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Confronting Sustainability: Forest Certification in Developing and Transitioning Countries

Benjamin Cashore, Fred Gale, Errol Meidinger,
Deanna Newsom, EDITORS

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Yale School of Forestry & Environmental Studies
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Foreword

James Gustave Speth, Dean
Yale School of Forestry & Environmental Studies

Ongoing environmental, social, and economic challenges facing the world's forests have led to increasing concern regarding appropriate policy approaches. As evidence pointed to increasing deterioration of forest ecosystems and rampant forest destruction in many places, initial efforts beginning in the 1970s emphasized intergovernmental agreements. Results included the signing of the International Tropical Timber Agreement in 1983 and the launching of the Tropical Forestry Action Plan in 1985.

Environmental and social groups, frustrated with slow governmental responses, undertook two complementary efforts in the 1980s: launching boycott campaigns of wood products from certain regions of the world, such as undisturbed tropical rainforest and Canada's remaining temperate old growth forests, while simultaneously supporting efforts to achieve a meaningful and binding global forest convention.

However, in 1993, following the failure of the Rio Earth Summit to achieve a global forest convention, the world of forest policy began to turn upside down. Many environmental groups, private foundations, and their allies decided to bypass intergovernmental efforts, which they reasoned to be a vast time sink with few results, and instead created a highly unusual policy instrument known as forest certification.

Building on the Forest Principles agreed to at Rio, they created a multi-stakeholder "Forest Stewardship Council" that developed globally important principles and criteria of responsible forest management and provided direction to regional bodies whose job was to develop national and/or sub-national standards. Most importantly, they turned to market pressures – hoping that there would be enough demand on the part of customers for environmentally and socially friendly forest products that the FSC might have a meaningful impact in denting, ameliorating, or even reversing global forest deterioration.

This grand experiment has had a number of powerful and important effects. It has encouraged and promoted multi-stakeholder participation in the development of forest policy in what had been historically closed processes between businesses and governments. It has also encouraged the proliferation of "FSC competitors" initiated by forest industry and forest owner associations who, while attracted to the idea of

forest certification, were unhappy with some FSC procedures and requirements. The result of this competition over certification programs has led to broader support for forest certification among forest companies and owners in North America and Europe, but limited support in developing countries – where some of the first and most persistent concerns about global forest deterioration were focused in the 1970s and still are today.

This book represents a comprehensive and rigorous effort to understand better how forest certification has emerged in developing and transitioning countries, regions that, despite their importance to global forest management, have until now received limited scholarly attention. Just how forest certification might emerge as a force for the promotion of sustainable forest management, and its potential role in limiting forest deterioration while promoting forest conservation is arguably one of the most critical questions facing environmental management today.

The book makes an important and significant contribution to addressing these questions for two reasons. First, it presents what is one of the most systematic and in-depth comparative analyses of contemporary forest policy and governance. Second, the decision by the editors to have the cases written by individuals from the countries being studied, and to hold a symposium on the results that linked practitioners and scholars, means that its influence on the *practical* questions of our times will be much greater than the array of scholarly conferences that fail to disseminate, or translate, the meaning of their efforts to real world problems.

The environmental and social challenges facing global resource management are more complex and at more critical junctures than ever before. Now more than ever there is a need for scholars to reinvigorate their efforts towards addressing and ameliorating critical global problems. The volume you are about to read is exemplary of such an approach: critical, probing, and yet always attuned to the problems for which forest certification was created.

Acknowledgements

This book is the result of an incredible array of efforts on the part of countless individuals and organizations who recognized the importance of studying the role and impact of forest certification in developing and transitioning countries. Without their individual and collective efforts, this book would not have been possible. The range of people to whom we owe enormous gratitude is so great, and so rich, that we feel the need to apologize in advance for omissions that we will inevitably make. Nonetheless, the following is our first, though far from final, effort to give recognition for those who have made this venture possible.

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Introduction: Forest Certification in Analytical and Historical Perspective

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OVERVIEW

In the last quarter century a growing body of scientific research has revealed that the world's forests are under stress. Data collected on biodiversity, species decline and deforestation reveal widespread deterioration of forest ecosystem structure and function. Research on social and community conditions has documented growing uncertainty about the ability of forest dependent communities to rely on forests for their livelihoods. Analyses of economic globalization and technological innovations have detailed an acceleration of forest exploitation alongside increasing uncertainty for domestic forest sectors about where global trends are headed. Taken together, existing research has revealed a complex, yet fragile relationship between forest use and natural functioning forest ecosystems.

In the face of this body of knowledge, and consensus that many problems are intensifying, domestic and international governmental responses have been strongly criticized as woefully inadequate, and far too slow, to address the myriad problems facing global forest management.

As a result of this frustration, some of the world's leading environmental groups and their allies decided to sidestep governments and created, in 1993, the "Forest Stewardship Council" (FSC). The FSC turned to the marketplace to generate incentives for forest businesses to conform to environmentally and socially responsible forest practices. Their solution was relatively simple: develop a set of global principles and criteria of sustainable forestry, have national and sub-national multi-stakeholder committees develop regionally appropriate standards, have third parties audit forestry operations for compliance, and "certify" those who pass the test — providing them with a badge of honour that, the hope was, would allow certified operations to gain some type of market advantage vis-à-vis their competitors (such as market access, price premiums, and the more abstract notion of a "social license to operate").

No one could have predicted the enormous and complex impacts that forest certification would have on global forest policy deliberations. Two significant trends have been observed. First, an intense competition has been waged for almost a decade now between FSC and industry-initiated certification programs, which were established to offer a more "business friendly," flexible, and less stringent approach to forest management. Indeed, in every country where the FSC has gained some traction, competitor programs have emerged. Second, despite unsustainable tropical forest management being the major impetus behind the creation of the FSC, the most significant support for, and battles about, forest certification have occurred in North America and Europe. Data in the charts below (see Figures 1 and 2) demonstrate that by 2005, 28 percent of total forest lands in North America and 56 percent in Western Europe had been certified according to one or another system, while in Eastern European emerging economies, active efforts to support the FSC were tied to attempts to gain a foothold in Western European markets. In contrast, forest certification has had limited uptake in most developing countries, both in absolute numbers of hectares certified and as a percent of the forest estate — despite assertions that it is in these very countries where, if supported, forest certification could have its biggest impact.

Figure 1 Number of hectares under different certification standards

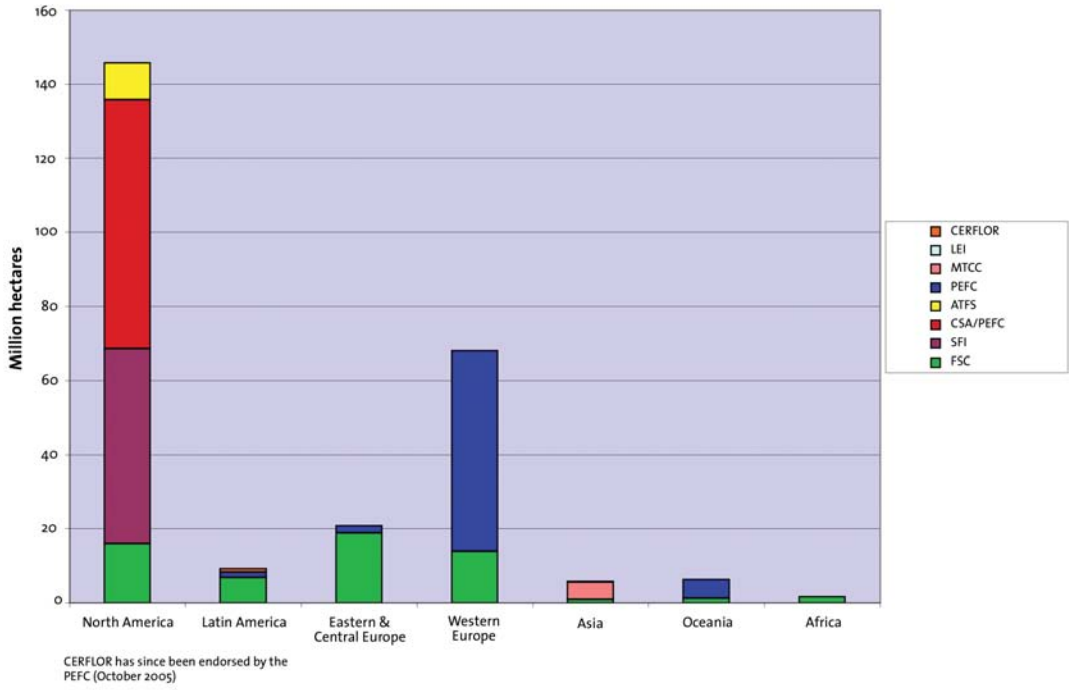
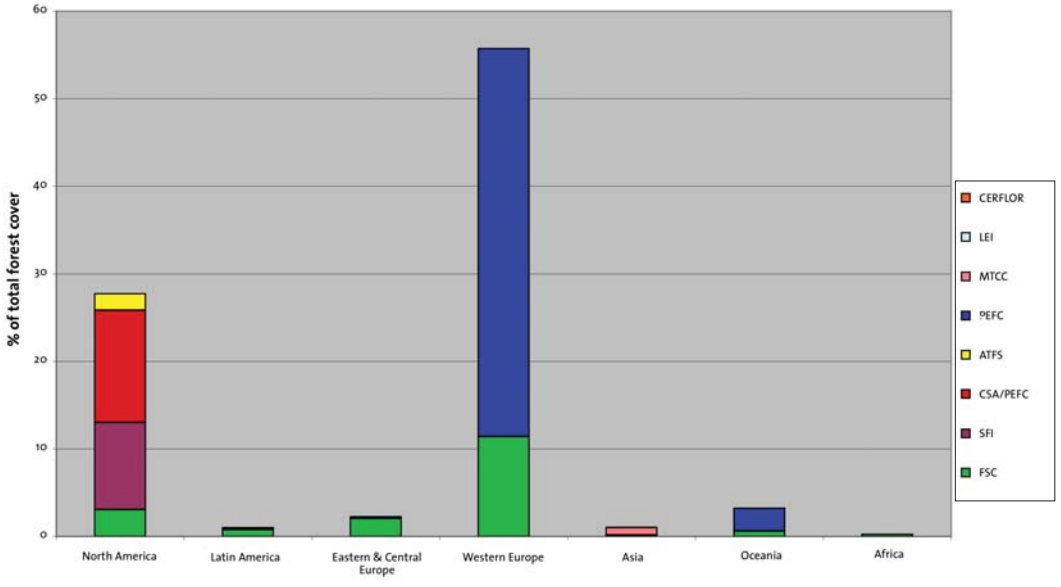


Figure 2 Area certified under each system as a percent of the total regional forest cover



Sources:

CERFLOR → Certificação Florestal. personal communication, Mrs Maria Teresa Rezende, mtrezende@inmetro. gov.br (data current as of 15/10/05, email of 15/10/05); LEI → Lembaga Ekolabel Indonesia. Personal communication, Indra S. Dewi, lei@indo.net.id (data current as of 15/10/05, email of 26/10/05); MTCC → Malaysian Timber Certification Council. Personal communication, MTCC (data current as of 15/10/05, email of 31/10/05); PEFC → Programme for the Endorsement of Forest Certification schemes. http://www.pefc.cz/register/statistics.asp (compiled 30/09/2005) (referenced 15/10/05); ATFS → American Tree Farm System. Personal communication, ATFS operations manager (email of 22/08/2005); CSA → Canadian Standards Association, Sustainable Forest Management. http://www.sfms.com/ (compiled 09/2005) (referenced 15/10/05); SFI → Sustainable Forestry Initiative http://www.about sfb.org/generalPDFs/SFI Certification_List_Website. pdf (compiled 6/8/2005) (referenced 15/10/05); FSC → Forest Stewardship Council. http://www.certified forests.org/region.htm (compiled 10/10/05) (referenced 15/10/05)

Why has the momentum behind forest certification been weak in most developing countries? Why have Eastern European countries been eager to adopt forest certification? Are there bottlenecks unique to developing countries that, if removed, could pave the way for widespread support in developing countries? What are the effects of certification — environmental, economic, and social — when it is adopted?

The purpose of this book is to shed light on these issues by turning our individual and collective research attention from developed country certification dynamics to developing and transitioning country dynamics. We do so with the knowledge that the promise of forest certification has yet to be fully realized. Indeed, if the barriers to its adoption elsewhere are not systematically analysed, understood and acted upon, forest certification could very well be assigned to the large waste bin of policy initiatives that failed to effectively address significant and persistent global commons problems. On the other hand, we are keenly aware that if certification does emerge as an enduring institution for addressing global forest management, its focus on transnational supply chains and globally traded commodities could provide a significant and more efficient way of addressing global problems than the existing interstate negotiations that currently dominate failed efforts to develop meaningful global forest management initiatives.

To accomplish these goals, we developed an innovative, exciting, and comprehensive approach to the study of forest certification. We rejected one of the more traditional approaches of comparative social scientists that involves raising grant dollars for ourselves and then going off to study countries in which we do not live, are unlikely to speak the language, and, despite best efforts, whose cultural richness we will never fully appreciate as well as someone who has grown up and lived there. Instead, we developed a comprehensive template to collect systematic, relevant data on the countries we studied and then identified scholars and practitioners from the countries we were studying to conduct the research and engage in a discussion of its implications. The challenges in undertaking and coordinating such an effort paled in comparison to the benefits that were achieved. As we believe the reader of the case studies to follow will see, this effort led to the development of rich and nuanced analyses of forest certification in developing countries in Africa, Asia-Pacific, Latin America, and emerging economies in Eastern Europe. Moreover, it helped to build an international community of practitioners and scholars who are at once analytical, reflective, and rigorous in probing what forest certification is presently accomplishing, and, more importantly, what it might accomplish in the future. Case study authors were required to use the research template we had created, but were given complete latitude to generate hypotheses about why certification developed, or failed to develop, in their own countries. Moreover, although the template served to structure their research, it was broad enough to allow the researchers to describe a rich array of effects as well as unanticipated consequences. As a result, we use the conclusion to deductively and inductively build hypotheses from these case studies that we hope will form the basis of future and urgently needed research designed to shed light on the potential strengths and limitations of forest certification.

Following this section, the remainder of this introductory chapter proceeds in the following steps. After tracing the origins of forest certification, the next section compares two very different approaches to its implementation. In the final section, we explain the methodology we used to analyse the countries, justify our case study selection, and provide a brief overview of the book's structure.

ORIGINS OF FOREST CERTIFICATION

The origins of the Forest Stewardship Council (FSC) can be traced back to frustration following three failed efforts to address forest problems through public policy and intergovernmental processes: the inability of the International Tropical Timber Organization (ITTO) to improve forest management practices in the tropics (Gale 1998); the collapse of talks at the United Nations Conference on Environment and Development (UNCED) on a global forest convention (Humphreys 1996; Bernstein and Cashore 2004); and growing concern over the potentially perverse effects of tropical timber boycott campaigns, which created incentives for governments in the South to convert "unproductive" forest land to other uses (Cashore, Auld, and Newsom, 2004; FAO 1993).

It was in this climate of frustration with both inter-governmental and environmental NGO initiatives that a network of individuals and organizations cohered around the idea of certification and labelling. In Oregon, a group called the Woodworkers Alliance for Rainforest Protection (WARP) formed in 1989 "to protect the entire forest ecosystem for the benefit of the inhabitants, the woodworking community and future generations" (Luthiers Mercantile Catalogue 1993).[1] At a 1990 meeting of this group (WARP I), the idea of FSC emerged as a response to the "likely proliferation of certifiers" (Landis 1996: 189). WARP's concern was shared by the New York City-based Rainforest Alliance, which had established its SmartWood Program in 1989 to certify timber from well-managed forests. With several auditing companies set to enter the budding certification movement in the early 1990s, RA too needed a set of forest certification standards to prevent consumer confusion and downward harmonization. Meanwhile, Friends of the Earth-UK's Good Wood scheme, set up in 1987, was encountering difficulties tracking timber (Bartley 2003: 445), while another group, the Newcastle-based Ecological Trading Company sourcing "sustainable timber" from around the world, was running into similar difficulties (Viana *et al.* 1995: 144). By the early 1990s, a consensus in favour of forest certification had emerged along with recognition of the need for a global approach.

In building this global approach, proponents of FSC were influenced by the history of the organic movement. As Dudley *et al.* (1996) observe, the boom in organic food consumption generated a huge diversity of labels all claiming to be "organic," but using slightly different criteria (*Op. cit.*: 146). The International Federation of Organic Agriculture Movements (IFOAM) was founded in 1972 to set minimum standards for the organic industry and it was that idea that was transferred to FSC, although it was recognized at the outset that for FSC to be successful, "it would have

[1] Founding members of WARP were Scott Landis (writer), John Curtis (Luthiers Mercantile), John Shipstad (secretary/treasurer), Andrew Poynter (A & M Wood Specialties), Lew Lorini (Woodshop News), Dick Boak (ASIA Newsletter, C.F. Martin), Dick Jagels (University of Maine, Dept. of Forest Biology, and frequent contributor to Wooden Boat), Leonard Lee (Lee Valley Tools), Gary Hartshorn (Director of Science for World Wildlife Fund), David Ellsworth (President of the Association of Wood Turners), Ken Kupsche (Woodcraft Supply), Silas Kopf (furniture maker), Ivan Ussach (Rainforest Alliance), and Fiona Wilson (American Woodworker magazine) (Luthiers Mercantile Catalogue 1993).

to be dealing with a much larger market share than is the case for organic food" (*Ibid.*). Another model that FSC built on was the International Organization for Standardization (ISO), a worldwide network of national standards organizations engaged in setting technical product standards. Although ISO's standards focused on functionality rather than propriety, its model of global consultation in a quest for consistency helped to shape FSC's vision and procedures.

Building on these experiences and influences, proponents of FSC formed an Interim Board in March 1992. With funding from the Austrian, Swiss, Dutch, British and Mexican governments as well as a number of NGOs (Bartley 2003: 448), a series of global consultations on forest certification occurred over a period of 18 months, with in-depth country and region assessments commissioned in Canada (British Columbia), Papua New Guinea, Sweden, the United States (Washington and Oregon), and elsewhere. The consultations were broadly positive on the need for FSC, and in October 1993, as noted, the Founding Assembly took place in Toronto, Canada.

FSC quickly institutionalised itself, selecting British forester Timothy Synott as its first Executive Director, locating its offices in Oaxaca, Mexico, finalizing its draft Principles and Criteria, hiring staff and accrediting certifiers. Its early progress was closely monitored by industry around the world, and a two-pronged strategy emerged to neutralise a perceived threat. The first prong aimed to discredit FSC within industry and government by highlighting its environmental NGO roots, exclusion of businesses and governments, and costliness. The second prong involved establishing and/or endorsing competitor programs to overcome these deficiencies — such as ISO's 14001 Environmental Management Certification System (ISO 14001), the American Forestry & Paper Association's Sustainable Forestry Initiative (SFI), the Canadian Standards Association's Sustainable Forest Management System (CSA), Brazil's CERFLOR scheme and many others. By the late 1990s, therefore, forest certification bifurcated and companies could opt to be certified either under FSC's performance-based scheme or under one or another competitor program.

APPROACHES TO CERTIFICATION

FSC's Approach

FSC's approach to standards development, implementation, accreditation and improvement is driven by the need to balance not only different constituency interests, but also to bridge the North/South divide. Crucially, therefore, FSC is a membership association open to organizations and individuals that share its objectives and pay a modest membership fee. On joining, members opt into one of three chambers representing economic, environmental or social interests. Those with an economic interest in the forest — forest managers, consultants, certifiers, and so forth — must join the economic chamber. Those with a clearly identifiable environmental interest — officers of environmental organizations, for example — must join the environmental chamber. The social chamber is more amorphous and includes development agencies, non-forestry unions, indigenous peoples, and church groups.

Members play an important role in developing FSC's policies and processes. At meetings of the General Assembly — which occur at least every three years — members put forward and debate resolutions concerning the organization's constitution, structure and operation. General Assemblies can be lively affairs with a large number of motions debated and voted on, resulting in significant alterations at times to the organization's operation. While some are appalled by what they see as a "chaotic" form of associational democracy, the approach keeps the organization in touch with its base and responsive to different constituency interests. A level of stability is achieved by requiring resolutions to earn at least 67 percent of the vote. While theoretically possible for two chambers to ally and outvote a third, in practice the supermajority requirement means that there must be substantial support across all three for a resolution to pass. Individual members account for only 10 percent of the total vote of any chamber so formal power rests with FSC's organizational members (Domask 2003; FSC 2005)

In addition to balancing constituency interests, FSC also redresses the inequity in resources and influence between developing and developed countries. New members from high-income countries are assigned to the Northern sub-chamber and those from low, middle, and upper-middle income countries to the Southern. The total vote of each chamber is split evenly between developing and developed country members, regardless of their actual numbers, ensuring that the interests of the South are taken into account. The approach is extended to FSC's Board of Directors too, which is composed of nine directors — three from each chamber and at least four from the South.

The FSC is not a certifying body: rather, it sets standards and accredits certifying bodies (CBs), licensing them to audit forest management operations on its behalf. It also regularly evaluates certifier performance and hears complaints from aggrieved groups. FSC's Founding Assembly approved a draft set of Principles and Criteria (P&Cs) that enunciated a vision of "environmentally appropriate, socially beneficial and economically viable" forestry. That vision was conditionally endorsed at the 1993 Toronto meeting and finalised in June 1994 following further revisions of the P&Cs. Today, there are 10 Principles that are further elaborated in 56 Criteria. The P&Cs are a work in progress, evolving as knowledge of forest management develops. Principle 10 on plantations was only finalised in 1996; and Principle 9 was rewritten in 1998 to replace the concept of "primary forests" with "high conservation value forests." Taken together, FSC's generic P&Cs constitute the baseline standard against which a forest operation must be assessed.

To carry out a certification assessment, FSC relies on a growing number (currently 15) of for-profit and not-for-profit firms certifying bodies. CBs audit forest operations to determine whether they meet FSC's standards. If a CB judges that an operation meets the FSC standard, it issues a certificate, enabling the forest company to use the FSC logo on its products and publicise itself as FSC-certified. There is clearly potential for such a system to be abused: an unscrupulous operator could incorporate as a bogus CB, conduct non-rigorous certifications, and issue false certificates. To prevent this, FSC "accredits" CBs by investigating applicant companies, only licensing those with *bona fide* credentials, and periodically reviewing their performance.

Once certified, the timber cut from a forest moves through a complex chain that may include sawmillers, secondary manufacturers, wholesalers, retailers and final consumers. The length of the timber chain presents a problem for certification. How can a retailer or consumer be certain that the purchased forest product actually comes from a certified operation? To enable the FSC logo to be placed on a final forest product, the organization engages in "chain-of-custody" certification. Companies along the timber chain apply for a chain-of-custody certificate licensing them to receive, store, process and sell FSC-certified products. FSC not only accredits CBs to certify forests, therefore, it also licenses them to conduct chain-of-custody audits to secure the flow of FSC-certified timber through the product chain.

An important element of FSC's approach is the accurate interpretation of its P&Cs in the forest. Although CBs may employ FSC's generic standard to certify operations around the world, the Principles and Criteria are written at a high level of abstraction and need to be further elaborated in the form of indicators (and, sometimes, verifiers) to meet national and local requirements. Where no national or regional FSC standards exist, CBs use their own indicators. However, a core objective of FSC is to have national working groups undertake the development of indicators relevant to the state or provincial context.

The cost of certification is a critical issue that especially affects small operators, who confront the same fixed costs of certification as large operators — professional fees, team travel, accommodation, per diem, stakeholder consultations — but spread them over a much smaller volume of extracted timber. FSC has revised its approach over the years to accommodate small operators, with two options now available. One approach is group certification, where small operators join a cooperative or community forest association, with the collective body taking out FSC membership certification and ensuring that its members practice appropriate forest management. Costs are reduced because the CB need only audit a random sample of member operations. A second approach is FSC's "Small and Low-Intensity Managed Forests" (SLIMF) certification system that permits CBs to streamline audit arrangements and reduce costs for operations under 100 ha and for low-intensely managed operations of up to 1000 ha.

Competitor Approaches

The formation of FSC in 1993 was closely observed by industry and forest owner associations, who eventually created "FSC competitor programs" (Cashore, Auld, and Newsom 2004). Such competitor programs became especially prominent in those countries where FSC began to gain support and interest along the forest sector's supply chain, sparking what one analyst has termed today's "certification wars" (Humphreys 2005). The term captured the battle for the "hearts and minds" of participants in the forest products chain as, in countries around the world, industry and governments responded to the FSC "threat" by promoting alternative schemes. Popular international schemes include the International Organization for Standardization's 14001 Environmental Management Systems approach (ISO 14001) and the Programme for the Endorsement of Forest Certification (PEFC, formerly the

Pan-European Forest Certification scheme). While ISO is a single, globally applicable system, PEFC endorses national forest certification schemes like the Canadian Standards Association scheme (CSA), AF&PA's Sustainable Forestry Initiative (SFI), Brazil's CERFLOR scheme and the Malaysian Timber Certification Council (MTCC).[2]

Although not developed specifically for the forest sector, ISO 14001 is a scheme in widespread use around the world.[3] ISO certification is available to middle and large companies interested in demonstrating a degree of commitment to environmental values. The scheme builds directly on the success of ISO's 9000 quality management series, embracing a process approach to standard setting and implementation. Under ISO, a company adopts a continuous cycle of development, planning, implementation, monitoring and evaluation. Company managers are in control throughout the cycle and the entire approach is governed by the notion of "continuous improvement," which requires that lessons learned in the current round to be applied in the next.

While good in theory, ISO's approach places a great deal of faith in company management and in process, and promotes no substantive standard to benchmark performance against other operators. It is an incremental approach to achieving sustainable forest management that relies on the concept of continuous improvement, while remaining vague with regard to its extent, timeliness, and coverage. ISO does require companies to obtain third-party certification, however, and this renders its approach better than first- and second-party schemes or doing nothing.

Another FSC-competitor scheme is the Programme for the Endorsement of Forest Certification. PEFC's origins lie in Europe, where efforts to establish FSC national standards in Finland, Sweden, Norway and elsewhere encountered strong resistance from small, farm-forestry operators concerned to protect private property rights and minimize costs. PEFC International was formally established in 1999 as an umbrella organization to evaluate and endorse national standards from around the world. Today, there are PEFC-endorsed standards in 20 countries, including Australia, Canada, Denmark, Finland, Germany, Norway and Sweden. Developing country schemes endorsed by PEFC include Chile's CertFor and Brazil's CERFLOR schemes.

In North America, SFI emerged as an important forest certification standard for industrial forests. SFI was developed by the American Forestry & Paper Association (AF&PA) in response to the FSC "threat," and at the outset was very much an in-house, second party, industry standard. While AF&PA members were committed to implementing SFI, the standard endorsed existing practices, and a third-party audit was not mandatory. Instead, a company's CEO submitted a signed statement that the firm was in compliance. Unlike FSC's complex membership arrangements for democratic input from diverse constituencies, SFI was carefully controlled by AF&PA, enduring heavy criticism for its lack of consultation with external stakeholders.

In response to internal and external pressures, SFI implemented a large number of changes over the years to its program. In an effort to garner broader support, SFI increasingly distanced itself from AF&PA, establishing itself as a separate organization in 2000 as the Sustainable Forestry Board (SFB). In a further move towards

[2] As of November 2005, the MTCC was a member of PEFC but had not yet applied to have its scheme endorsed by it.

[3] Since ISO 14001 is a generic scheme for all companies wishing to demonstrate a level of environmental responsibility, it does not fit neatly into the category of FSC competitor program and at least one of the editors would have excluded it on this basis. However, it is also apparent that in the "certification wars" to which we are referring here, ISO was viewed by the forest industry as a possible solution to an emerging problem. As it became clear, however, that ISO's process-based approach would be unable to compete with FSC, industry associations increasingly turned to developing their own on-the-ground, performance-based systems.

achieving broader support, AF&PA restructured the SFB in 2002, reducing its own control from 40 to 33 percent, with the remaining two-thirds split between representatives of conservation groups and the broader forestry community. In response to criticisms about lax enforcement, AF&PA encouraged members to undergo third party verification. Following periodic reviews of its standard, SFI has adopted a number of revisions to better incorporate biodiversity objectives, although these remain weaker than FSC's, as do its provisions on worker and indigenous peoples' rights. In conclusion, and despite its attempts to restructure itself to become a broader-based, multi-stakeholder body, SFI remains under the control of the AF&PA and unresponsive to environmental and social concerns.

A second FSC competitor scheme in North America is the Canadian Standards Association (CSA) scheme, initiated in 1993 with funding from the Canadian Pulp and Paper Association (CPPA). CSA is an independent, non-governmental organization accredited to the Standards Council of Canada (SCC). In the past, CSA mostly focused on the development of narrow, technical standards for industry sub-sectors. However, in the 1980s CSA gained experience with the ISO 9000 quality management standard and played a lead role in the development of the ISO) 14001 series. When approached by the CPPA to develop a forestry standard, CSA built on these experiences and did not consider an alternative, performance-based approach (Elliott 1999).

Like SFI, CSA was initiated by industry. It did, however, include environmental and indigenous representatives on the responsible technical sub-committee. The scheme was never accepted by Canada's environmental and indigenous peoples' network, however, and even struggled to gain acceptance from industry, which found its provisions onerous in comparison to ISO or SFI. Although based on an environmental systems approach to certification, CSA later added a more substantive, performance-based requirement by referencing the Canadian Council of Forest Ministers' sustainable forest management guidelines. These guidelines were developed through the Montreal Process, a lengthy series of negotiations between forestry representatives of twelve countries over the meaning of sustainable forest management in the Americas and beyond.[4]

FSC competitor programs have emerged over the past decade in other regions of the world. In Latin America, Brazil's Instituto Nacional de Metrologia, Normalização e Qualidade Industrial, known as INMETRO, developed the CERFLOR scheme while Chile's CertFor Scheme was endorsed by the PEFC in 2004. In the Asia-Pacific, the two largest forest product exporters, Indonesia and Malaysia, have developed schemes known as the Malaysian Timber Certification Council (MTCC) and Lembaga Ekolabel Indonesia (LEI) respectively. In Africa, the African Timber Organisation has since the mid-1990s developed the Pan African Forest Certification scheme (PAFC). PAFC-Gabon was established in October 2004, and has joined the PEFC in anticipation of future endorsement. Meanwhile in Eastern Europe, schemes are being developed in Belarus, Estonia, Latvia, Lithuania, Poland and Russia for PEFC endorsement.

Key differences between FSC and competitor schemes are summarized in Table 1 below, based on who has rule-making authority and the nature and scope of the rules established. Table 2 compares FSC's scheme with several competitors across a range of criteria to further illustrate differences.

[4] The twelve countries currently involved in the Montreal Process are Argentina, Australia, Canada, Chile, China, Japan, Mexico, New Zealand, Republic of Korea, Russian Federation, United States and Uruguay (http://www.mpci.org/members_e.html, accessed September 2005).

Table 1 Different conceptions of forest certification

	Conception One	Conception Two
Who participates in rule making	Environmental and social interests participate with business interests	Business-led
Rules – substantive	Non-discretionary	Discretionary-flexible
Rules – procedural	To facilitate implementation of substantive rules	End in itself (belief that procedural rules by themselves will result in decreased environmental impact)
Policy Scope	Broad (includes rules on labor and indigenous rights and wide ranging environmental impacts)	Narrower (forestry management rules and continual improvement)

Source: Cashore 2002

Table 2 Comparison of FSC and FSC competitor programs

	FSC	PEFC	SFI	CSA
Origin	Environmental groups, socially concerned retailers	Landowner (and some industry)	Industry	Industry
Types of standards: performance or systems-based	Performance emphasis	Combination	Combination	Combination
Territorial focus	International	Europe origin, now international	National/ bi-national	National
Third party verification of individual ownerships	Required	Required	Optional	Required
Chain of custody	Yes	Yes	No	Emerging
Eco-label or logo	Label and Logo	Label and Logo	Logo, potential	Logo, potential

Terms: *Performance-based* refers to programs that focus primarily on the creation of mandatory on the ground rules governing forest management, while *systems-based* refers to the development of more flexible and often non-mandatory procedures to address environmental concerns. *Third Party* means an outside organization verifies performance; *Second Party* means that a trade association or other industry group verifies performance; *First Party* means that the company verifies its own record of compliance. *Chain of Custody* refers to the tracking of wood from certified forests along the supply chain to the individual consumer. A *logo* is the symbol certification programs use to advertise their programs and can be used by companies when making claims about their forest practices. An *eco-label* is used along the supply chain to give institutional consumers the ability to discern whether a specific product comes from a certified source. NOTE: The PEFC is included in this table for comparative reasons, but it is difficult to make universal characterizations about program content or procedures, since they vary by country or sub-region (though they must meet the minimum level set by the PEFC Council).

Source: Cashore, Auld and Newsom (2004), adapted from Moffat (1998: 152), Rickenbach, Fletcher and Hansen (2000), and www.pefc.org

METHODOLOGY

Although, as noted above, much has been written about certification's first decade, the story has been told mainly by Northern academics reflecting on developed-country experiences. While sustainable forest management presents challenges to forest managers in the North — from the Boreal forests of Canada to the temperate rainforests of Tasmania — it does so in a context where the knowledge, infrastructure and institutional capacity exist to implement the transition should firms and governments wish.

The situation in Africa, Asia-Pacific, Eastern Europe, and Latin America is very different. Put simply, the task of sustainable forest management is much more challenging in these regions because it occurs in an unsupportive economic, political and social context. While some success stories exist, certification's progress in these regions has been slow and uneven, reflecting, in various cases, a lack of resources, poor infrastructure, corrupt institutions, environmentally insensitive domestic and foreign markets, and domination by foreign corporations. While companies and governments in the North must face up to the challenge of sustainable forest management, it is those in the East and South who can be truly said to confront it. In this book, we not only seek to understand this struggle, but also to confront it as academics.

An examination of the amount of certified forest in developed and developing countries (see Figures 1 and 2, page 9) underscores the challenge that certification faces in the South. The top regions globally in terms of area certified under all schemes — North America and Western Europe — encompass most of the developed North including the United States, Canada, Sweden, the UK, and Germany. Of the almost 60 million hectares of FSC-certified forests in 2005, 52 percent were in developed countries, 32 percent in transitioning countries, and only 17 percent in developing countries (extra one percent due to rounding error). PEFC's ratio is even starker. As of 2005, PEFC had about 193 million ha of certified forests[5], but only just over 7 million ha (3.6 percent) in developing countries (Brazil, Chile and Malaysia). Almost all the remainder was in high-income, developed countries, except for two in Eastern Europe (Czech Republic and Latvia). There is an irony here. Forest certification was initiated primarily to promote good forest management in tropical developing countries, but has been adopted by developed-country operators seeking a market advantage from their comparatively lower cost of compliance.

[5] Figure includes PEFC endorsed schemes as well as applicant and harmonized schemes like SFI, ATFS, Cerflor and MTCC. Indonesia's LEI is excluded because at the time of writing it had not applied for nor been recognised by PEFC.

The South's reluctance to embrace forest certification is also reflected in academic publications on the subject. The research literature has examined the instrument of certification in various ways: as a forum for political struggle and negotiation between actors over national forest policy (Elliott 1999); as an emerging system of civil-society regulation (Meidinger 2003); as systems of private self-regulation (Haufler 2001); as voluntary codes (Webb 2004); and as a non-state, market-driven system of legitimation (Cashore, Auld, and Newsom 2004). Although developing country case studies have not been completely excluded from these efforts, researchers have tended to focus on countries with large areas of certified forests.

These also happen to be the ones closest to hand — Canada, Germany, Sweden, the United Kingdom and the United States. In contrast, relatively little has been written on certification in developing and transitioning societies.[6]

Despite the challenges faced in the South and the academic focus on the North, forest certification must work in Eastern European and developing countries if it is to deliver on its promise. By bringing to light the difficulties experienced — and highlighting some of the solutions adopted — this book expands our theoretical understanding of forest certification's effects.

The project evolved from discussions commenced in 2002 that consolidated themselves in a plan to host a major symposium at Yale University. The symposium, entitled *Forest Certification in Developing and Transitioning Societies: Social, Economic, Ecological Effects*, took place from 10-13 June 2004. The major academic objective of the symposium was to develop a comparative database of the effects that certification was having in the South and Eastern Europe to complement work already done on developed countries. To this end, the editors developed a template to guide case study researchers on what information should be collected and how the research should be structured. Important secondary objectives of the symposium were the fostering of research capacity in developing and transitioning countries through the identification and commissioning of nationals to write the case studies, and the publication of the proceedings to ensure widespread availability.

Through 2003 and into 2004, the editors worked to secure funding to run the symposium. Early grants from the Rainforest Alliance and WWF International were very important in enabling the project to get underway, with major funding from the ITTO, the U.S. Forest Service, the World Bank and GTZ, the German development agency, critical to its occurrence. The three-day symposium hosted by Yale's Program on Forest Certification was an outstanding success, with researchers from developing and transitioning countries presenting their case studies and working closely with their regional colleagues and the editors to compare results and identify common themes and challenges.

The symposium's academic objectives placed considerable weight on the template developed by the editors, which was designed to compare the relative effectiveness of certification across different jurisdictions. Initially, the editors developed a very detailed template, but after concerns were expressed that it might be overly constraining and inflexible, the template was streamlined to consist of a relatively small number of core headings (see Box 1, next page).

The template was accompanied by a detailed explanation of the meaning of each heading, together with examples. Its purpose was to generate comparable studies of the effects of certification across countries and regions. Overall, the approach worked well, enabling this book to be read in one of three ways: sequentially to obtain an understanding of certification's effects across countries and regions; regionally, to understand the opportunities and challenges to certification in Asia-Pacific, Africa, Eastern Europe and Russia, and Latin America; and thematically, to understand how certification emerged, the reactions of different actors, and its social, environmental and economic effects. The interested analyst can thus mine the case studies,

[6] But for a case study of Indonesia, see Chris Elliott, "Forest Certification: Analysis from a Policy Network Perspective," PhD thesis, Department de genie rural, Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland 1999.

generating and testing hypotheses concerning certification's effects in developing and transitioning societies. Our own effort to identify themes and make sense of the data is set out in the conclusion.

Box 1 Case study template

Introduction

Background Factors

1) Ownership and Tenure
2) Markets

The Emergence of Forest Certification

1) Initial Support
2) Institutional Design
3) Standards
4) Forestry Problems
5) Roadblocks and Challenges

The Reaction to Certification

1) Forest Policy Community/Stakeholders
2) Forest Owners
3) Current Status of Forestland Certification
4) Current Status of the Certified Marketplace

Effects of Certification

1) Power
2) Social
3) Economic
4) Environmental

Conclusion

Countries were selected in a region as follows. Each editor was assigned to a specific region and was responsible for assessing candidates for possible inclusion. Criteria used in selecting countries into the project were:

(a) total forest area (relative to other countries and as a percentage of total land area of the individual country);

(b) level of forest certification activity (measured in hectares certified, number of chain-of-custody certificates, establishment of FSC national working groups, development of competing forest certification system); and

(c) identification and availability of a researcher from the case-study country.

While it proved relatively straightforward to narrow down the countries to a smaller sub-set of eligible candidates, it proved quite difficult in some cases to identify national researchers with the background and knowledge to undertake the case studies. By networking with scholars and practitioners from around the world, a well-qualified group of researchers was eventually assembled, testifying to the power of the new telecommunications technologies of the Internet, email, and teleconferencing and to the feasibility of a new kind of global research. The countries eventually selected are set out by region in Table 3.

Table 3 Case study countries by region

Asia-Pacific	Eastern Europe	Latin America & Russia	Sub-Saharan Africa
Indonesia	Estonia	Bolivia	Gabon
Malaysia	Latvia	Brazil	South Africa
Papua New Guinea	Poland	Guatemala	Uganda
Solomon Islands	Russia	Mexico	Zambia

A final methodological component was the Yale symposium itself. The formal presentation of the case studies at the plenary meetings (10-11 June) was complemented by in-depth regional and thematic workshops held on the following days (12-13 June). At the workshops, the editors and the case-study researchers were able to engage in deep discussion on the similarities, differences and policy challenges facing forest certification within and across the respective regions. At a final workshop, all researchers collaborated in a brainstorming exercise to identify emergent themes; that collaboration has continued in the preparation of shared introductions to the four regions.

In order to provide clarity, we have organized the book according to the four regions from which the case studies were drawn (we present the regions and individual case studies within them in alphabetical order) as well as providing regional overviews that place the cases within their broader geographical contexts. Taken together, the regional case studies tell a fascinating story of the role of forest certification in introducing new ideas about sustainable forest management, in developing alternative arrangements for multi-stakeholder processes, in identifying existing and potential impacts and bottlenecks, as well as the need for further, targeted research.

In the final chapter, we set out our conclusions based on a careful reading of the case studies within and across regions. We also identify the questions that remain and what they say about where the most important research efforts ought to be targeted. Such an effort reveals the role played by forest ecology, market structure, state capacity and openness, land tenure system, NGO pressure, industry cohesion, and indigenous peoples' organizations in shaping durable support for forest certification.

Although significant questions remain, what is clear from a close reading of the cases to follow is that forest certification is having an important effect in shaping norms about how to make forest policy, including opening up domestic forest policy

networks for wider participation by previously excluded groups. Just how forest certification shapes new forest policy norms, and whether, and how, it might continue to institutionalise itself as a meaningful form of global and domestic governance, represent the critical questions that we turn to, and detail, in the conclusion.

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REGIONAL OVERVIEW

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INTRODUCTION

The tropical forests of Southeast Asia and Oceania are prized for their biodiversity and economic values. The prevalence of islands in the region contributes to high levels of species endemism as well as increased vulnerability to extinctions. The global economic demand for tropical timber, meanwhile, has fuelled myriad environmental problems, including deforestation, forest degradation and the loss of biodiversity. As a result of growing international environmental concerns, the world's first forest certification took place in this region when SmartWood certified Perum Perhutani in Indonesia in 1990. Considerable efforts have been invested since that time to develop certification into a profitable enterprise capable of promoting improved forest practices. Many of the same problems that certification was designed to fix, however, have served to prevent its expansion.

SIMILARITIES AND DIFFERENCES

Ecology and Economy

A key geographic feature of the region is the Wallace line, which divides two major continental shelves with sharply distinct ecologies. On one side of the line are Peninsula Malaysia, the island of Borneo, Sumatra and central and western Indonesia. Across the line are the Moluccas, the entire island of New Guinea, and Solomon Islands. Within these two very broad areas there are also a vast number of critical and distinct ecological regions including hill forests, lowland forests and coastal swamp forests. Major commonalities between the four case study countries (Indonesia, Malaysia, Papua New Guinea, and Solomon Islands) include not only this tremendous biodiversity of their tropical forests, but also the rich cultural diversity of their human populations. The region's island geography has played a major role in shaping this diversity. Solomon Islands and Papua New Guinea (PNG) encompass hundreds of islands, while the Indonesian archipelago numbers of 17,000. Malaysia is the one case study country with a land base connected to the Asian mainland, although it also includes two states located on the Island of Borneo.

Indonesia's population (at 206 million in 2000) is almost ten times Malaysia's (22 million), and much greater than either PNG (5 million) or Solomon Islands (0.4 million). Indonesia also has the largest forest area (105 million hectares) in comparison to PNG (31 million), Malaysia (12 million) or Solomon Islands (3 million).

Significant variation exists between the case study countries in terms of economic conditions, population density, forest area, annual deforestation rates and the importance of the timber industry. Malaysia's annual GDP per capita at US$4,469 is roughly four times that of the other three case study countries, which range from US$1,096 for Indonesia to US$797 for Solomon Islands. The forest industry remains an important contributor to these GDP figures. Official statistics suggest that Indonesia and Solomon Islands continue to earn more than 10 percent of their GDP from forest production. The same would likely be true of Papua New Guinea with

improved forest industry statistics. In addition to making an important contribution to domestic GDP, forest product exports also earn foreign exchange amounting, in the case of Solomon Islands, to more than 10 percent of total exports (Brown and Durst 2003: 45).

China, Japan and South Korea are the largest importers of Asia-Pacific timber, although there are also niche markets for processed timber products in Europe and North America. While East Asia continues to dominate international trade in the region, the pattern of control of the forest resource has changed over the last three decades. Initially foreign companies owned most timber harvesting operations, and timber was exported as raw logs. This is no longer the case in Indonesia and Malaysia, due in part to active government policies promoting domestic forest industries and the development of value-added wood processing. Foreign logging companies still dominate in PNG and Solomon Islands, however, and exports consist of relatively unprocessed logs.

Deforestation and Forest Tenure

Deforestation in the Asia-Pacific has proceeded in a manner similar to other regions worldwide. Forest degradation begins with selective high grading of the most easily accessible areas. Once the most valuable timber species have been removed, logging becomes less selective and extends into more remote and often less fertile regions. The establishment of logging roads, together with the degradation of the forest resource, proceeds hand in hand with growth in the local human population and agricultural expansion. The end result is often deforestation, i.e. the complete loss of forest cover and conversion to other land uses. In this way, virtually all of the lowland dipterocarp forests in Malaysia and Indonesia have been logged out or are heavily disturbed.

It is estimated that roughly 30 to 40 million people are directly dependent on the forest resource in the region. These include large rural populations, many of whom depend on the forests for their subsistence needs. The official distribution of forest tenure, however, varies considerably between countries. The majority of forestlands in both Indonesia and Malaysia are government owned. In Papua New Guinea and Solomon Islands, in contrast, communal ownership dominates. Despite the differences in legal tenure arrangements, the lack of rural community capacity to capture economic benefit from the global timber trade is a problem shared by all four countries.

The Development of Forest Certification

The environmental, social and economic importance of forestry, as well as the considerable challenges facing its sustainable implementation, have combined to make the Asia-Pacific region an early pioneer in the development of forest certification. As already mentioned, the world's first internationally recognized forest certification took place in Indonesia in 1990. This early certification, implemented by the SmartWood Program of the Rainforest Alliance, later became recognized under the newly formed Forest Stewardship Council (FSC).

While the FSC was involved in the region's first certifications, both Indonesia and Malaysia have since developed their own national certification systems. In 1993, the same year as the Forest Stewardship Council's founding meeting in Toronto, Indonesian industry and government interests began the process of developing the national Lembaga Ekolabel Indonesia (LEI) system. A few years later, the Malaysian government established its own process, leading to the eventual formation of the Malaysian Timber Certification Council scheme (MTCC). Both schemes are now fully developed, with their own forest certification standards, certifier accreditation, and review procedures. In the last two years both LEI and MTCC have redrafted standards and adopted procedures in an attempt to make their schemes more compatible with FSC's.

In Papua New Guinea and Solomon Islands, a different approach to certification has emerged. This system, known as Eco-forestry certification, was developed through the collaboration of Greenpeace New Zealand and a number of forest product buyers from New Zealand known collectively as the International Tropical Timber Group (ITTG). Eco-forestry certification represents a simplified, less costly form of certification designed specifically to help community forestry operations develop the skills and capital necessary to proceed to full certification. Despite the active development of these various certification systems in the Asia-Pacific case study countries, forest certification has proceeded very slowly in the region (see Table 1). Only one of the operations has been certified for longer than five years (the term of a single certification period) and all community-based operations that have been certified have subsequently not been re-certified.

Table 1 FSC certificates issued (as of June 2004)

	Community	Natural Forest	Plantation	Total
Indonesia	1*	1	1*	3
Malaysia	0	2	2	4
PNG	2*	0	0	2
Solomon Islands	2*	0	1	3
Totals	5 (-5*)	3	4(-1*)	12

*Either currently suspended or no longer certified.

Challenges to Forest Certification

Political instability is a major problem in the region. In Indonesia, regional and ethnic clashes have accelerated since the 1998 overthrow of the Suharto regime. In the midst of political change, various islands and ethnic groups have been battling for independence and/or greater autonomy. Meanwhile, Papua New Guinea and Solomon Islands have undergone frequent changes in political leadership and also suffer from continued ethnic clashes. Malaysia, in contrast, has been relatively stable, with one political party maintaining control over the country since its independence in 1957.

All of the following case studies mention the absence of a market for certified products as a major constraint in the implementation of forest certification. The majority of exports in the region are sold within East Asian markets, where demand for "green" timber is minimal. China is currently the largest buyer of wood products in the Asia-Pacific, and Chinese demand for certified products is virtually non-existent. Without an adequate market for certified products, timber producers have little economic incentive to pay the costs of certification.

The lack of local community capacity to own and manage forestry operations represents another key factor shaping certification in the region and the case studies illustrate how this dynamic creates both opportunities and constraints for sustainable forest management. Opportunity lies in the potentially symbiotic relationship between development assistance donors and local communities. In such cases, donors provide communities with resources and capacity building in return for community adherence to sustainable forestry standards. Constraints to sustainable management, however, include continued dependence on foreign donor support and the relatively short-term nature of some donor-driven projects.

Forest tenure disputes, and/or disputes over resource distribution, profoundly influence the expansion of forest certification. Certification generally requires proof of clear tenure and use rights and long-term commitment to one particular forest management path. Logging in the region, however, is often conducted through short-term contracts between governments, local elites and foreign logging companies. Disputes are common between these logging contractors and local and/or indigenous rural populations.

Land ownership patterns vary considerably among the four case study countries. Most forestlands in Indonesia and Malaysia are government owned, while the majority of forestlands in Papua New Guinea and Solomon Islands are communally held. Regardless of official tenure arrangements, however, the growth of international commercial wood products trade represents a major economic shift away from traditional forest uses. Forest certification is often controversial under such circumstances, depending on whether it is seen as supportive of large-scale industrial logging or community-based resource uses.

Illegal logging and inadequately enforced forest laws compound social tensions in the region. In Indonesia, the problem is heightened by "turf wars" between national, regional and local governments, which have frequently led to conflicting environmental forest policies (Rhee 2003). In Papua New Guinea and Solomon Islands, relatively weak and constantly changing governments put serious limitations on enforcement capacity. In Malaysia, the problem of illegal logging is perhaps less severe than in the other case study countries (particularly on Peninsular Malaysia). However, international pressures have been brought to bear on the Malaysian government to ensure that logs imported for processing in-country – especially Ramin – have been harvested legally.

Competing Certification Systems

Forest certification itself comes with its own potential for generating conflict. From the international to the local level, forest certification is of concern to an extremely broad range of interests, including international lending institutions, international environmental groups, various levels of international, national, and local government, large and small-scale forestry operations, forest workers, and rural and indigenous communities, as well as a range of international, national and state environmental and social interests. Relations between many of these groups have long been dominated by conflict and distrust. Hence, certification systems perceived as being controlled by any single interest will be viewed as unacceptable by competing groups (McDermott 2003).

In terms of the political economy of competing certification systems, the case studies highlight two distinct political strategies: the creation of national systems (in Indonesia and Malaysia) on the one hand, and the development of markets for community-based operations (in Papua New Guinea and Solomon Islands) on the other. In their respective case studies, Muhtaman and Prasetyo (Indonesia) and Shahwahid (Malaysia) explain how national certification systems developed in an effort to maintain sovereignty over forestry decisions. However, these national certification systems have been unable to garner a high level of support from diverse interests, including international environmental groups, local NGOs, indigenous peoples and rural communities. The authors go on to explain the very different strategies pursued by Indonesia and Malaysia to make their schemes more nationally and internationally legitimate.

In Papua New Guinea and Solomon Islands, where the majority of forestlands are communally owned, NGOs and local communities have been the drivers of forest certification. Bun and Bwang (PNG) and Wairiu (Solomon Islands) discuss the development of Eco-forestry certification as an alternative approach for community operations currently unable to afford certification under the FSC. Eco-forestry certification was created through negotiations between New Zealand buyers (ITTG), international NGOs, and community forestry operators. Through the Eco-forestry certification system, community forestry operators receive financial and technical support as well as premiums for their forest products in exchange for adherence to a simplified set of forest management standards. The case studies highlight, however, a key difference between the national systems and Eco-forestry certification, rooted in the balance of decision-making power in the different schemes. As reflected in the case studies, while many NGOs support the Eco-forestry certification scheme, they are adamantly opposed to the national certification systems in their current forms.

Indonesia's LEI, Malaysia's MTCC, and Solomon Island's Eco-forestry certification all include elements of a "step-wise" approach to certification. Step-wise approaches allow for the graduated achievement of full forest certification. In Indonesia and Malaysia, managers are awarded "grades" for their performance. Under Eco-forestry certification, community forest operations obtain market approval by meeting a simplified set of standards as a first step in the longer-term goal of achieving FSC-

accredited certification. While step-wise approaches to certification are appealing in theory, the practical difficulty is to ensure that companies do, in fact, progress through the system and achieve the highest level of certification. If there is no systematic progression, the first step will become the de facto standard.

IMPORTANT QUESTIONS FACING THE REGION

These case studies from the Asia-Pacific region raise many important issues concerning the utility and feasibility of forest certification. Among the most important are working out who has the greater power to influence the direction of certification in the region – producers like Indonesia and Malaysia or consumers like China and Japan? Another key issue is determining who will pay for certification when market demand and/or community capacity are lacking and in a context of systemic social problems related to land tenure, inequality, political instability, corruption and illegal logging. Further, proponents of certification in the region are beginning to pose the question of how demanding certification standards should be and whether a step-wise approach to certification can be crafted to ensure more widespread adoption of the approach. Finally, an important issue raised by the case studies focuses on the role that governments have and could play in decision-making in relation to certification.

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Forest Certification in Indonesia

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ABSTRACT

Tropical deforestation and forest degradation in Indonesia is a serious concern of many stakeholders. About 16 million hectares of forestland in concessions is degraded. In addition, the lack of clarity of land tenure rights and ownership has given rise to significant conflict, which also contributes to unsustainable forest management. In response, domestic and international organizations have put considerable pressure on Indonesia to improve forest management policies and practices.

In 1990, the first ever developing country certification was carried out in Indonesia, when SmartWood certified Perum Perhutani's teak forest operation on the island of Java. In response to this and other NGO pressure, the Government of Indonesia established its own forest certification scheme – Lembaga Ekolabel Indonesia – in 1993.

In 1998, LEI was officially established as a foundation and since then has conducted several certification assessments. LEI and FSC have also developed a Joint Certification Protocol (JCP) that obliges FSC to use both LEI and FSC criteria and indicators when conducting an assessment of a forest management operation.

Despite its early arrival, poor forest practices, ineffective government policies, and forest-related conflicts over indigenous peoples' land rights have hindered certification's development in Indonesia. While many challenges remain, a few positive effects of certification have been noted. These include the establishment of a government incentive for companies to pass LEI certification, an increased willingness of companies to engage in public consultation, and the opening up of political space for NGOs and communities to express their concerns.

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INTRODUCTION[1]

Although its market-driven elements are often emphasized, forest certification actually encompasses much more: certification encourages collaboration, facilitates conflict resolution, builds confidence and trust, promotes partnership, and promises a premium price. These elements of a vision of what certification can achieve are a challenge to both private and communal forest managers. The implementation of certification in Indonesia has many unique features. Initially, not many parties welcomed the certification idea. However, international pressure, including boycotts of Indonesian wood products in Europe and the U.S., pushed forest certification onto the national forestry agenda.

The Government of Indonesia (GoI) developed an interest in certification as a result of its participation in the ITTO and the 1992 Earth Summit. At the ITTO, several meetings concluded in 1990 with a commitment by member states to achieve the sustainable management of natural tropical forests by the year 2000. Similarly, the non-binding Forest Principles adopted at the Earth Summit in 1992 put sustainable management of tropical forests on the agenda. The issue was made more urgent by growing environmental activism in North America and Europe demanding consumers to boycott tropical timber products. In response, the Indonesian government established its Standard and Criteria of SFM[2], which were fully supported by a private sector organisation (APHI or *Asosiasi Pengusahaan Hutan Indonesia*/Indonesia Forest Concessionaires Association), which was similarly concerned about market access.

Indonesia's interest in certification as a way to achieve SFM was also stimulated by an international non-governmental organization (NGO) called the Rainforest Alliance, which introduced SmartWood Certification Program into the country when it assessed Perum Perhutani's teak operation on Java in 1990. Simultaneously, SmartWood built up contacts with local NGOs including LATIN (Lembaga Alam Tropika Indonesia /Indonesian Tropical Institute). While NGOs generally supported the idea of certification, some such as WALHI (*Wahana Lingkungan Hidup Indonesia*/ Indonesian Forum for Environment) and SKEPHI (*Sekretariat Kerja Pelestarian Hutan Indonesia*/Working Secretariat for Indonesia Forest Conservation), questioned its feasibility in the Indonesian forestry context, where poor forestry and significant corruption existed alongside serious conflict with indigenous peoples.

With a variety of views about certification circulating, a *Kelompok Kerja Sertifikasi Lembaga Ekolabel Indonesia*/LEI (Certification Working Group of Indonesia Ecolabel Institute) was established in 1993 led by Emil Salim. The timing suggests that forest certification in Indonesia was also in part a response to the establishment of the Forest Stewardship Council (FSC), which had a founding meeting in Toronto, also in 1993. In the early years of its existence, the LEI working group concentrated on system and standard development; in 1998, however, the working group officially became the *Lembaga Ekolabel Indonesia*, an independent accreditation body.

The development of the LEI national standard raised the issue of its relationship with FSC. Although FSC was widely accepted by international markets, Indonesian stakeholders involved in LEI insisted that any Indonesian certification assessment

[1] This case study was conducted from January to June 2004. Given the limited documentation and research about certification in Indonesia, we depended on existing documents. We carried out a literature review and used notes from certification meetings as well as forestry mailing lists. We interviewed people involved with certification and sent a questionnaire to eight companies with certification experience. The personal experience of the authors has been an important component of the study. We are indebted to Asep Suntana who provided a thorough review of an earlier draft. We also wish to thank the companies who returned their questionnaires and gave us useful feedback. We appreciate our colleagues in Indonesia who supplied us with knowledge and information. Certainly our colleagues in LEI who provided detailed information and helped make this study possible. The Symposium organizers played a key role in making the study, the symposium, the workshop and book possible, and we are thankful to them. A special thanks to Fred Gale for reviewing and giving input on the study.

[2] Achieved via two decrees: the Indonesian Ministry of Forestry decree No. 252/Kpts-II/1993 and decree No. 576/Kpts-II/1993, Regulation of Sustainable Forest Management.

should use the LEI system. The situation encouraged FSC and LEI to co-operate and, since 1998, all certification activities in Indonesia's natural forests have been done using both systems under a Joint Certification Protocol (JCP). This arrangement is supported by GTZ, the German donor agency.

Certification has been underway in Indonesia for about 10 years and considerable difficulties have been encountered. Challenges include a problematic external environment composed of inconsistent government policy, poor law enforcement, and corruption. This tough external environment, coupled with some high-profile cases of certification withdrawal, have encouraged detractors to conclude that certification cannot work in Indonesia unless there are fundamental changes in existing arrangements, in particular land tenure arrangements and the policy environment. However, in our view, this is an overly pessimistic conclusion. We believe that certification can make a practical difference at the level of the management unit and that it is assisting a modest number of companies to improve their performance.

BACKGROUND FACTORS

Historical Context

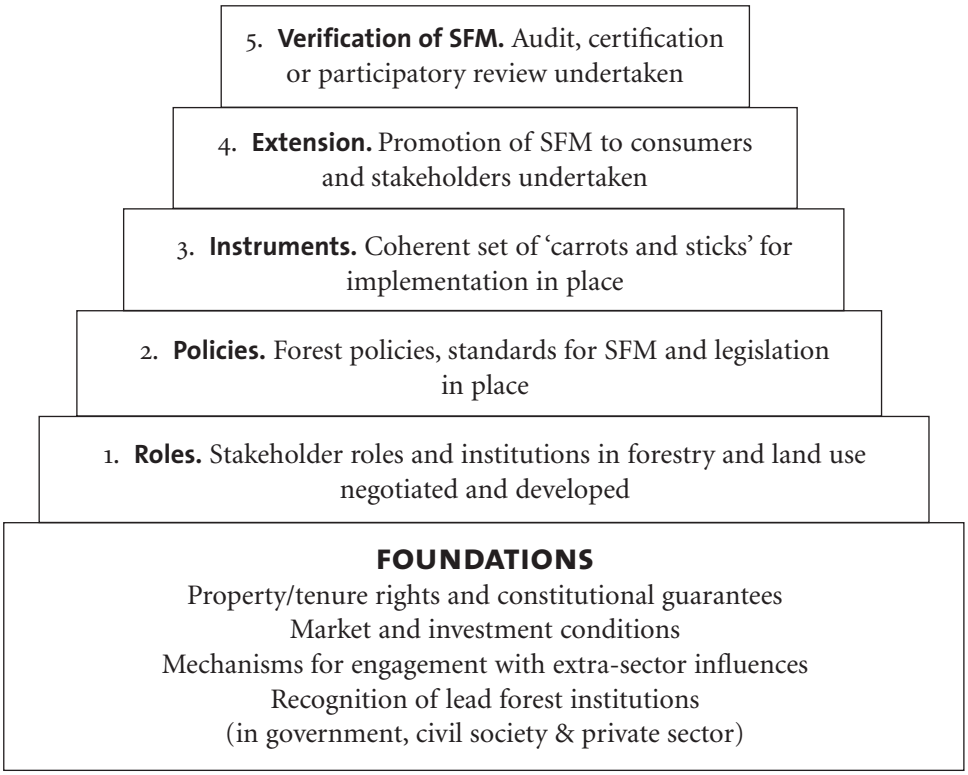
Forestry Problems

Forest fires, forest conversion and mismanagement are all proximate causes of deforestation and forest degradation in Indonesia. These factors also contribute to the loss of biodiversity (Agung 2001). However, underlying these proximate causes are a series of governance problems. The attainment of sustainable forest management (SFM) depends critically upon matters far from the forest itself, including the extent and quality of enabling policy, and legal and institutional arrangements (Mayers *et al.* 2002). The "pyramid" of forest governance when applied to Indonesia (Figure 1) illustrates many of these difficulties with problems in the foundational tier appearing in the form of forest-area conversion, land tenure overlap, unclear property rights, risky market and investment conditions, and social conflicts. These foundational problems reappear as problems in the forest sector in Tier 2 as policy failures with ineffective government incentives, heavy taxes and bribery. Good governance could make a substantial contribution to solving many of the problems located in the foundational tier.

One example of forest governance dysfunction is the tenure system. After more than three decades of operation, the HPH (*Hak Pengusahaan Hutan*/Forest Concessionnaire Holder Rights) system has failed to achieve sustainable forest management (Tim Fakultas Kehutanan IPB 2002). It has been recorded that in 1998, almost 17 million hectares of forestland under concessions was in a degraded condition. Some of the degraded areas were then converted into other land uses. Ministry of Forestry data indicates that in 2002, approximately 4.7 million hectares of forestland was reclassified as non-forestry cultivated land. This tendency towards significant forestland reduction is likely to continue in the future as forests are cleared

for palm oil establishment (Forestry Statistics of Indonesia 2002). About 420 forest concessionaires were recorded as being in business in 1998, occupying a total area of 51.58 million hectares. Today, however, the number has fallen to 270 HPHs with a working area of 28.08 million hectares (Forestry Statistics of Indonesia 2002).

Figure 1 The pyramid of good forest governance



Note: the lower tiers in this pyramid are more difficult to build and are more important than the higher ones. The Foundational Tier is crucial, but is largely hidden from view and incorporates a large number of actors outside the forest sector.

Source: J. Mayers, S. Bass and D. Macqueen, *The Pyramid: A Diagnostic and Planning Tool for Good Forest Governance* (London: IIED 2002).

Another example of a forest governance failure in Indonesia is illegal logging. It has been estimated that 70 percent of forest products coming from timber processing mills is from illegal sources, an amount valued at approximately US$3 billion in 2002 (Musthofid and Witjaksana 2002).[3] Wood-based industries use illegal logs because it is economically rational to do so since these are much cheaper than legal logs by about US$50 per cubic meter (Mir and Fraser 2003). The widespread existence of illegal logs undermines the incentive to produce legally.

[3] Obidzinski (2003) has pointed out that patron-client dependency in natural resource utilization systems – including forestry in Indonesia – is a major reason why illegal logging is so difficult to suppress.

Policy Responses

The policy response to the issue of poor governance has been to focus mainly on the proximate causes of deforestation and forest degradation and to downplay the structural causes, especially the tenure system. Efforts to bring about change include the introduction of various sustainability-related policies, including since 1972 the Indonesian Selective Cutting system. Nevertheless, due to improper implementation, Indonesia's forests continue to experience over-exploitation (Barr 1999, 2001; Brown 1999, 2001), which has been exacerbated by illegal logging. Illegal logging takes place on almost all forestland in the country, including national parks. While certification has been perceived as an innovative policy response with respect to illegal logging, it has been largely ineffective in protecting the country's forests and national parks because it is limited to the forest management unit level and because it is a voluntary not mandatory approach that focuses on internal management improvement. Because so much timber is illegal in Indonesia, considerable reliance has been placed on Chain of Custody (CoC) certification as a tool to enable the industry to prove that its logs come from certified sustainable forest. With a minimum supply of certified logs in Indonesia, there is a potential role to extend CoC certification to verify the legality of logs entering production, and not merely as a follow-up process of the certified forest management unit.

Structural Features

Ownership and Tenure

The Indonesian government designates four major categories of forest. These are: (1) Conservation Forest, an area of about 19 million hectares designed to conserve biodiversity; (2) Protection Forest, an area of about 31 million hectares with the primary function of supporting the living system, such as providing potable water and preventing erosion and flooding; (3) Production Forest, an area of about 64 million hectares intended to produce timber in sustainable manner; and (4) Conversion Forest, an area of about 8 million hectares designed for non-forestry development. About 43 million hectares of Indonesia's forest has been degraded. Degraded forests exist not only in the Production Forest but also in the Protection and Conservation Forests. Summing these components up, the total forest is about 122 million ha, which is similar to the common view that Indonesia's total forest area is around 120 million ha. Forest Watch Indonesia provides data (Table 1), which shows a decline in forest cover of 15 percent between 1986 and 2000.

There are three main forest production management systems in Indonesia: KPH, HTI and HPH. The KPH (*Kesatuan Pemangkuan Hutan*/Forest Stewardship Unit) system has been developed in Java following the long history of plantation forestry dating back to the colonial era.

Table 1 Forest area in Indonesia 1986-2000

	1986		2000		Change in 1986-2000	
Forest Classification	Area (ha)	% Total	Area (ha)	% Total	Area Change	% Change
Production forest	31,850,000	23	35,200,000	29	3,350,000	11
Limited production forest	30,520,000	22	21,800,000	18	-8,720,000	-29
Protected forest	29,680,000	21	31,900,000	27	2,220,000	8
Conservation forest	18,250,000	13	23,300,000	19	5,050,000	28
Conversion forest	30,540,000	22	8,200,000	7	22,340,000	-73
TOTAL	140,840,000	100	120,400,000	100	20,440,000	-15

Source: Forest Watch Indonesia-Global Forest Watch. Potret Keadaan Hutan Indonesia. 2001: 18

The second forest management system is HTI (*Hutan Tanaman Industri*/Industrial Forest Plantation). Officially, the main purpose of HTI is "an activity to rejuvenate and revitalize forest lands in order to increase the potential of production forest to guarantee the availability of industrial material and is an effort to rehabilitate unproductive production forest. Many view HTI in practice, however, as a vehicle for earning more profits by cutting the logs in the HTI land clearing process" (Colchester *et al.* 2003).

The third forest management system is HPH (*Hak Pengusahaan Hutan*/natural forest concession holders). Indonesian corporations or individuals are only granted forest concessions by the Ministry of Forestry in production and limited production forest areas.

The Government established *Peraturan Pemerintah* (Government Decree) No. 21/1970, which grants rights to the private sector to manage HPH forest areas (Tim Fakultas Kehutanan IPB 2002; Brown 1999). The decree provided HPH holders a non-transferable 20 year right to cut timber, but obliged concessionaires to follow the principle of sustainable forest management as prescribed by the Indonesian selective logging and planting system (*Tebang Pilih Tanam Indonesia* or TPTI).

In addition to these three systems of tenure, Article 33 of the 1945 Indonesian Constitution stipulates that the State controls natural resources and their utilization. Acting on this authority, the Government of Indonesia controls, manages and administers the nation's forests under the provisions of the 1967 Basic Forestry Law (Act 5), and the supporting rules and regulations. This arrangement contrasts significantly with that found in Papua New Guinea (PNG) where 97 percent of land is customarily owned (see PNG case study by Bun and Bewang, this volume), or in Solomon Islands where 90 percent of the forested lands is in traditional ownership (see Solomon Islands case study by Wairiu, this volume). In 1999, a new Indonesian Forestry Law No. 41/1999 was enacted, which helped strengthen forest conservation measures. Although recognized in the 1960 Agrarian Law, customary land rights (*hak tanah adat*) were not clearly acknowledged in the 1967 Basic Forestry Law, which sets

out land to be set aside as state forest and the purposes for which that forest land will be put aside. However, customary rights are given more emphasis in the 1999 Forestry Law (Kartawinata *et al.* 2001) although the government has been relatively powerless to enforce ownership rights and defend the legal status of forests.[4] The lack of provision for the rights of local communities has resulted in many conflicts between local communities and concession holders.

The prevailing conflict over land tenure suggests that the existing laws and regulations mentioned above have not clearly recognized the community land tenure and ownership system. In principle, all land and forests without formal ownership are owned by the state (Ruwiastuti 2000; Bachriadi *et al.* 1997). There are strong similarities between the Indonesian forestland ownership system and that of Malaysia (see Malaysia case study by Shahwahid, this volume). The rights of communities that have traditionally lived in and around the forests have been neglected or overruled.

Officially there is a HKM (*Hutan Kemasyarakatan*/community forestry) program, which commenced in 1998 by the Ministry of Forestry. HKM was designed to provide communities with access to state lands for planting trees (usufruct rights). However, HKM is not effective because it presents communities with serious administrative and procedural difficulties such as requiring them to obtain the legal status of forest management unit/community organization. Moreover, HKM regulations did not set out clearly who has authority to issue permits. In response to these difficulties, the HKM regulation was revised; however, instead of improving matters, procedures were made even more complicated, rendering HKM a failure.

Markets

The average log production (round wood) for the past 7 years, whether from HPH, HTI, private forests or other sources, has only been capable of supplying a small percentage of overall domestic demand. For example, in 2001, these sources only supplied 37 percent of industrial raw material needs. The percentage of log production coming from natural forests using selective cutting decreased from 72 percent to 18 percent over the last seven years, while production from conversion forests increased significantly in the late 1990s, but has subsequently declined. Detailed figures are given in Table 2.

Forest products (plywood, sawn timber) are mainly exported to Asian countries such as Japan, Singapore, Taiwan, Hong Kong, China, and South Korea.

[4] The government of Indonesia through the State Ministry of Agraria Affairs/National Agrarian Board issued ministerial decree No. 5 Year 1999 on Guideline of Resolving Adat Land which highlights the principle of determining adat land (ulayat) and its claim implementation. This was introduced through *Peraturan Menteri Negara Agraria/ Kepala Badan Pertanahan Nasional* No. 5 Tahun 1999 *Tentang Pedoman Penyelesaian Masalah Hak Ulayat Masyarakat Hukum Adat*. Under the current legal structure, the ministerial decree does not have any teeth to enable implementation at the local government level. Since 1995, however, the government has encouraged local populations to take a more active role in forest management and the establishment of social forestry programs. This was supported by a decree in 1998 that authorised communities to undertake timber harvesting through cooperatives. Another similar programme is the Management of Forest Production by Traditional Societies, which involves non-government organizations (NGOs) working in partnership with local communities. Although not comprehensive, the new Forestry Law of 1999 does define some aspects of the property and other rights of local communities with regard to forestland. It defines a customary forest (*hutan adat*) as a state forest on the territory of a customary society (*masyarakat adat*) and acknowledges community rights 'as long as they are evidently in place and their presence is acknowledged and as long as their rights do not conflict with national interests'. *Peraturan Menteri Negara Agraria/Kepala Badan Pertanahan Nasional No. 5 Tahun 1999 tentang Pedoman Penyelesaian Masalah Hak Ulayat Masyarakat Hukum Adat*.

Table 2 Log production by sources

Year	Natural* Forest (m^3)	%	Conversion Forest (m^3)	%	Forest Plantation (m^3)	%	Private Forest (m^3)	%	Total (m^3)
2001	1,809,099	18.0	2,323,614	23.1	5,918,766	58.9	0	0.0	10,051,479
2000**	3,450,133	25.0	4,564,592	33.1	5,294,604	38.4	488,911	3.54	13,798,240
1999/2000	10,373,932	42.2	7,271,907	29.6	6,019,107	24.5	895,371	3.6	24,560,317
1998/1999	10,179,406	53.5	6,056,174	31.8	2,162,546	11.4	628,818	3.3	19,026,944
1997/1998	15,821,397	53.6	10,162,081	34.4	2,247,190	7.6	1,289,654	4.4	29,520,322
1996/1997	15,268,135	58.6	8,021,329	30.8	2,097,812	8.0	682,006	2.6	26,069,282
1995/1996	16,943,933	68.2	5,398,196	21.7	2,383,049	9.6	124,883	0.5	24,850,061
1994/1995	17,308,737	72.0	4,708,697	19.6	1,871,737	7.8	138,106	0.6	24,027,277

Source: Forestry Statistics of Indonesia, Ministry of Forestry 2001
* Annual production from TPTI (Tebang Pilih Tanam Indonesia/Indonesian Selective cutting and Planting System)
**Data from April to December 2000

Other destinations include the European countries (UK, Netherlands, Belgium, Italy) and the USA and Canada. During the last 10 years, the export of plywood from Indonesia to North America and Europe decreased significantly, while that to Asia and Middle East remained healthy until 1996, when exports began to decline. These details are shown in Table 3.

Table 3 Export destination and revenue from sawnwood and plywood

Year	Product	USA & Canada (m^3)	Europe & UK (m^3)	Far East (ASIA) (m^3)	Mid East (m^3)	Others (m^3)	Total (m^3)	Value (US$)
1991	Sawnwood	0	117	12,403	659	0	13,179	14,637,289
	Plywood	875,117	849,590	6,251,499	677,056	306,074	8,959,336	3,161,150,098
1992	Sawnwood	40	14	308	0	0	362	539,212
	Plywood	1,014,941	1,079,678	6,486,665	802,817	313,289	9,697,390	3,520,445,420
1995	Sawnwood	0	0	795	0	0	795	2,047,051
	Plywood	698,261	744,420	4,022,451	619,693	2,254,000	8,338,825	3,854,178,215
1996	Sawnwood	0	0	60	0	0	60	849,586
	Plywood	912,581	852,341	5,089,192	656,879	1,855,580	9,366,573	4,429,477,446
2000	Sawnwood	218	3,594	6,061	0	0	9,873	40,524,111
	Plywood	188,466	419,824	2,265,588	191,050	31,316	3,096,244	881,000,321
2001	Sawnwood	1,385	0	10,929	0	0	12,314	5,190,000
	Plywood	128,881	9,930	492,720	85,116	3,052	719,699	315,210,000

Source: Forestry Statistics 1992-2001, Ministry of Forestry

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

Certification started in Indonesia with an assessment of *Perum Perhutani* by SmartWood in 1990. After decades of struggle both through field action and policy intervention to prevent forest destruction due to logging operations, a few NGOs felt that certification could provide a tool for change and that it was (and is) an effective instrument to democratise forest resource management by making practices in forest concessions more transparent. It could also enhance public involvement in forest management through public consultation and monitoring and provide a "level playing field" and "learning arena" for sustainable forest management among interested parties including the private sector (concessionaires and industries), government, NGOs, academics, and communities.

Government interest in forest certification was stimulated by International Timber Trade Organization (ITTO) meetings in the late 1980s and early 1990s when members approved a set of "Guidelines for the Sustainable Management of Natural Tropical Forests" and agreed, in Bali, Indonesia, that producer members should develop national guidelines based on the ITTO model to encourage progress towards "Target 2000." Neither "Target 2000" nor the ITTO guidelines made reference to certification, but both eventually served as "building blocks" for forest certification with the guidelines providing a technical basis for criteria and indicators and the year 2000 being seen by the Ministry of Forestry as the date by which the program should be implemented (Elliot 2000). At this point, the Government of Indonesia developed an interest in establishing an agenda for certification development. Unlike in Malaysia (where certification was led by the Ministry of Primary Industries) or Papua New Guinea and Solomon Islands (where it was driven by local and international NGOs and individuals) forest certification in Indonesia was driven by the Ministry of Forestry.

On the market side, wood products from Indonesia were threatened by environmental NGOs in Europe and the USA. Organisations in these countries called for a boycott and pressured governments to ban the use of tropical timber in public construction in various municipalities in Germany, Holland, the UK and the USA (Elliot 2000). The situation became more serious, however, in June 1992, when the Austrian parliament passed the "Federal Act on the Labelling of Tropical Timber and Tropical Timber Products as well as the Creation of a Quality Mark for Timber and Timber Products from Sustainable Sources." This act made labelling of tropical timber obligatory in Austria, although following international pressure led by Indonesia and Malaysia, Austria revised the Act in the spring of 1993 and the obligatory timber labelling requirement was dropped in favour of voluntary labelling (Rametsteiner, quoted in Elliot 2000). Forest concession holders subsequently put certification on the Indonesian agenda because 40 percent of the country's total exports were in product categories likely to be affected by an ecolabel. Both the Indonesian government and the private forestry sector organisation, APHI, began to promote the establishment of certification.While some Indonesian NGOs, such as RMI (*Rimbawan Muda Indonesia*/Indonesia Youth Forester, now called The Indonesian Institute for Forest

and Environment) and LATIN supported certification, others such as WALHI argued that certification could not be effective within the political structures of the day.

Rowland and Simpoha (1999) identified several constraints and challenges for certification in Indonesia that were of particular concern to NGOs. These included the perception that FSC required an absence of conflict over rights to forest concessions, an obligation that could rule out certification for nearly all the country's forestry concessions. But there was a policy problem as well. It was debatable whether Indonesia could afford to wait for certification to change attitudes and practices in the forestry sector in view of existing rates of deforestation and the extent of illegal logging. Influencing forest production indirectly through the global timber trade was considered to be a long-term process that depended on whether a sufficient market for 'eco-timber' really existed, whether consumers in the North were committed to purchasing certified timber, and whether profitable markets for uncertified wood and wood products remained.

Institutional Design

To facilitate certification, changes to silvicultural policy in Indonesia were and are needed. Concessionaires are currently required by the terms of their concession licenses to undertake practices that contradict certification requirements. It is questionable whether certification can stimulate a policy change of sufficient magnitude in Indonesia's forest management system. Compounding these policy problems, there is a lack of community-level institutions for forest management after 30 years of virtual exclusion from the forest. The legal framework for community forestry is still unclear. For example, *hutan adat* rights and options are untested. The legal obstacles to recognising community rights are still considerable. It may be unrealistic to expect legal changes that bring them into line with certification standards in the near future. In response to this situation LEI launched a certification system and standard designed for community-based forest management that is now being trialed in the field.

In 1992 and early 1993, MPI (*Masyarakat Perhutanan Indonesia*/Indonesian Forestry Community) created a working group to develop Indonesian criteria for sustainable forest management. The group was coordinated by APHI with the proposed standard drawing mostly from ITTO's criteria and indicators. Professor Soerianegara from Bogor Agricultural University (IPB) headed up the team that developed this standard, which included academics and representatives from concessionaires. The Ministry of Forestry and the Ministry of the Environment chaired the APHI Group. Preparatory work on this had apparently started informally within MPI in 1990 after the ITTO meeting in Bali. However, the group was formally constituted and the link made between criteria and indicators and certification in 1992. The analysis of MPI seems to have been that the development of criteria and indicators for sustainable forest management and timber labelling was going to be inevitable in the future, and that they should take the lead in developing national criteria and indicators rather than run the risk of having them imposed (Elliot 2000).

Two options were debated at this time: to join the FSC process already under way, or to develop a national, independent certification process, system and standard separate from external processes. Stakeholders in Indonesia chose the second option and certification began as a producer-led initiative independent of other international initiatives, very much along the lines of Malaysia's National Timber Certification Council. However, both countries have since chosen to seek closer ties with international certification initiatives, most notably the FSC, with the aim of gaining international market recognition for their labels.

One reason behind this national certification initiative was that, if certification was coming, the Indonesian timber trade preferred to be a market leader, participating in shaping the system, rather than to have to adapt to an externally established system. In addition, there was a need for other mechanisms for evaluating the quality of forest management in Indonesia, a fact fully recognized by the Ministry of Forestry. Finally, there was increased pressure from Indonesian civil society for changes to the forestry sector, where many forestry practices marginalized the roles and rights of communities as forest beneficiaries (Elliot 2000).

At the end of 1993, Djamaludin Suryohadikusumo, then-Minister of Forestry, announced that he had asked Emil Salim, a former Minister of the Environment and member of the Bruntland Commission, to develop a national forest certification system and establish the program's institutional arrangements. Salim then established the Indonesian Ecolabelling Working Group, an independent task force composed of individuals from NGOs and academia.[5] The working group began to take shape in early 1994 on the basis of a Memorandum of Understanding signed by Djamaludin and Salim (Elliot 2000: 102).

There were three objectives of the LEI Working Group (*Kelompok Kerja Ekolabel Indonesia /Pokja Ekolabel*). These were to (a) develop criteria and indicators of sustainable forest management, (b) design a decision-making method for the forest certification process, and (c) design institutional arrangements for the formal establishment of the Indonesian Ecolabelling Institute (Salim *et al.* 1997). The basic principles of the LEI programme were defined as follows: to function as an independent, non-profit, third-party certification body; to encourage the implementation of the criteria and indicators and certification procedures and to make the final decision on issuing certificates; to ensure transparency throughout the certification process; to aim for mutual recognition of certification schemes internationally; to promote certification as an incentive not a punishment for concessionaires; and to implement certification on a voluntary basis.

The Pokja LEI process involved a variety of interest groups including the APHI expert team, the National Standarization Board (*Dewan Standardisasi Nasional*/ DSN), NGOs, and experts from universities. The LEI standard itself draws from international documents, namely FSC's Principles and Criteria, ISO's 14000 series, and the ITTO's criteria and indicators. Before the establishment of the working group, a Ministerial Decree was adopted in April 1993 on "Criteria and Indicators for the Sustainable Management of the Natural Production Forest." The decree specified that the management of natural production forests would be considered sustainable if it

[5] In 1994 the membership of the group was as follows: Dr Emil Salim, Chair; Dr Riga Adiwoso, Professor of economics, University of Indonesia; Ir Hariadi Kartodihardjo, PhD candidate in forest policy, Bogor Agricultural University; Ir., Haryanto R. Putro, forest conservation, Bogor Agricultural University; Ir Zaim Saidi (NGO-*Yayasan Lembaga Konsumen Indonesia*, a consumer advocacy group); Ir Asep S. Suntana, RMI-Indonesian Institute for Forestry and Environmental Research, an NGO; Ir Tri Nugroho and Suporaharjo, LATIN, Indonesian Tropical Institute, and NGO, and Ir Mia Siscawati, RMI. From 1994 to 1997 the membership of the group was essentially the same with one NGO representative (Nugroho) being replaced with another one. Tri Nugroho and Suporaharjo were not active after LEI became a Foundation.

complied with specified national and management unit level criteria and indicators as set out in an independent and credible certification system (Elliot 2000).

It is important to note that Pokja LEI made use of international sustainable forest principles and that a review was carried out to improve the implementation of environmental impact assessment (EIA), a weakness of forest management in Indonesia at this time (Kartodihardjo 2003).

This was a critical period for LEI in terms of its ability to establish a credible certification system. The Ministry of Trade and Industry and the Ministry of Environment relied on LEI to further develop certification for both forest and non-forest products. Heated discussions eventually led to consensus among the interest groups, mainly NGOs (who wanted the social and ecological aspects to be taken more seriously) and APHI (who had developed their own certification system). Harmonization of diverging views took place, resulting in the certification system that is now being implemented. The establishment of the working group prevented APHI's criteria and indicators from being imposed on the country as a national standard and subsequently the APHI initiative evolved into an internal auditing system to help concessionaires prepare for certification (Elliot 2000).

A consensus emerged between the LEI Working Group and APHI to harmonize the certification standard at this time, even though the former contained stronger social and environmental provisions. By the end of 1996, the main elements of the LEI forest certification programme were in place and in April the draft standard was submitted to the Indonesian National Standards Body for approval. In April 1997 a workshop was held between the Ministry of Forestry, APHI and LEI at which the three institutions agreed that LEI's criteria and indicators were acceptable and this agreement can be seen as a key stage in the programme development phase (Elliot 2000).

Field tests and system improvement were conducted intensively during this period and an effort was made to build up certification and assessment expertise. Given LEI's multifarious role, it organized several training sessions for assessors, established expert panels, and put in place the infrastructure for accreditation. Pokja LEI was officially established as a foundation in February 1998 as *Yayasan Lembaga Ekolabel Indonesia* (LEI) and in June of that year, LEI's criteria and indicators for natural forest management were adopted as the Indonesia National Standard.

Table 4 Forest Stewardship Council (FSC) and Lembag Ekolabel Indonesia (LEI) comparison

Items	FSC	LEI
Standard	• More focus on conservation. • 10 principles and 56 criteria designed for global application. • Certifiers develop indicators for specific jurisdictions. • Focus is on the implementation of planning documents. • Places emphasis on performance and SFM compliance. • Planning & monitoring should be publicly accessible.	• Focus on TPTI (selective cutting) and other forest management requirements set by government. • Criteria and indicators are tailored specifically to Indonesian forest conditions – 57 indicators (21 on production 19 on environment, and 17 on social requirements). • Verifiers defined to check that forest management implemented according to the standard. • Emphasis placed on the system applied by the forest management unit.
Assessment process	• Scoping is voluntary. • Assessments directly conducted by the accredited certifiers. • The weakest indicators are subject to pre-conditions.	• Screening by Expert Panel I (compulsory). • Scoping (compulsory). • Public meeting and certification monitoring is link with the established FKD (*Forum Komunikasi Daerah* / Regional Communication Forum). • Stronger indicators can compensate for weaker ones. • More criteria.
Decision-making process	• Decision to certify is responsibility of certifier. • At least two peer reviewers for decision verification. • FSC not involved in the decision making process.	• Decision-making done by an independent Expert Panel II based on data from the certifier assessment process. • Application of Analytical Hierarchy Process approach. • Assessors act as data enumerators/data collectors. • LEI makes decision to certify.

Applications for Certification Bodies (CBs) were solicited at this time, and from 10 applications, four were approved and accredited to LEI: PT TUV International Indonesia, PT SGS ICS Indonesia[6], PT Mutuagung Lestari and PT Sucofindo. From 1998, all assessments have been conducted by one of these accredited certification bodies. In 2000, in order to obtain public and international confidence in LEI as a credible system and to refine field assessment methods, LEI organised a workshop in cooperation with FSC that resulted in the establishment of the Joint Certification Program (JCP) in accordance with a Mutual Recognition Agreement (MRA). The purpose of JCP was to strengthen the bargaining position of LEI with respect to other forest certification initiatives, FSC included. The JCP was signed to convince foreign interests of the high degree of credibility of Indonesia's nationally based system. The JCP—signed in September 2000 by their respective accredited CBs operating in Indonesia, by the Executive Directors of both organizations, and by the GTZ representative—contained the following elements (LEI 2002). Both schemes should:

- Meet all the requirements of FSC and LEI;
- Use LEI's Criteria and Indicators (FSC's certifying bodies will use all LEI C&Is, including those exceeding FSC requirements as well as those additional FSC requirements not included in LEI's scheme);
- Oblige FMUs to pass both LEI and FSC system requirements to obtain certification (permitting the issuing of both certificates and the use of both logos);
- Make the FSC scoping requirement non-compulsory and determined by the FSC certifying body;
- Require public consultation as a fundamental component of the JCP;
- Make public summaries of the certification decision available in Bahasa Indonesia and English; and
- Conduct surveillance visits and appeal processes according to each system's requirements.

LEI's approach to certification is based on a "logical framework." The framework consists of two "dimensions" used to evaluate the quality of forest management in a concession. The first is the "sustainable forest management principles dimension", which covers the results of forest management. The second is the "management dimension," which addresses the inputs or strategies used to achieve sustainable forest management. The "sustainable forest management principle dimension" is divided into three functions: production, ecological, and social. Similarly, the "management dimension" is divided into three levels concerning forest resource management (at the level of the concession as a whole), forest stand management and institutional management. This framework has provided the basis of a set of criteria and indicators that are used for the evaluation of concessionaires' performance in the field.

[6] Since 2002 SGS Qualifor was replaced by SGS Malaysia. Meanwhile, PT SGS ICS Indonesia withdrew from the certification in November 2002 following a risk analysis of their forest certification business in Indonesia. (Personal communication with Daru Ascarya, Accreditation officer at LEI June 2004).

The final component of the LEI system is the use of the Analytic Hierarchy Process (AHP) for decision-making. AHP is used by Expert Panel 2 to weight the LEI criteria and indicators gathered by assessors in the field according to local social, ecological and economic conditions. The result of a LEI certification assessment is a grade on the certificate. The highest grade is gold, which means that the company has achieved sustainable forest management. Lower passing grades (silver and bronze) are given to concessions that are weak in one of the dimensions of sustainable forest management. Weaknesses in two dimensions, however, mean that the concession fails to be certified.

Standards

Certification was designed to overcome, at the level of the management unit, the numerous forest management, social and environmental problems outlined earlier. To do this, LEI has developed several certification mechanisms and procedures for natural forest certification including a certification standard (SNI 5000 series), certification procedures (LEI 99 series), and a performance evaluation standard (LEI-01 and LEI-02). Standards for forest plantations are also completed. A community-based forest certification standard is under field-testing. The standard for natural forest management is the longest established, and therefore much of the focus of this section refers to this standard. In addition, the natural forest certification standard became the basis of later systems.

Certification standards are determined according to the certification activities. LEI 5000 Standards are based on a SFM system framework. Criteria, indicators and verifiers are discussed in more detail in LEI-01 standards, while the FMU performance values are determined using the LEI-02 document. The matrix in Table 5 shows how the management and production dimensions are combined and that each indicator represents a combination of dimensions. Table 6 elaborates on LEI classifications.

Table 5 Matrix showing the management and production dimensions of LEI

Management Dimension (Strategies for Achieving Results)	Production Dimension (Principles)		
	Production Sustainability	Environment Sustainability	Social Sustainability
1. **Area Management** (Compulsory Requirements) – *necessary conditions*	INDICATOR	INDICATOR	INDICATOR
2. **Forest Management** 2.1 Production 2.2 Environmental 2.3 Social (Core activities)	INDICATOR	INDICATOR	INDICATOR
3. **Organizational Management** (Desirable) – *sufficient conditions*	INDICATOR	INDICATOR	INDICATOR

Source: LEI 5000 Standards

Table 6 Clarification of the main conditions for the social, environmental and production aspects in LEI

NO.	ASPECT	MAIN CONDITION	CLARIFICATION
I.	SOCIAL	1. Tenure system	Land claims by local communities based on traditional ownership must be acknowledged.
		2. Economic development of local Community	If the local community relies on the forest for their livelihood, their activities should not be disturbed by the existence of the FMU.
		3. Guarantee of social/ cultural integrity	No use of force (physical & non-physical) to solve problems with the workforce or the local community occurs.
		4. Guarantee of community nutrition and health	The FMU must be sensitive to the impact of its activities on the local community's health.
		5. Guarantee of workers rights	No unjust contract termination, health and safety should be provided, workers unions must be allowed, and salaries should be suitable to the local conditions.
II.	ENVIRON-MENT	1. Condition of the vegetation	The structural composition of the forest stands should not change drastically, both within protected areas and other areas.
		2. Condition of the wild life	Logging activities should not disturb the biodiversity of animals and their habitats.
		3. Soil and water conservation	The level of erosion and water quality should not change as a result of forest exploitation. The FMU must have equipment for monitoring and evaluating its environmental impact.
III.	PRODUC-TION	1. Area status and security	The area managed by the FMU must be free of land use conflicts in the long term. Both horizontal conflict with the local community (traditional land) and vertical conflicts due to inconsistent policies for land use allocation must be addressed. The FMU must be active in resolving conflicts.
		2. Planning and harvesting techniques	Harvesting should be well planned especially the yield schedule, and preparation of infrastructure must follow a set standard. Timber harvesting is done emphasizing environmentally friendly methods (RIL)
		3. Silvicultural system and rehabilitation	The FMU must implement post-harvesting activities in a realistic manner. The silvicultural system used should guarantee continual production for the long term in accordance with the forest condition
		4. Timber management and reporting	Any logs at the felling site, log landing or log pond are clearly identifiable
		5. Organization and administration	The FMU operations are supported by a professional organization and Standard Operating Procedures (SOP) are prepared, especially in forest fire management

The LEI standards provide several documents related to certification administration. Assessors, for example, should understand LEI doc-1 and LEI doc-2 for field assessment. Assessors must check the detailed indicators in the field as written in the LEI documents. This is different from FSC certification, which provides the assessor with a generic standard, which is then elaborated in the field unless an FSC national working group has developed national or regional standards. Where those exist, the FSC accredited certifier must then assess practices according to the endorsed national or regional standard.

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

After more than ten years of operation in Indonesia, certification has been widely criticised by several parties. The most vociferous critics are NGOs led by WALHI and its international network (such as the Rainforest Foundation, Rainforest Action Network and Down to Earth). In March 2001 a workshop was organized by WALHI and attended by several NGOs and individuals on the subject of certification. At the end of the workshop participants signed a statement calling for a temporary halt to scoping, assessment and issuance of certificates to Indonesia's forest concessions—in effect, a forest certification moratorium. In its correspondence, WALHI does not oppose certification in principle but is opposed to certification in the current situation. Its position is that no certification of any logging concessions (HPH) can be credible as long as the concession system and legislation (such as the Forestry Act No.41/99) fail to grant local communities rights to their land and resources. The whole concession system must be revised and the borders of indigenous peoples' lands clearly defined (Down to Earth 2001).

In September 2000 ARuPA—a student forest advocacy group in Jogjakarta—issued a position paper criticizing the certification of Perum Perhutani done by SmartWood and its partner in Indonesia, LATIN. They argued that, based on their observations, KPH Perum Perhutani should not be certified due to ongoing social conflicts and illegal logging.

Some of the corrective actions requests (CARs) imposed on Perhutani were considered unrealistic. According to some national and local newspapers, ARuPA claimed that the log transport system was vulnerable to manipulation. Therefore, the issuance of CoC certificates for furniture industries in Java was not valid (Fuad and Astraatmaja 2000). The complexities of the Indonesian bureaucracy relating to timber operations make it easy to mislead certifiers about the sources of timber used by chain-of-custody companies. A field study by the ARuPA indicated a variety of ingenious methods for illegally harvesting teak plantations and "laundering" the timber so wood processors could claim they only used legal sources of wood. Local government officials, security forces and Perhutani staff and senior level bureaucrats were allegedly implicated in this "legalization" of illegal logging (Down to Earth 2001).

Despite this criticism, there are some NGOs working towards certification. RMI, Pelangi, YLKI (*Yayasan Lembaga Konsumen Indonesia*/Indonesian Consumer

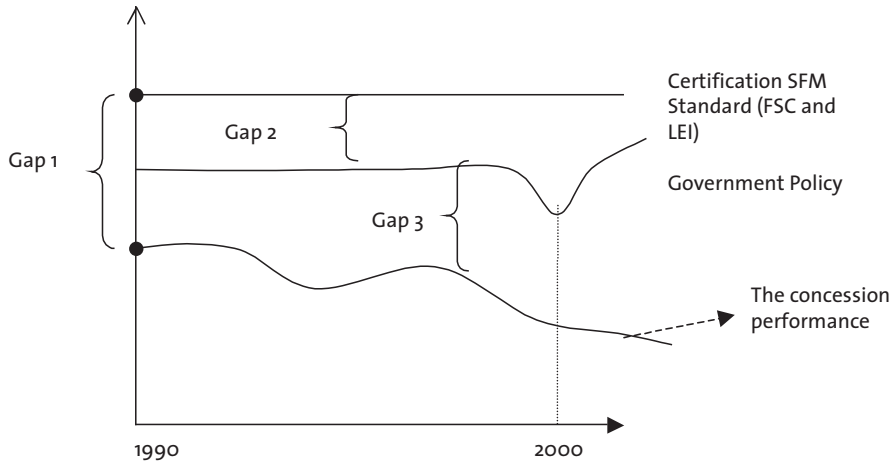
Advocacy Group), LATIN and Skephi are among those who champion certification. LATIN and Skephi are both members of FSC. In its response to criticism, LATIN believes that certification is a useful tool to penetrate directly and practically to the heart of forest management companies. Certification can also be a useful tool to ensure that stakeholders have access to the management unit to raise issues of concern. LATIN argues that certification is not a panacea to solve all of Indonesia's chronic forestry problems. It can, however, be a bridge and a forum of dialogue for stakeholders to raise their respective concerns. It is up to the assessed company to figure out ways to solve the conflict, to build a consensus, and to share its power with others. If it fails to do so, the conflict will continue, forest sustainability cannot be guaranteed, and the company in all probability will fail to meet the certification requirement (LATIN 2000).

Forest Owners

Early on, the Indonesian private sector was very enthusiastic about certification. This can be observed through the development of criteria and indicators initiated by APHI in 1993. APKINDO (Indonesian Wood Panel Association) believed ecolabelling would support sustainable forest management and provide economic incentives (APKINDO quoted in Elliot, 2000). To ready concessions for certification, APHI continues to use its standard as an internal audit to identify the preparedness of its members. An APHI study showed that among the HPH undergoing evaluation none was ready to be certified to the sustainable forest management standard. In addition APHI has conducted certification training for its members.

Many years after ITTO commitment in Bali (1990) to achieve SFM in the year 2000, a dynamic process has emerged resulting from the different standards in use and commitments of all involved parties (i.e. between the standard of sustainable forest management, the Government policy, and the concession performance). This dynamic is illustrated in Figure 2.

Figure 2 Gap between SFM standard, government policy and concession performance



Although the number of forest concessions in the last 30 years has been decreasing, the figure indicates that the ones that remain continue to fail to meet the government's standard. Their capacity to do so was weakened by the regional autonomy policies implemented in 2000, which created great uncertainty especially in the transition period. The situation was exacerbated by the non-availability of a forestry policy framework to support sustainable forest management practices (Agung and Hinrichs 2000).

Concessionaires' performance became worse because of lack of supervision by government as well as the uncertainty of the political situation. Gap-3 in Figure 2 illustrates the widening margin between government policy and concessionaires' performance.

Meanwhile, underlying forestry problems—such as unbalanced log supply and demand for forest industries, land encroachment, land dispute, overlapping forests land with other purposes (mining, agricultural, resettlement), as well as forest conversion policies that do not take into consideration High Conservation Value Forest (HCFV)—have created a gap between government policy and FSC's and LEI's Sustainable Forest Management Standard (Gap-2).

The existence of these two gaps has made it especially difficult for forest concessionaires to meet the SFM standard, because they not only have to improve their practices to achieve the government standard, but must go significantly beyond that to achieve the FSC-LEI Standard (i.e. move over the entire distance covered by Gap-1). Concession holders seem to be ill disposed towards forestry-related businesses because of the many problems of overlapping land tenure, illegal logging and price fluctuation of forest products. In such a context, certification becomes a less strategic issue. Some of the concessions, however, remain committed to export their products to eco-sensitive markets, and they remain interested in implementing sustainable forest certification. They expect that in such an uncertain situation, certification will be able to provide them greater long run security.

Current Status of Forestland Certification

Certification has operated in Indonesia in at least three types of forest management: plantation forest (state-owned and private owned), natural forest (state-owned and private owned) and community-private partnership. In most cases private or state-owned companies pay the certification costs fully. However, prior to the certification assessment some companies worked in partnership with other programs that promoted sustainable forest management. These programs include Reduce Impact Logging (in partnership with Tropical Forest Foundation/TFF certification suport program launched by Tropical Forest Trust (TFT), promotion of HCVF (in partnership with The Nature Conservancy (TNC)), and forest management improvement towards certification (in partnership with the Global Development Alliance to Promote Forest Certification and Combat Illegal Logging in Indonesia (WWF and TNC)). WWF and TNC through a recent program of Global Alliance have been actively promoting certification. Table 7 shows the progress of certification in forest concessionaires during 1999-2003. As can be seen, of a total of 13 HPH operations that applied for SmartWood or FSC certification, 11 went through the scoping phase but only 6 moved on to a full assessment.

Table 7 Number of HPH assessed by SmartWood/ other FSC certifier

Year	Application	Scoping phase	Full assessment	Certified (area ha)
1999	2	1		
2000	4	4		
2001	2	2	3	90,957
2002	1	1	1	
2003	4	3	2	

In Table 8, we see that of the six that underwent a full assessment, two dropped out and by early 2004 only PT Intracawood Manufacturing had met its preconditions and become certified. But certification of PT Intacawood was cancelled shortly thereafter due to a legal dispute with the Ministry of Forestry. None of the preconditions in the remaining three operations had been met. A more detailed account of the status of forest certification is provided below, broken down by region.

Table 8 Results of the six HPH operations that underwent full assessments

Name HPH/management units	Number of HPH/management units			Status by January 2004		
	Pre-condition	Condi-tion	Recomm-dation	Pre-condition	Condi-tion	Recomm-endation
PT. Sumalindo Lestari Jaya	8	35	26	8	35	26
PT. Erna Djuliawati	5	28	14	5	28	14
PT. Sari Bumi Kusuma	8	17	22	8	17	22
PT. Intracawood Manufacturing	7	32	18	0	32	18
PT. Inhutani I – Labanan	6	23	19	**	**	**
PT. Austral Byna	10	27	25	**	**	**

** No longer in certification process

Certification in Java

Perum Perhutani (a state-owned company in Java) was one of the first certified operations in the world. It was certified by SmartWood in November 1990 and the certificate, which covered approximately 2 million ha of mainly teak plantations, was valid until 1995 (the first certification cycle). There was no reassessment until 1998 when FSC decided that the scale for the assessment should be the district level/KPH (not the entire plantation area as it was in 1990). Reassessment was conducted in 1998 for five KPHs, of which three were certified (KPH Cepu, Kebonharjo and Mantingan) in 1999. A new forest district assessment was conducted in March/April 1999 for eight KPHs, of which three were certified (KPH Madiun, Kendal and Lawu/pine) in April

2000. By July of that year the certified teak KPHs were Cepu, Kebonharjo, Mantingan, Kendal and Madiun with total certified area was 115,000 hectare and production of 100,000 m^3. There were also 33 teak furniture industries that had received chain of custody certification.

Perhutani's certified districts were suspended in 2001; and in 2003 all certification status in the districts were withdrawn because of non-compliance with the timeline for improvement. The suspension is based on the non-compliance of the certification conditions based on the FSC principles and criteria as well as the SmartWood standards. SmartWood believes that the long-term sustainability of the plantation resources is at a serious risk. The suspension is effective as of October 20th, 2001 (Rainforest Alliance 2001).

The failure to deal with illegal logging and difficulties in community relations were among the reasons for the suspension. Since then, no more management units in Java have been certified. Three districts have been under improvement since 2003 in collaboration with Tropical Forest Trust: Mantingan, Kebunhardjo and Randublatung.

A project supported by GTZ and WWF Indonesia in collaboration with several NGOs has been underway to develop certification for community forests. Two sites were selected as a pilot project in Central Java where local communities have been planting teak and *sengon* (*Albazia sp.*) in gardens for many years. LEI has been involved in this process as part of its certification standard development for community forest. A Memorandum of Understanding was signed in 2003 among several NGOs (LEI, ARuPA, PERSEPSI, WWF, KPSHK, AMAN, and SHK Kaltim) to run a pilot project on CBFM certification. Some challenges that have arisen during community preparation include strengthening appropriate forest management plans, and rules and regulations about community forest management. The limited volume of harvest and a lack of continuity of supply may still be constraints for buyers to get a contract with community groups.

Certification in Sumatra

Two companies in Sumatra have been certified. One, PT Xylo Indah Pratama (XIP), was suspended in 2003, while the other, PT Diamond Raya Timber, is still certified. SGS Qualifor, an FSC-accredited certification body, and PT Mutu Agung Lestari, a LEI-accredited certification body, conducted both forest assessments under the JCP program.

XIP plants and harvests pulai (*Alstonia scholaris* and *Alstonia angistoloba*), a raw material it uses in its pencil slat factory at Muara Beliti, Musi Rawas District, South Sumatra.[7] Currently, all slats are sent for final processing into pencils to XIP's pencil factory in Bekasi (PT Pencilindo), under a joint venture with Staedler. Pencil market prospects are said to be good for the consumer segments being developed by the company. XIP sources over 80 percent of its current wood supply for its pencil slat processing plant from hundreds of lowland smallholder rubber plantations where pulai grows wild.

Naturally occurring pulai in home gardens and other smallholdings account for the rest of the supply.

[7] Information about XIP is mostly taken from the assessment/audit report of SmartWood Forest Management Annual Report of PT Xylo Indah Pratama (XIP), SW-FM/COC- 140. Official Audit Year: 2003, Audit Date: March 2003. Final Report Completed: May 2003. Auditors: Anne Gouyon and Dwi Rahmad Muhtaman.

XIP's Peoples Forest Development Project (*Proyek Pengembangan Hutan Rakyat, P2HTR*) entered its ninth year in 2004 and will eventually cover 10,000 hectares, almost all of it in smallholder agroforestry plantations under joint management agreements. These smallholder agroforestry plantations have been established on former alang-alang (*Imperata cylindrica*) grassland (approximately 65 percent), on scrub brush land (about 25 percent), and on past rubber gardens (about 10 percent), distributed throughout southeastern Musi Rawas District.

XIP currently harvests 30,000 m^3 per year from rubber plantations and home gardens located in the southeastern part of the Musi Rawas district. XIP plans to maintain this volume of production. The current plan does not call for an increased harvest level as this is projected to supply sufficient raw material for their pencil factories. While there is a potential of about 200,000 ha of rubber plantations in Musi Rawas from which XIP can harvest pulai, only about 18,000 ha belonging to some 2,464 farmers are in the certified suppliers' pool that signed the agreement. XIP started its involvement in the certification program in December 1998 when there was a scoping visit from SmartWood. Between July 25 and August 1 1999, a team from SmartWood conducted a full assessment; and in May 2000 XIP was certified as a community forestry management operation. This was the first certificate of its kind issued in Indonesia. Annual audits are regularly carried out by SmartWood to ensure the company complies with the certification standard. An annual audit conducted in March 2003 concluded that some significant improvements were needed, and XIP's certificate was suspended in June 2003.

The second important concession on Sumatra is PT Diamond Raya Timber (DRT), an HPH forest concession in Riau province. DRT is a subsidiary of the Uniseraya Group that now has three concessions in Indonesia. PT Uniseraya Group operates in Riau Province where it has factories producing plywood, sawn timber and furniture. The DRT concession was issued in 1979, and the current license (1998) covers 90,956 ha of peat swamp forest, no more than a few meters above sea level at any point, and merging into mangrove forest to the northeast. The forest provides a habitat for a number of rare and endangered species, notably Ramin (*Gonystylus bancanus*). In addition the forest provides habitat for the Sumatran Tiger (*Panthera tigris sumatrae*) along with a number of important arboreal primates such as gibbons (Down to Earth 2001).

SGS Qualifor undertook pre-assessment visits to DRT in November 1998 and June 1999. The main assessment then took place in December 1999 and was the first evaluation in Indonesia to take place in cooperation with LEI (Lembaga Ekolabel Indonesia). A certificate was subsequently issued in March 2001, with the company producing round logs of the following range of species: Meranti (30 percent), Ramin (20 percent), Durian burung (15 percent), Suntai (10 percent), and Bintagur (10 percent).

Certification in Kalimantan

The only other region in Indonesia with an active certification operation is Kalimantan. In 2002, there were around 127 forest concessions with an area equal to

almost 10.8 million ha (Forestry Statistics of Indonesia 2002). Of these, only five are in the process of obtaining certification under the Joint Certification Programme (JCP) between LEI and FSC-accredited certification bodies.

Current Status of the Certified Marketplace

In the 1990s there was a teak furniture boom in Java, which benefited Perum Perhutani, the country's major teak supplier. The public campaign by NGOs in Europe and the US about Indonesian forestry issues generated consumer demand for certified furniture, and Perum Perhutani was well placed because at the time it was certified. The demand for certified furniture increased from 1998 to 2000 and applications for Chain of Custody certification increased. However, the actual number of certified companies was limited because the volume of certified teak was limited. When part of Perhutani KPH's certificate was suspended in 2001, most of the CoC industries were also suspended. Teak furniture export is still going on regardless of the unavailability of certified sources, however; and one CoC certified company has managed to keep its certificate by importing certified pinewood from Australia.

At present, DRT is the only certified log producer in Indonesia with an average annual production of about 60,000 cubic meters (SGS Qualifor 2001). All of the log products are supplied to two other companies, namely PT Uniseraya (SGS-CoC-0767) and PT Panca Eka Bina, which export moulding, garden furniture and other products.

EFFECTS OF CERTIFICATION

As discussed earlier, the promoters of certification hope that it can facilitate change at the policy, practitioner, and field implementation levels, so that the benefits of the forest can be more justly distributed to local communities surrounding the forest. Achieving SFM in Indonesia is hindered by problems outside the forest itself, especially those related to forest governance, as detailed in a revised "Pyramid Mayers" for Indonesia in Table 9 and as further elaborated in the following sections on certification's power, social, economic and environmental effects.

Table 9 Certification's effects in Indonesia

Element of Good Governance Of Pyramid Mayers	Current Conditions in Indonesia
[Tier-5]. Verification of SFM:	Certification has become a credible verification tool of what SFM would look like in the Indonesian context.
[Tier -4]. Extension:	The Joint Certification Scheme Program between FSC and LEI is a catalyst to promote and acknowledge the Indonesian certification scheme to the international market.
[Tier-3]. Instrument:	By being certified, PT. DRT received special treatment by being allowed to log Ramin (*Gonystilus bancanus*). However, law enforcement of forest policy is weak, leading to illegal logging, land conversion and conflicts, which are an economic disincentive.
[Tier-2]. Policies:	ITTO, FSC, PEFC, and LEI have issued SFM standard. However, there is still a gap between SFM standards and government policy (see Figure 2), especially with respect to property rights and land tenure-related problems. To date, certification has not contributed toward substantial government policy change.
[Tier-1]. Roles:	Certification has facilitated negotiations between interested stakeholders, and stimulated concessionaires to pay more attention to the role of local communities through community development program.
Foundations	Not so many changes in the (tier-1) and (tier-2) level, leaving many of the underlying problems unsolved, contributing to unconducive investment environment in the long term for forestry business especially in the era of transition to decentralization.

Power

Certification has altered subtly the balance of power between various groups, including government, local communities and business.

Government

In 1970, the Indonesian government issued a regulation (PP No. 21/1970) covering the forest concession and the Forest Product Harvesting Rights. The forest area allocated to production under this regulation is based only on the limited consideration of timber volume and landscape condition, with less attention paid to property rights and tenure problems in the area. Lately it has been recognized that there are many land use-related conflicts in such concession areas. No fundamental changes in government policy concerning forest management have been made recently, however, even though after the ITTO declaration in Bali in 1990, the government issued policies intended to improve the current standard and criteria of SFM.

Consequently, many of the regulations made were incapable of preventing the failure of SFM in Indonesia due to institutional weaknesses in government caused by collusion, corruption, and manipulation. As a result, the government fails to present the real facts concerning the country's forest management performance. With market pressure, certification has been able to promote SFM through its role as a tool for verifying forest management practices. Certification has been able to generate greater transparency and a credible picture of the forest management practices required to achieve SFM, exposing in the process the forest management unit's problems caused by internal and external factors. As a broad generalization, certification in Indonesia has had a partial effect at the forest management unit level, but it has not been able to make large-scale changes toward the conditions for SFM, especially those related to forest governance.

Local Community

At the community level the power dynamics are very interesting. Certification has pushed forest managers to work closely with local communities. Forest managers invest more in building community relations through a variety of community partnership activities. On the other hand, communities have a better chance to channel their concerns about the behaviour of companies and other groups. Avenues of communication are developed and participatory approaches are now becoming part of a new company culture for those under certification. In short, the social aspect of forest management gets more emphasis.

Private Sector

Companies have recognized that the implementation of sustainable forest initiatives makes compliance with the Government's SFM mandate more systematic and straightforward. With forest certification, it was hoped that the Government would grant incentives to the company in the form of reducing administrative requirements such as approval of the annual operations plan and favourable considerations.[8] Companies operating forest management units also attempt to use certification as a lever for policy change. In the case of one company in East Kalimantan, the forest management team lobbied the local government as well as the Ministry of Forestry to establish a policy environment that would enable the company to meet its certification conditions. However, there are only a few certification supporters attempting to achieve policy change and they are not well organized and tend to emphasize the technical aspects of certification. More generally, certification has not been adopted as a tool for policy change.

[8] Personal correspondence with PT Riau Andalan Pulp and Paper, March 2004.

Social

One major social challenge encountered by forest management units has been the failure to build better relationships with communities in and around concessions. Certification improves community consultation mechanisms, with companies

designing the conflict resolution and negotiation mechanisms. Although the design processes are still not adequate, at least there is willingness to solve conflict in better ways. One company, XIP, developed a community-company partnership program, which has been underway for more than 10 years. XIP's pulai planting program is focused on the grass and scrub bush lands owned by transmigrant families, who generally do not have the economic resources to develop it. Most households in the rural areas of Musi Rawas are first- and second-generation transmigrants that have two to five hectares of land under village land entitlements. A typical household has one to two hectares of land in rice (padi) and two to four hectares of land in a combination of alang grass, scrub bush land, and tree crops (rubber, coffee, coconut).

Under the joint management agreements, XIP finances site preparation, establishment and maintenance costs, and has management control over the land until the trees are harvested in ten years time. Farmers are given the option of working as labourers on their land. While some take up this option, most do not. They continue with their (presumably more attractive) other on- or off-farm activities. Note that before the arrival of XIP much of the candidate land was fallow, often because farmers did not have the resources to make it productive. XIP's initiative has given farmers the opportunity to make the land more productive in the short term from agricultural crops and for the long term with the wood crop.

Companies involved in certification continuously conduct training of employees and community-participants in various topics relating to sustainable development. Workers unions and other workers rights receive more attention from the management. In general, as one top manager put it:

> Environmental, social and economic objectives are included in the whole company organization and key performance indicators of every employee from supervisor and above positions, thus, awareness in addressing and balancing concerns for the profit, the planet and the people has widened, and concerns for the elements of sustainable development goes beyond compliance.[9]

[9] Personal email correspondence with top management of Riau Andalan Pulp and Paper (RAPP), Riau, Sumatra.

Partnerships have expanded with community, university, and environmental NGOs.

In most of the companies under a certification program, land tenure issues are considered a priority to resolve. Many of them have been unsuccessful, however, because land tenure issues are intimately connected to national policy and law enforcement. Companies initiate discussion about the situation with affected local communities and engage in participatory mapping, identification and protection of sites of significant importance for community, and the development of appropriate conflict resolution mechanisms.

Community development programs, established initially as charity programs to meet government regulations, have improved as a consequence of certification. Community programs now adopt more participatory approaches through community planning and companies are learning better and effective community development approaches.

Illegal logging is a critical forestry issue in Indonesia; however, most of the companies under certification have experienced minimum levels of illegal logging. All certification assessments evaluate the level of illegal logging taking place as well as the efforts of the company to prevent, monitor and reduce illegal logging practices. Certainly the management unit makes every possible effort to prevent or reduce it. These include a local policy approach to persuade authorities to stop giving away permits that overlap with the forest concession, the development of effective community development programs, and the use of police and military to guard the main exit and entry points.

One company reported that:

> Certification has reduced illegal logging significantly after they developed a Log Tracking System and Procedure for external wood supplies. The system and procedure do not only focus on the documents but rather include field assessment ensuring wood are sourced consistent with approved harvesting permits ensuring that wood are sourced from harvesting areas that are in accordance with approved land use plans (known origin) and wood are harvested and transported in accordance with existing forestry rules and regulations and in accordance with the organization's Wood Purchase Policy. Along with the implementation of the log tracking system and procedure is the conduct of 3rd-Party Audit with WWF as observers."[10]

[10] Personal email correspondence with top management of Riau Andalan Pulp and Paper (RAPP), Riau, Sumatra.

Some buyers discriminate against products from mixed hardwood forests, while others gave timelines as to when supply of products should come from sustainable wood sources. Still others asked for third-party audits particularly of wood supplies originating outside of concessions. As an offshoot of illegal logging issues in Indonesia, Riau Pulp's major buyers required third-party audits on the origin and legal sources of wood, which was carried out in October 2002 with a surveillance audit in May 2003 with WWF (Indonesia) acting as observer.

Economic

Costs

In Indonesia, concessionaires experience significant certification costs associated with making the required improvements to their forest management practices. These costs vary depending on the topography in each region. For example, for concessionaires that operate in a region with high accessibility, social costs associated with illegal logging and land encroachment will be high. For others, working in the remote and difficult terrain requires the company to redesign the working area, allocate some land for protected areas and decrease the volume of timber logged. In addition, it may be necessary to change the tools used to harvest the forest to comply with topographic requirements.

DRT reported, for example, that they have spent a large amount of money to secure the area from illegal logging activities including the cost of patrolling by military/police officers, and the making of guard posts. While DRT desires government

involvement in solving this problem, up to the present the obligation for securing the area remains the burden and responsibility of the concessionaire.

PT Sumalindo Lestari Jaya (SLJ), a concessionaire in the process of obtaining certification, reported that the main problem it faced is the hilliness of its working area. To reduce the impact of felling, they needed to redesign the area and the harvesting system. They also needed to restructure the area, allocating part of it to protect high conservation value forests, which reduced its overall Annual Allowable Cut (AAC). The process of retooling and adjusting its exploitation methods and applying Reduce Impact Logging, as well as redesigning the working area, will take almost five years, costing a significant amount of money.

There is a lack of market incentives too because many countries have yet to put into effect procurement policies supporting log certification. China, Korea, and Middle East countries are examples of the countries that pay little attention on these matters, made worse by their readiness to source illegal logs.

Benefits

DRT is advantaged by the issuance of the Ministry Decree (SK) No. 168/Kpts-IV/2001 that allows *Ramin* (*Gonestylus bancanus*), which is listed in CITES' Appendix III, to be felled. PT DRT is the only legal Ramin producer in Indonesia producing about 20 percent (12,000 cubic meter per year) of the crop potentially available. The government through the Ministry Decree No. 156/Kpts-II/2003 and the Decree of Director General of Forest Production No. 02/Kpts/VI-PHA/2003 also provides incentives to concession holders via an exemption in reduction of its AAC. As a result, the concessionaire has an economic benefit because its AAC is not cut back. According to concessionaires, the overall benefit from these two economic incentives could cover the additional cost to meet the requirements of SFM.

While the above incentives appear to be important, certified forest companies in Indonesia claim that the price premium earned by certified timber is not significant, even though Perum Perhutani reports it at 15 percent. There are other economic and commercial imperatives why the Company is interested in implementing sustainable forest management, and these include long-term benefits such as the reduction of production cost, reduced environmental and social risks, and increased productivity. One company interviewed believed that forest certification would enable it to market its products and compete particularly in advanced economies. It recognized that today it is not the certification itself that is important; rather of most concern to the company is the sustainable development of the business. Therefore the adoption of the certification standard was aimed at improving the way the company did business.

The company reported that standard operating procedures aimed at improving productivity and minimizing adverse environmental and social impacts were put in place and continuously disseminated amongst its own employees and contractors. They had also institutionalised the ISO 14000 environmental management system and were making continuous improvements in correcting and improving areas where major non-conformance are observed. The company had also replaced its Annual Environmental and Social Report with a Sustainability Report that followed the

framework of the Global Reporting Initiative (GRI). Periodic independent third-party audits, particularly in environmental and social matters have become a regular activity, whereas before the focus had been only on financial audits.

Environmental

Most of the companies under certification assessment have a low score on environment indicators, which includes biodiversity protection, conservation area management, procedures and strategies for logging-road construction, and monitoring and evaluation of environmental impacts. The most common practice to improve forest management is the application of RIL. Some companies get technical assistance from organizations such as the Tropical Forest Foundation. Companies face difficulties in understanding and interpreting the concept of HCVF, with some working with NGOs or other relevant organization to improve their knowledge.

Companies believe that many of the issues related to non-compliance are well recognized. Certification helps to identify specific weaknesses and to generate new knowledge and skills to meet the criteria and indicators. Internal and external training about certification is acquired and it contributes to improved awareness of the environmental aspects through improvements to the log harvesting system, especially with the introduction of low impact forestry (RIL). Two concessionaires in East Kalimantan that belong to the East Kalimantan Certification Working Group (*Kelompok Kerja Sertifikasi Kalimantan Timur* (KKS)) have received technical assistance from GTZ's Sustainable Forest Management Project (SFMP).

SFMP-GTZ recommended the government make RIL an important requirement in evaluating and monitoring the performance of concessionaires. The central government responded very well by issuing a circular letter from the Directorate General of Production Forest Management (No. 274/ 2001), stated that RIL needs to be implemented in the concessions. The establishment of forest conservation reserves in the forest management unit area has also been stimulated by certification. For example, PT Sumalindo Lestari Jaya II has allocated an area for HCFVs of about 50,000 ha. PT Intracawood Manufacturing is cooperating with The Nature Conservancy (TNC) to help identify HCVF in their working area.

As a precondition to certification, DRT, in cooperation with Indonesian Research and Science Institute (LIPI) and Bogor Agriculture University (IPB), is implementing a mangrove ecosystem study. The study also covers Ramin regeneration, wildlife monitoring, growth analysis, and taxonomy. Certification has also stimulated DRT to conserve about 10 percent of its forest area in every felling compartment as a wildlife corridor and seed source for natural regeneration. This has had a significant impact upon the availability of the seedling trees for natural regeneration. It is well known that the survival rate for manmade *ramin* regeneration in swamp forests is very low, so by allocating more land for seedlings, it is expected that natural regeneration will improve in the future.

CONCLUSION

Summary

There are two forces driving forest certification in Indonesia. First, there is the international pressure of the market place, with consumers reacting to destructive forestry practices by supporting import bans or boycotts and/or requesting that wood products be certified to the importing country standard. Second, there is domestic pressure, which is demanding that government and forest companies improve forestry practices and policy and promote certification as a tool for change. Because of the unique forestry context, certification is not designed solely to meet market demand and policy change will be required for certification to be effective. Recognising this, supporters of certification are promoting it as a tool to advocate for policy change in forestry sector.

For example, TNC and WWF Indonesia have developed a program to support certification and combat illegal logging, and the Tropical Forest Foundation (TFF) is working with Forum International, the Tropical Forest Trust (TFT), and PENSA-IFC (*Pengembangan Usaha*, Program for Eastern Indonesia Small and Medium Enterprise Assistance, the International Finance Corporation) to develop certification support programs. International buyers are working with forest management units (both forest concessions and community forestry groups) to facilitate certification and get certified wood. Meanwhile LEI is preparing itself to become a constituent-based organization (CBO) to make it a more effective and legitimate accreditation body in Indonesia.

Roadblocks and Challenges

Disputes over forestland tenure, unsustainable forest management and un-conducive forest management policy have been Indonesia's major forestry problems. These are made worse by political, economic and social disruption, which have placed the efforts of sustainable forest management certification at a critical stage (Kartodihardjo 2003). In addition, there have been distractions related to the implementation of regional autonomy, which has led to disputes between regional and central governments over forest management authority.

Certification's arrival in Indonesia is to be credited to the establishment of LEI. For the last ten years, LEI has contributed significantly to public awareness and understanding of forest certification. Certification is now the concern of certifying bodies, companies under assessment and assessors, NGOs, local communities around the forest area under certification assessment, and other individuals who are involved in the assessment process or sustainable forest management issues. Meanwhile, the FSC-accredited certifying bodies operating in Indonesia (SmartWood, and SGS Qualifor until 2003) view Indonesia as an important market for their services but could not expect many applicants because in reality there are not many good forest management companies, not to mention the social and policy environment around forestry sector.

Future Developments

There are at least three major factors affecting certification's future development in Indonesia. These are disputes over forestland tenure status, un-conducive forest management policy and negative market responses to certified forest products. The new structure of LEI as a constituency-based organisation will have a significant impact on certification's future development. By establishing a new type of governance it is expected that LEI will have an improved capacity to carry out its important mandate which is, among others, ". . . to evaluate the concession performance based on a set of rigorous standards, but also to critically evaluate government regulations and practices that do not support the effort to achieve sustainable management of forests" (Salim *et al.* quoted in Elliot 2000). NGOs, academics, international organizations and certifiers tend to stress the need for fundamental reform of forest policy.

Future Research

There is considerable need for forest certification research in Indonesia. Specific areas of research include marketing, where there is a general lack of awareness of what certification is, even though certification has been underway for over fourteen years. Other research areas include the economic and social impacts of forest certification for local governments, management units and communities around the forest area; and the distribution of the costs and the benefits. There is also the need for future studies on the impact of certification to reduce illegal logging, on its capacity to bring about policy change, and on land tenure arrangements. Research could also be carried out on the costs and benefits of certification in transition from conventional forest management to SFM, on the role of domestic market, and on the impact of CBFM certification as a tool for legal, economic and ecological recognition of community forestry.

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ACRONYMS

AHP	Analytical Hierarchy Process
APHI	*Asosiasi Pengusaha Hutan Indonesia*/the Indonesian Association of Forest Concession Holders
APKINDO	*Asosiasi Panel Kayu Indonesia*/Indonesian Wood Panel Association
CB	Certification Body
CBO	Constituent Based Organization
CBFM	Community-based Forest Management
C&I	Criteria and Indicator
CoC	Chain of Custody
DPS	*Dewan Pertimbangan Sertifikasi*/Certification Review Board
DRT	PT Diamond Raya Timber
DSN	*Dewan Standardisasi Nasional*/National Standardization Board
EIA	Environmental Impact Assessment
EP1	Expert Panel 1
EP2	Expert Panel 2
FKD	*Forum Komunikasi Daerah*/Provincial Communication Forum
FMU	Forest Management Unit
FSC	Forest Stewardship Council GFTN/PFTN Global Forest Trade

	Network/Producer Forest Trade Network
HCVF	High-Conservation Value Forests
HKM	*Hutan Kemasyarakatan*/Community Forestry
HPH	*Hak Pengusahaan Hutan*/Forest Concessionnaire Holder Rights
HTI	*Hutan Tanaman Industri*/Industrial Forest Plantation
ITTO	International Timber Trade Organization
IPB	*Institut Pertanian Bogor*/Bogor Agricultural University
JCP	Joint Certification Program
KPH	*Kesatuan Pemangkuan Hutan*/Forest Stewardship Unit
KKN	*Korupsi, Kolusi, Nepotisme*/Corruption, Collusion and Nepotism
LATIN	*Lembaga Alam Tropika Indonesia*/Indonesia Tropical Institute
LEI	*Lembaga Ekolabel Indonesia*/Indonesia Ecolabel Institute
MPI	*Masyarakat Perhutanan Indonesia*/Indonesian Forestry Community
MRA	Mutual Recognition Agreement
NGO	Non-Governmental Organization
Pokja LEI	*Kelompok Kerja Lembaga Ekolabel Indonesia*/LEI Working Group
RIL	Reduce Impact Logging
RMI	formerly *Rimbawan Muda Indonesia*/Indonesia Youth Forester (now RMI read as The Indonesian Institute for Forest and Environment)
SFM	Sustainable Forest Management
SKEPHI	formerly *Sekretariat Kerja Pelestarian Hutan Indonesia*/Working Secretariate for Indonesia Forest Conservation)
TFF	Tropical Forest Foundation
TFT	Tropical Forest Trust
TNC	The Nature Conservancy
TPTI	*Tebang Pilih Tanam Indonesia*/Indonesian Selective Logging and Planting System
WALHI	*Wahana Lingkungan Hidup Indonesia*/Indonesian Forum for Environment)
WWF	World Wide Fund for Nature
XIP	PT Xylo Indah Pratama
YLKI	*Yayasan Lembaga Konsumen Indonesia*/Indonesian Consumer Advocacy Group

Forest Certification in Malaysia

*Mohd Shahwahid H.O.**

ABSTRACT

Forest certification emerged in Malaysia through direct initiatives of the states' forestry departments acting as trustees of Permanent Forest Estates (PFEs), through bilateral projects for sustainable forest management between these departments and international bodies, and through direct interest from individual forest concessionaires. Currently, certification is very much market-driven and is serving as a tool to promote sustainable forest management.

There are two certification programs in Malaysia: the Forest Stewardship Council (FSC) and the Malaysian Timber Certification Council (MTCC). Certification receives support from various stakeholders, including the government and the private sector. Support from the local community is growing in strength, particularly for the FSC. The MTCC is working towards gaining the trust of the indigenous community, constrained by the issue of the native customary rights over forestland. This issue is within the domain of state constitutions and beyond that of the MTCC. Various parties – including national and international NGOs, governmental agencies, and international markets – play their synergistic roles towards garnering domestic support for certification and in streamlining the national MTCC certification in its phased approach towards global acceptance. MTCC is continuing its attempt to obtain international recognition of its program by attempting to comply with FSC's Principles and Criteria.

Certification has provided a new dimension in forest management. Forest management is no longer principally the domain of state forestry departments; nor does it focus solely on the issue of sustainable timber production. Social considerations have emerged and indigenous peoples' concerns have to be taken on board. There are various environmental, economic and social impacts of certification and these are discussed. Certification is at the growth stage in the country and some thoughts as to the future roles of both the FSC and MTCC programs are provided.

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INTRODUCTION[1]

The Malaysian case has five important features. First, certification has been driven by the market with market-oriented actors (industry, including workers) at the forefront of efforts to establish a Malaysian Timber Certification Council (MTCC). Second, the national and state governments have been extensively involved in all aspects of the development of MTCC. Third, domestic and international NGOs have played an important role in attempting to steer MTCC towards accepting a more consensus-building certification program. These NGOs together with certifiers have also promoted FSC. Fourth, indigenous peoples issues have substantially complicated the development of forest certification in Malaysia, especially in Sabah and Sarawak.

Governments and interested parties have faced difficulties in addressing the issue of indigenous peoples' rights. These difficulties have led to the development of environmentally and economically strong but socially weak MTCC standards. In particular, indigenous communities' claims of land ownership in forest reserves are preventing negotiations with FSC from moving forward. State legislation on forestland prevents recognition of indigenous peoples' land claims because it vests Malaysian states as trustees of public forest land. Finally, there has been the emergence of a contest between MTCC and FSC schemes, which was latent at the beginning of the 1990s, but appears to have emerged into the open in the past few years. The two schemes represent, in effect, different norms with respect to the status of law, with MTCC giving priority to positive law over customary law and FSC requiring that considerably more attention be paid to customary law.

Unlike Indonesia, at present the path dependence of certification seems to be less important, as there do not appear to have been any high profile cases of natural forest certification suspension. This chapter will trace in more detail the arguments in support of the above features of the Malaysian case.

[1] The research technique adopted involves conducting first a literature review of the subject matter involving a search in the internet and published materials. Key stakeholders were identified and interviews arranged to solicit first hand information. Analysis was done on primary reports where available such as on minutes of meetings and reports from certifiers of field audit exercises. Data were collected from statistical reports from national and international agencies. Other information was also compiled from the author's previous personal research effort on the subject matter.

BACKGROUND FACTORS

Historical Context

Malaysia is a tropical country located north of the Equator within latitudes 1° to 7° North and longitudes 100° to 119° East. The country is separated into Peninsular and East Malaysia by the South China Sea. The total land area is approximately 32.8 million hectares with 13.1 million hectares in Peninsular Malaysia, which comprises eleven states and the Federal Territory of Kuala Lumpur, and 19.7 million hectares in East Malaysia, which consists of two large states, Sabah and the Federal Territory of Labuan (7.4 million hectares), and Sarawak (12.3 million hectares).

Forestry Problems and Existing Policy Response

Forestry in Malaysia faces various problems. Small-scale and isolated illegal logging, partial compliance to harvesting specifications, deforestation, and loss of biodiversity in harvesting activities are typical grievances being faced by a rapidly developing nation.

The occurrence of illegal logging, partial compliance to harvesting specifications and loss of biodiversity have a better chance of being checked within certified forest management units (FMUs). Monitoring the use of imported illegal logs by domestic processors is proving more challenging. Despite the federal government's placing a ban on the importation of illegal logs, there are suggestions that Malaysia's wood-based industry is utilizing illegal Ramin logs (Telapak 2003). Ramin was listed by Indonesia in Appendix III of CITES (the Convention on International Trade in Endangered Species).

Malaysia responded by arguing that it is illogical and unfair to draw the conclusion that the steady export of Ramin from Malaysia constitutes proof of illegal Indonesian Ramin imports (MTC 2004). There is selective logging going on in the Ramin-rich production forest in southeast Peninsular Malaysia. Malaysia put up a partial reservation to the Convention for Ramin parts and derivatives as a step to ensure that the trade that had arduously been built up over the years is not jeopardized by unnecessary procedures and misidentification.

Despite certification making some headway with illegal logging, it does not address the problem of conversion of forests outside the forest reserves to non-forest uses. Government policies and regulations do not prevent forestland located outside the forest reserves from being converted to other land uses. This policy response is to meet the demands of development.

Structural Features

Ownership and Tenure

At the end of 2002, the total forest area in Malaysia was estimated to be 19.01 million hectares or 57.9 percent of the total land area, with the proportion of forested land being higher in Sabah and Sarawak than in Peninsular Malaysia. Malaysia has a total area of 16 million hectares of natural forest, of which 14.19 million hectares are designated as Permanent Forest Estate (PFE) or forest reserve. Approximately 10.53 million hectares of the PFE are production forests, with the remaining 3.66 million hectares being protection forests. Another 1.8 million hectares located outside the PFE are designated as national parks and wildlife sanctuaries.

In Malaysia, there is a separation of power over land matters. Under Article 74(2) of the Malaysian Constitution, forestry comes under the jurisdiction of the respective state governments. As such, each state is empowered to enact laws on forestry and to formulate forestry policies independently. Each state has power of decision over resource use and allocation. It has its own forestry department and other institutions to implement forestry policies. The executive authority of the federal government only extends to the provision of advice and technical assistance to the states, training, the conduct of research and in the maintenance of experimental and demonstration stations.

The constitution does give the federal government powers to establish departments or ministries for resource conservation. State forestry departments are obliged to refer to their federal counterparts on certain matters. Nevertheless, in practice,

contradictions between federal and state policies do occur from time to time. State governments have been known to pursue their own forest policies, even when they appear to contradict federal policies.

There are two potential conflicting views of the forests. The first is that forests are seen as a physical and economic resource, controlled by the state government, private logging companies and individuals whose main concern is in the commercial value of trees to generate revenue and income. The second is that forests are seen by indigenous and forest dependent peoples as a physical, social, cultural and spiritual resource, for livelihoods as well as the basis of beliefs, identity and survival. These different visions clash, and conflicts around forest use have been well documented, especially in the state of Sarawak.

Currently all forestlands in Malaysia are owned by the government, except for a few thousand hectares of plantation forests which are privately owned. Although the management of all natural forests is under the purview of the respective state departments of forestry, state governments do lease out long-term concessions of various lengths to integrated timber companies. Such companies include Kumpulan Pengurusan Kayu-Kayan Terengganu (KPKKT) with 128,720 ha in the state of Terengganu; Perak Integrated Timber Complex (PITC) with 9,000 ha in the state of Perak; and Kumpulan Perkayuan Kelantan (KPK) with 92,500 ha in the state of Kelantan.

The management of leased forestland has to be guided by Forest Management Plans (FMPs) approved by the respective state forestry departments. Indigenous communities living in the forest have usufruct rights over forest goods and services. They do not own the forestland. In East Malaysia, there are larger forestlands classified as native customary rights (NCR) land. Given this situation, no forest harvesting agreements involving local communities in co-management responsibilities are practiced in the country.

Markets

In Malaysia, the forest sector primary production base was composed of 3.2 million tonnes of wood fuel and 17.9 million tonnes of industrial round wood in 2002. The country encourages secondary and tertiary processing of timber. In the same year, 4.6 million tonnes of sawn wood, 6.8 million tonnes of wood-based panels, 123.7 thousand tonnes of pulp for paper, and 851.0 thousand tonnes of paper and paperboard were manufactured.

The forest sector total export (not inclusive of furniture) was 13.8 million tonnes valued at US$2.7 billion in 2002. The main export contributors were industrial round wood with 37.5 percent in volume but 18.0 percent in value; sawn wood with 20.7 percent in volume but 13.9 percent in value; and wood-based panel with 40.8 percent in volume but 60.3 percent in value.

It is interesting to note that for both industrial round wood and sawn wood the percentage contributions to total forest sector exports were higher in volume over value in contrast to the case of wood-based panels. This is an indication of lower

value per unit volume for industrial round wood and sawn wood than for wood-based panels. The major export destinations of Malaysian forest products were China (31.2 percent) and Japan (25.1 percent). Other important destinations were Korea (5.6 percent), U.S.A. (4.3 percent) and the Netherlands (3.5 percent).

The forestry sector has contributed significantly towards the country's socio-economic development. This can be highlighted from the following statistics for 2002:

- The forestry sector contributed US$3.7 billion in gross value added, accounting for about 4.7 percent of the country's Gross Domestic Product in the year 2000;
- The total export of the forest sector (excluding furniture) was valued at US$2.8 billion or 2.8 percent of the country's total export earnings in 2002. Imports were valued at US$1 billion, making the country a net exporter of US$1.8 billion;
- In 1998, the total forest revenue collected by the various states in Malaysia amounted to US$368.8 million, based on a production of 21.7 million m^3 of round logs. In some states, such as Sarawak, Kelantan and Pahang, forest revenues made a very important contribution to governments' revenues.
- The forestry sector (excluding furniture) also provided employment of about 2 percent of the country's labour force.

Given the above performance, the timber and timber products industry is an important contributor to the economy of the country, in terms of foreign exchange earnings, employment and value added creation. Throughout the first and second Industrial Master Plans (1985-1995 and 1996-2005), the timber and timber products sector has been earmarked to provide domestic and export growth for the economy. Hence, the declining trade – seemingly caused by importing countries' negative perception that the products do not come from well-managed forests – is taken seriously by the federal government (Yong 2002).

Various efforts have been undertaken to confront this challenge, including ascribing to timber certification and developing a system that can provide assurance that the timber products have been manufactured using timber from sound forest management practices.

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

Given the long-term prospect of limited supply of forest, the government has to approach development efforts judiciously. The future patterns of forest resource management in Malaysia have to be restructured by adopting strategies of sustainable management by treating the environment as integral, in order to ensure that maximum economic and social benefits are derived from managing this resource. Any

environmental changes have to be guided through proper long-term management of the forest resource by maintaining an optimum equilibrium between resource utilization and the need to protect the environment as a prerequisite for the sustainable production of forest goods and services. Adherence to forest management regulations and its certification is taken as one move to ensuring that this end is met.

In the post-United Nations Conference on Environment and Development (UNCED) period, issues of forest certification were new to the Malaysian government, which was more interested in ensuring the implementation of its Selective Management System (SMS), an approach that the government has high faith in as promoting forest sustainability. At this time the scheme by the Forest Stewardship Council (FSC) was under active consideration with a founding convention held in 1993.

Although the Malaysian government at that point was expressing little interest in certification, it had taken the recommendation of the ITTO for all producer member countries to set up a certification scheme (Abdul Rashid, personal communication, July 2004). In 1994, in discussions among timber-related government agencies, it was decided that the Malaysian Timber Industry Board (MTIB) was to lead in the formulation of the certification scheme. MTIB became the secretariat to the Malaysia-Netherlands cooperation in certification in 1995. Hence, the Malaysian certification scheme got going later in 1995.

There was a realization that Malaysia's Selective Management System (SMS), although sound on paper, was not being implemented satisfactorily on the ground by concessionaires and logging teams. Certification was looked upon as a tool to make concessionaires and logging teams change their mindset towards complying with the SMS. It can be perceived that the early endorsement of certification was very much motivated towards achieving sustainable and economical timber production and environmental concerns. Social considerations at that early stage were given less emphasis. Hence, the Malaysian Criteria and Indicators (MC&I) were modelled more on the ITTO's SFM.

Malaysia's intention to set up its own certification program is related to several factors. One is its ease of fit with the ITTO's C&I of SFM (Abdul Rahim, personal communication, 2004), an approach that espouses the same objective of forest sustainability as set by the SMS promoted by the Forestry Department. Another was that it is the right of a country that has a critical interest in the timber trade, which is an important national economic contribution, to determine its own destiny (Chew, personal communication, 2004).

It was felt that the country ought to be a party in the implementation of a certification scheme. The country is keen to cooperate in any certification scheme and felt it should have some input in the formulation and application of such schemes. It believed that there should be a two-way involvement of certification schemes with Malaysian timber trade authorities to prevent any unilateral changes in certification rules so that Malaysian concessionaires are not constantly under threat and Malaysian interests are protected. The fact that Malaysia is a major exporter of tropical timbers also influenced the decision to set up its own certification program. This

program ought to be globally acceptable but yet should not jeopardise the interest of the nation's forestry agenda of sustainable forest management and economic contribution.

A third important reason is the latent fear of a new approach or mindset change (Ng, personal communication, 2004). Relevant government agencies are uncertain of how to tackle social issues, particularly on native customary rights that have long been unresolved to the satisfaction of all parties. And forestry departments were used to handling forestry matters internally without being required to have consultative discussions on social implications. Hence, because of the need for this mindset change, modification in approach of the formulation of the MTCC program occurred to establish a more balanced representation of interests in its structure. This explains the delayed entry of non-governmental organizations (NGOs), especially social groups, into the consultative discussions.

In general, the government views forest certification as a double-edge sword. On the one hand, it is a marketing mechanism to gain market access by being consumer-driven, market-based and on a voluntary basis. On the other hand, it is a pre-requisite for improving practices on the ground. In the case of forest certification, the Malaysian government took leadership in the certification drive. Its involvement is to allay doubts in the minds of consumers about the sustainability of the management of forestland that is overwhelmingly owned by the government and the financial requirements of forest management certification schemes that are mostly yet to be self-financing.

The Malaysian government's involvement in forest management certification schemes has some advantages in ensuring:

- consistency of criteria and indicators applied;
- balance in the views of the different parties involved;
- greater accountability to the public;
- greater transparency in the schemes used; and
- an additional channel for presenting their interest to labeling authorities.

Early leadership was provided by the Ministry of Primary Industries, which initiated approval at the Federal Cabinet level, set policy to adopt timber certification and established a national committee to oversee its implementation. The government agencies initially involved included the Forestry Department Headquarters for Peninsular Malaysia, Sabah and Sarawak, and the Malaysian Timber Industry Board. The industry and its associations went along with the government's drive. Forest harvesting rights were getting scarcer and there were excess demands to obtain these privileges. The timber industry and the private sector too were seeking certification as a method of demonstrating and informing consumers that their timber products came from well-managed forests, thereby ensuring their products' continued popularity and sale.

Private Sector View

The private sector was realistic about the certification requirement and indicated its willingness to seek certification. This position is supported by the following quote from Barney Chan, the Chief Executive Officer of the Sarawak Timber Association (STA). Sarawak is the largest state in Malaysia with the largest forest resources.

> STA must be prepared for the inevitable: eco-labeling will be introduced, it is only a question of time. However, I feel that this move is not necessarily bad for us. If we are indeed looking after our forests in the correct way, we should have not much difficulty in getting appropriate certification for our timber products. Such being the case, we should look at the positive side and use eco-labeling as a marketing tool so that we can maintain the European market for our timber. Here I want to report to members that STA is still in consultations with the State and Federal authorities on this eco-labeling matter (Chan, personal communication, 2004).

The private sector was willing to work closely with relevant authorities to ensure that certification did not stall trade. This included working with the Malaysian Timber Industry Board and the Forestry Department in a government-industry-NGO coalition created to set up a Malaysian scheme in support of the Government's intention to see that the MTCC came to fruition.

NGOs

Conservation organizations – particularly the environmental non-governmental organizations (NGOs) and indigenous peoples organizations actively involved in timber certification including the World Wide Fund for Nature (WWF) and the Malaysian Nature Society (MNS) – have all along been wary of the impact of forest harvesting in the country, both environmentally and socially. They actively participated at the early stages (1995) in the formulation of the policy statements and implementation procedures of the Malaysian scheme on certification, hoping to influence it to incorporate their conservation and social interests. NGOs like the WWF looked upon certification as a tool to demonstrate good forest management. While indigenous peoples organizations looked upon certification as a means to gain recognition of native rights upon forestland, particularly the NCR land.

The NGOs set several criteria to ensure certification met the intended objectives. The certification systems should be institutionally and politically adapted to local conditions, cost effective, accepted by all involved parties and compatible with generally accepted international principles. To be accepted, the systems should be transparent and credible to consumers and based on objective and measurable criteria, reliably assessed by independent parties that are uninfluenced by others with vested interests (Ng, personal communication, 2004).

From the above observations, it can be concluded that the Government through the forestry departments, initially had more influence over the industry by virtue of its institutional function of allotting concession rights to the industry. New

harvesting specifications and practices that were deemed required for SFM were being put in place that the industry was duty bound to accept. As the deliberations on consensus building proceeded, the strong influence of the NGOs emerged, particularly on social issues that Malaysian forestry has for a long time not given as much emphasis to as the objective of sustaining the timber resource.

Institutional Design

Timber certification programs adopted in Malaysia belong to two categories: the government-sanctioned Malaysian Timber Certification Council (MTCC) program and the Forest Stewardship Council (FSC). The first is driven directly by the government by formulating the MTCC certification, initially guided by the International Tropical Timber Organization (ITTO)'s criteria and indicators (C&I) in the first phase followed by further attempts to comply to the FSC's principles and criteria (P&C) in the second phase. The adoption of the MTCC certification program was spearheaded by the forestry departments of various states acting as trustees of the permanent forest reserves (PFEs) and a few timber firms who gained long-term concessions from the state. The adoption of the FSC is a proactive move by the Malaysian-German Sustainable Forest Management Project (M-GSFMP) in Sabah and the private sector to obtain internationally acclaimed best practice acknowledgement and/or to meet the requirements set by international consumers.

The forestry departments in the states of Peninsular Malaysia, Sabah and Sarawak ascribe to the MTCC program while having an attitude open to new approaches and permitting the industry to take its own choice on which certification scheme to adopt including that of FSC and ISO 14000. In Sarawak, the Samleng Group has carried out an FSC pre-assessment while the KTS Group has begun developing its Environmental Management System (EMS) under the ISO 14000 scheme. In Peninsular Malaysia, FSC-certified PITC has also begun EMS activities in its attempt to obtain ISO 14000 certification, while the MTCC-certified KPKKT (a subsidiary of Golden Pharos) has opted to seek FSC certification as well.

The FSC program is a well-established certification scheme and its development has been discussed in detail in earlier chapters. This chapter will deliberate more on the MTCC program.

MTCC Certification Program

The MTCC certification program is motivated by the country's commitment to ITTO's "Guidelines for Sustainable Management of Natural Tropical Forests" and its "Criteria for the Measurement of Sustainable Tropical Forest Management" (CMSTFM).

As mentioned earlier, Malaysia had taken action to build on and operationalize these guidelines for two reasons. Certification is seen as a step to protect its interest of ensuring the production of a continuous flow of desired forest products and services from the forest reserves. In doing so, it also commits to ensuring that production be conducted without undue reduction of the forest's inherent values and

future productivity, and without undue undesirable effects on the physical and social environment.

Further, certification is being actively pursued to ensure continued market access of Malaysian timber products particularly in environmentally sensitive markets. Certification is seen as critical for long-term access to key markets in Europe, United States and Japan since the market is being undercut in less green-sensitive markets like China, Taiwan and South Korea by low-cost producers in Indonesia and Cambodia.

Typical of decision-making approaches adopted in the country, the nation formed two committees at two different levels: (i) a National Committee on Sustainable Forest Management (NCSFM) comprising of representatives from relevant Government agencies and universities, with the task of setting the elaborated ITTO's CMSTFM for implementation; and (ii) a Working Party on Sustainable Natural Forest Management (WPSNFM) comprising of state forestry departments in Peninsular Malaysia, Sabah and Sarawak with the task of operationalizing the ITTO's C&I on SFM at both national and forest management unit levels.

In order to ensure that the agreed activities are implemented in the field by the respective state forestry departments in Malaysia, a task force was formed to develop an effective mechanism and procedures for the periodic monitoring of the implementation of all the activities, and produce reports on their progress to the higher authorities in Malaysia for their information and further action. This task force, established in May 1996, comprised of representatives from the Ministry of Primary Industries, Malaysia; the Forestry Departments of Peninsular Malaysia, Sabah and Sarawak; the Forest Research Institute, Malaysia; the Malaysian Timber Industry Board; the Malaysian Timber Council; and the Faculty of Forestry, University Putra, Malaysia. To complement this effort, Peninsular Malaysia also formed a Technical Monitoring Committee at the Forestry Department Headquarters, Peninsular Malaysia in October 1995 to monitor the implementation of all the activities undertaken by the respective state forestry departments.

To enhance the implementation of the certification scheme, the National Timber Certification Council, Malaysia (NTCC) with representation from academic and research and development institutions, timber industry, non-governmental organizations (NGOs) and government agencies was incorporated as a company limited by guarantee in October, 1998. NTCC was later renamed the Malaysian Timber Certification Council (MTCC).

The academic institution selected was the Faculty of Forestry, Universiti Putra Malaysia while the R&D institution was the Forest Research Institute, Malaysia. In addition to a representative from the timber industry, environmental NGOs were represented by WWF. The activities undertaken by the MTCC, among others, included the following:

- Development and implementation of a timber certification system in Malaysia to ensure sustainable forest management, as well as to facilitate the trade in timber from Malaysia;

- Development and implementation of training programs in all aspects related to timber certification;
- Development and implementation of standards related to timber certification;
- Establishment and implementation of a system to oversee and monitor the implementation of the certification system, including appeal mechanisms;
- Establishment of networks and cooperation with national and international bodies related to timber certification to facilitate cooperation and mutual recognition arrangements; and
- Collection, processing and dissemination of data and information related to timber certification and sustainable forest management.

Standards

To help gauge the level of compliance, criteria, indicators, activities and management specifications were formulated. Like the institutional arrangements, these standards were also developed for both national and forest management unit (FMU) levels. The C&I at the national level provided a common framework for monitoring and evaluating progress towards sustainability nationally. However, they did not specify requirements for sustainable forest management practices in the field. In this context, the C&I at the FMU level assessed directly the sustainability of forest resource management, conservation and development in practice. It should also be noted that no single C&I was alone an indication of sustainability. Rather, the set of C&Is were to be considered as an integral system to assess the practice of sustainable forest management.

An FMU was defined as an area of forestland managed by an organizational entity, which decided on and subsequently implemented forest activities to ensure the economic, ecological, biological and socio-cultural sustainability of the area. The unit consisted of forest districts having a number of forest reserves, which were further divided into compartments and sub-compartments for the purpose of effective management, conservation and development of the forest resources.

In Peninsular Malaysia, each individual state was subsequently defined as an FMU. Hence, it is important to note here that MTCC is a regional certification scheme, rather than a purely FMU-based scheme. The concept of an FMU seems to be in contention in part; a question arises as to whether the entire state, for example, can be viewed as an FMU? MTCC argues that it can in view of legal and administrative requirements for managing forest at the state level, with the state forestry director being responsible to the state authority for the preparation and implementation of the state forest management plan, reforestation plan and programmes relating to amenity forests. The allocation of Annual Allowable Cuts (AACs) for the production forests of the PFE by the National Forestry Council is determined on a state-by-state basis. In Sabah and Sarawak, the concept of FMU is defined differently using the more recognized definition at the concession level.

In formulating the activities, the NCSFM reviewed the P&C for Forest Management of the FSC and those of the Tropenwald Initiative (TI), and also took into account the Principles and Recommendations enshrined in ITTO's "Guidelines on the Conservation of Biological Diversity in Tropical Production Forests."

National Level

At the national level, the MTCC used the ITTO's five Criteria and 27 Indicators as a starting point to develop a total of 206 management specifications and 92 activities. The five criteria cover the forest resource base, continuity of flow, level of environmental control, socio-economic effects and institutional framework. Two new indicators were added to the MTCC at the national level, while two original ITTO indicators were omitted. The two new indicators were on Plantation Establishment of Non-wood Forest Produce and Annual Planting Targets under the ITTO's criterion on the Forest Resource Base and on Expenditure Budgets for Forest Administration under the ITTO's criterion on Socio-Economic Effects.

The indicators omitted were on the Availability of Environmental Assessment Procedures under the criterion Socio-Economic Effects and on the Relationship of National Policy to ITTO Guidelines under the criterion on Institutional Frameworks. The former was omitted since this indicator was already included under the criterion on the Level of Environmental Control, which the Committee deemed to be more appropriate. The latter was omitted because the National Forestry Policy of Malaysia had adequately met the objectives of the ITTO guidelines in terms of sustainable forest management.

Forest Management Unit Level

To ensure effective monitoring and evaluation of the criteria and indicators in the field, Malaysia established activities at the level of the FMU. A total of 84 activities were identified to be implemented at the FMU level under six criteria and 23 indicators. The six field-level criteria covered resource security, the continuity of timber production, conservation of flora and fauna and other forest resources, an acceptable level of environmental impact, socio-economic benefits, and planning and adjustment to experience. Of the 84 activities identified for implementation on a state basis, a total of 70 activities (or 83 percent) were identical to those identified at the national level.

In its development, seven additional indicators beyond those identified at the national level were added to the FMU level. These were:

- Length of cutting cycle;
- Areas of Protection Forests and Production Forests within the PFE;
- Establishment of forest plantations for wood production;
- Establishment of forest plantations for non-wood production;
- Availability of environmental assessment procedures;

- Expenditure budgets for forest management; and
- Expenditure budgets for forest administration.

A total of 191 management specifications have been formulated at the FMU level, of which 161 (or 78 percent) are identical to those formulated at the national level. This set of criteria, indicators, activities and management specifications for forest management certification formed the *first phase* of MTCC certification. They were initially used to certify three forest management units in Peninsular Malaysia, namely, the states of Selangor, Pahang and Terengganu, under the Malaysia-Netherlands Joint Working Group's (JWG) Pilot Study on timber certification in mid-1996.

MTCC Revisions

Between 1996 and 1999, the MC&I underwent several series of revisions. Under the coordination of the MTCC, the Forestry Departments of Peninsular Malaysia, Sabah and Sarawak agreed on a common set of C&I both at the national and FMU levels for the whole country in July 1999. Standards of Performance (SoP) for each of the Activities were identified at the regional level by the respective Forestry Departments of Peninsular Malaysia, Sabah and Sarawak in their regions in August, 1999. In the case of Peninsular Malaysia this entailed the refinement and/or addition to the Management Specifications of the MC&I formulated earlier in 1994. These regional SoP were then integrated into the draft MC&I for the whole country under the coordination of the MTCC in September, 1999.

The draft MC&I was then tabled at the national-level consultation held in October, 1999 where a total of 85 organizations and companies, representing interested parties such as the timber industry, social and environmental non-governmental organizations, trade unions, women's organization, academic/research institutions and government agencies, were invited to attend. A total of 111 participants representing 58 organizations, including two representatives from the Forest Stewardship Council (FSC) participated in the meeting. Through this process, Malaysia adopted a set of MC&I for forest management certification to be used in assessing forest management practices in all forest management units for the purpose of certification under MTCC's scheme.

MTCC started operating its certification scheme in October 2001. Under the timber certification scheme, MTCC as the timber certification organisation receives and processes applications for certification, arranges for assessments to be carried out by registered independent assessors, and decides on all such applications based on the reports of the assessors. MTCC also provides an appeals procedure, should there be parties not satisfied with its decisions.

The launching of MTCC was not well received by all parties. WWF Malaysia who accepted an invitation to serve on the Board of MTCC to help formulate a scheme to improve forest management, encourage conservation of biodiversity, solve social conflict and provide a credible guarantee of good forest management, resigned a day prior to the launching date. WWF's concerns were that (WWF Malaysia 2002):

- The standard used in the MTCC scheme is derived from agreements between the Malaysian Timber Industry Board (MTIB) and the Netherlands Timber Trade Association (NTTA) under the Malaysia-Netherlands Ad-Hoc Working Group. This standard was not developed through a duly established, multi-stakeholder consultative process, and emphasizes economic considerations while failing to adequately safeguard social and environmental conservation values;
- MTCC saw its scheme as being transitional but WWF Malaysia argued that this was not clearly demonstrated due to the lack of a work plan and timeline to progress from the current scheme to a standard compatible with the Forest Stewardship Council's requirements of process and substance.

Nevertheless, NGOs like WWF are of the opinion that the MTCC label is able, in principle, to provide a verification of legal compliance and a verification of legal origin. MTCC needs to strengthen its chain of custody requirements through the product supply chain to prevent the mixing of MTCC labeled products with products from unknown sources. In the absence of such strengthening, the concern remains over non-transparent tracking of illegal movement of Indonesian logs into Malaysia. Specifically WWF Malaysia is concerned about the products classified under the Minimum Average Percentage System (WWF Malaysia 2003b). There are no clauses or requirements to ensure that the non-MTCC source does not come from contentious sources like the conversion of High Conservation Value Forests (HCVF) and illegal materials. It is felt the absence of this requirement undermines MTCC's purpose of providing a credible market label on the legality of the MTCC labeled product.

MTCC has approached the implementation of its scheme phase by phase. Relevant concerns tabled by various stakeholders are adopted and MTCC has planned to use a new standard that has been developed based on the P&C of FSC. The development of this new MC&I involved broad-based consultation and consensus between social, environmental and economic stakeholder groups through several meetings of the multi-stakeholder National Steering Committee (NSC) and regional consultation held separately in Peninsular Malaysia, Sabah and Sarawak. These consultations were held in October 2002 where the representatives of all the stakeholder groups from the three regions met to finalise and adopt the national standard. An action plan has also been adopted towards the formation of an FSC National Working Group (NWG) as a new body to advance the work of the NSC. The NWG will develop a standard that will be submitted to the FSC for endorsement.

Seeking Mutual Recognition from FSC

The timber industry in the country has a choice either to apply for FSC certification that is perceived to be highly credible in Europe or apply for an MTCC certification. The timber industry utilizing logs for conversion into value added products for the export market require a certificate that is credible and recognized internationally. Hence, to meet the credibility demands for these markets, the MTCC needs to

develop a working relationship with the FSC, which is perceived to be the most credible scheme in Europe.

As the FSC requires the participation of environmental NGOs and indigenous peoples organizations in the working groups, representatives of these NGOs and indigenous peoples were invited to participate, and provided comments and critiques in the building of the MTCC scheme for over a year. Various issues and demands were put forward at the regional workshops covering Peninsular Malaysia, Sarawak and Sabah. However, there was insufficient response from MTCC and in July 2001, the indigenous peoples organizations and most NGOs withdrew from the process. The differences in visions were too wide. The MTCC is structured to find ways to sell timber while the Indigenous Peoples Organizations and NGOs are mandated to protect the forests and to secure the livelihoods and interests of indigenous peoples and local communities who live in, depend on and derive their spirituality and cultural identity from the forests (POASM *et al.* 2001 as quoted in Yong 2002).

Consequently the cooperation between the MTCC and FSC collapsed. The FSC is said to have strong social commitment. The MTCC felt that seeking the recognition of community land rights is beyond its scope. Recognition of such rights would require changes in state constitutions on land rights. MTCC felt that the Social Principle should not trump the Principle on Legal Framework of Local Conditions, which required that the state constitution on land matters should be followed. In Sarawak there are 28 ethnic groups staking claims upon customary land. The Sarawak Forestry Department takes a stand that 'custom' is not a law unless enacted in the State Constitution. The Majlis Adat Istiadat recognizes that each ethnic group has Native Code or 'adat'. According to the State Constitution, the Native Code is below the State land code. Local headman or 'penghulu' will resolve any land dispute at the community level. If this is not resolved, land disputes have to be resolved at the higher level State Land Code. Accordingly, as long as land conflicts are not resolved then FSC certification is in jeopardy.

When the negotiation for endorsement by the FSC stalled, the MTCC found that its global recognition waned. It has developed at least two strategies to ameliorate this: opening to the demands of the FSC and approaching the PEFC. According to MTCC, PEFC is a natural choice since it recognises national certification schemes. As a small national scheme, MTCC recognises the need to work with bigger schemes including both FSC and PEFC. At the moment, MTCC has not yet submitted membership to PEFC for endorsement but has the intention to do so possibly in 2006. MTCC feels that being a member to PEFC may be advantageous as PEFC adopts the concept of mutual recognition and MTCC can fall under its umbrella scheme.

In terms of obtaining mutual recognition of MTCC certification from FSC, it has proven to be a long and haggling process. Hence MTCC, in keeping to its phased approach, has announced, through its press release dated 26 August 2003, its intention to use the new standard entitled Malaysian Criteria and Indicators for Forest Management Certification [MC&I (2002)] which is based on the P&C of the FSC. There is a contention whether MTCC's intention of adopting the new standards is totally due to its phased approach or whether it has reluctantly altered its approach

in response to both indigenous NGOs and market pressures. Based on discussions with the MTCC and WWF, it appears to be a combination of both. It is a common practice in the country to introduce new rules and regulations in stages to allow more time for relevant parties and society to adapt to changes. But in this case, the process has been further enhanced by responses from NGOs and market forces.

The MC&I (2002) was finalised and adopted by consensus at the National-Level Consultation held on 28-30 October 2002 Kuala Lumpur. The MC&I (2002) is currently being field-tested, following which it will be refined to take into account the results of the field tests. A target date of January 2005 was set to start using the MC&I (2002) to assess all FMUs for the purpose of forest management certification under the MTCC scheme. The certificate for Forest Management awarded to applicants who have been found to comply with MC&I (2002) would carry a status of FSC compliance but not endorsement. In other words, technically FSC requirements have been complied but no endorsement from the organization would be implied.

THE REACTION TO CERTIFICATION

Indigenous People

The NGOs feel that a number of fundamental demands need to be addressed before any credible and effective certification scheme can be put in place. Many of these demands revolve around the decision-making process affecting the community's rights to customary lands and forests and include:

- The need for participatory, consultative, open, transparent and involved representation of all key stakeholder groups at all levels;
- Wide distribution of up-to-date and accurate materials and information in the local languages with appropriate visual forms to the communities and with sufficient time given for the communities to understand the issues before they can make a decision. The geographical distance and isolation of indigenous groups would have to be taken into consideration;
- Greater transparency in the communications between MTCC and various bodies such as Keurhout Foundation, Tropenwald Initiative (TI), Tropical Forest Trust, and Forest Stewardship Council (FSC) in relation to indigenous peoples;
- The demands that standards comply with the C&I of ITTO (Criteria 7.14 to 7.17) and with the FSC's Principles and Criteria (Principle 2 and Principle 3) on local forest and indigenous communities' legal and customary tenure or user rights (adat);
- The requirement that a Memorandum of Agreement between the villagers and FMU/concession holders on the Community Protocol be negotiated and signed. Further, when defining the boundary of village and FMU/concession areas, full involvements of indigenous peoples be required to certify and reassert their traditional village boundary;

- A request that the chair or facilitator of the National Steering Committee, Regional and National Consultations sessions, and associated meetings be an independent person to allow for balanced and neutral participation;
- A request for funding to facilitate travel and administration to ensure a wider participation by indigenous people and NGOs.

Owing to the inability of the MTCC certification scheme to meet their demands, indigenous people fear that their tribal lands may be signed off to logging concessions without their consent. They want their right to prior informed consent and to be able to use their customary laws. To them 'prior informed consent' means being told–with consent obtained – before national governments move in to delineate protected areas around sacred lands. They feel that they must do whatever is necessary to protect their resources at the local level, as they are not going to be recognised at the state, national or international level. The modern laws and competing private sector interests are alien to their traditional ways (Loh 2004a, 2004b)

Forest Owners

PITC, whose interests are to produce certified timber that is accepted internationally, have begun to seek additional certification other than MTCC. FSC program seems to be alternative certification program being sought after. PITC is also seeking ISO 14000 environmental management system standards.

NGOs

Despite the encouraging interest shown by the Malaysian Government and Malaysian companies in certification, NGOs reception is less encouraging. Environmental and social NGOs and community-based groups in Malaysia and abroad have argued that the MTCC certified 'sustainably managed' status of most of the states in Peninsular Malaysia is not credible. The FSC certified concessions are exempted from this concern.

According to WWF Malaysia (2003a), there are many different problems with the MTCC scheme, but the main concerns are:

- It does not give due recognition and acceptance of customary land rights, tenures and user rights of indigenous peoples and local forest communities;
- It was not developed through a due consultation process, and emphasizes economic considerations while failing to adequately safeguard social values and environmental conservation.

Industry

Because of the stalemate in getting recognition of FSC for MC&I, the Sarawak Timber Association (STA) began working on an initiative since the middle of 2003 to generate an interim chain-of-custody verification scheme. This initiative involves placing a mark on the timber and timber products of Sarawak. This mark is tentatively called

the "STA Stamp." It is essentially a chain-of-custody system, a clear method of tracking the timber from logging to milling to export points. This mark will indicate that verification of legal status has been carried out by third-party assessors. The essential framework of the STA Stamp is a COC with particular emphasis on the legal status of the material being tracked. Third-party assessors, typically globally known accounting firms, add credibility to the system. The STA Stamp is a voluntary marking system for STA members.

Current Status of Forestland Certification

As of December 2003, MTCC has certified seven FMUs (Pahang State FMU, Selangor State FMU, Terengganu State FMU, Perak State FMU, Negeri Sembilan State FMU, Johor State FMU and Kedah State FMU) with a total of 2,310,567 ha. However, it should be noted that Terengganu State FMU was a reassessment and re-certification case after being suspended in November 2002. As mentioned earlier, certifying the whole state as an FMU is contentious but the Government and MTCC view on this has been elaborated. All these certified forests are 'government owned'.

One concession area under Perak Integrated Timber Complex (PITC) with an area of 9,000 ha has also applied for FSC certification. It was assessed as complying and obtained its FSC certificate at the end of July 2002. Another concession area receiving an FSC certificate is the Deramakot Forest Reserve, Sabah involving an area of 55,000 ha in September 1997. This forest reserve was certified as being a "well-managed forest" adopting management concepts and practices in full compliance with the MC&I and hence the ITTO's criteria and indicators for sustainable forest management as well as the FSC P&C (Gilley 2000).

None of the FMUs in Sarawak has been certified yet. But there are two projects – one bilateral and the other multilateral – being established. The Malaysian-German SFM project involving bilateral cooperation between the Sarawak Forestry Department and GTZ undertaken by the Samleng Group at Ulu Baram involving 170,000 ha of hill forest where a FSC certificate is being sought. The multilateral project is the MTCC-ITTO SFM project undertaken by the Ta Tau Group at Ulu Anap involving another 170,000 ha where the MTCC certification program is underway. The enabling conditions for both FSC and MTCC certification program have already been met with the enactment of the Sarawak Forest Ordinance, National Parks and Wildlife Ordinance and the establishment of the Permanent Forest Estate (PFE).

Current Status of the Certified Marketplace

The first shipment of MTCC-certified timber was exported in July 2002 to the Netherlands. According to MTCC, at the end of February 2004, 9,217 m^3 of MTCC-certified sawn timber products had been exported to the Netherlands, Germany, Belgium, France and the United Kingdom. A number of authorities and companies have shown interest in accepting MTCC-certified timber products. For example, the Danish Ministry of Environment and Energy has included the MTCC scheme as one of the accepted schemes in its document entitled "Purchasing Tropical Timber: Environmental Guidelines" (Ismail 2004).

As of January 2004, 38 companies have received the MTCC Certificate for Chain-of-Custody (Ismail 2004). Certified sellers usually boost their market share because of the cachet of certified timber in eco-sensitive markets. Innoprise Corp, the state company in charge of logging the Deramakot Forest, has seen better efficiency and booming sales of its garden furniture to Germany since the project started in 1994 with German aid. Another concession, PITC is producing 12,000 m3/year on average from an annual coupe of 300 ha. The small volume is due to its relatively small concession area. According to its chief executive officer, market orders are brisk and the company is facing difficulty in meeting demand (Tan, personal communication, 2004). The number of companies receiving FSC COC certificates is not known.

EFFECTS OF CERTIFICATION

Power

The advent of certification has obviously shaken the power dynamics within forestry circles. Forest policy, authority and decisions over practices have always been the domain of the governments and forestry departments. The entry of FSC and other certification programs have introduced a 'threat' to this domination. The Government is intent on achieving SFM at its own determination, but certification has hastened the urgency. Hence, among other things, on grounds of patriotism and in keeping to the recommendation of the 1993 ITTO conference for all producer member countries to set up a certification scheme, the country established the MTCC to certify that the timber with the MTCC logo comes from sustainably managed forest. Despite the focus and determination to improve forest management practices, the MTCC scheme has found that NGOs have a strong influence on market endorsement.

NGOs have often questioned MTCC's ability to establish the necessary credibility to be an assurance of SFM. The issue of smuggling of timber from Indonesia has been raised as one of the major concerns for importing countries. The inability to reassure importing consumers despite the Malaysian Government's log-import ban on June 25, 2002 and subsequent announcement of efforts to increase its effectiveness is a further indication of the dynamics of the influence of global issues and of NGOs upon trade. The NGOs have demanded a higher level of transparency about the extent of illegal wood movement between Malaysia and Indonesia. It is a certainty that the Malaysian Government, and MTCC in particular, has to reckon with this power shift.

Social

Limited evidence of social effects of certification is available. Certified concessions have an obligation to take care of the interest of local residents. For instance, PITC has created two social programs in its effort to fulfill the third FSC principle on financial, socio-economic and legal considerations of indigenous peoples. Two programs were created to fulfill the elements of community and public involvement particularly on the employment from within the local and regional workforce and involvement of employees in community affairs.

The Orang Asli (or Indigenous Peoples) Program involves getting them employed as logging workers, even though there were no Orang Asli in the forest concession area initially, but living nearby. The Orang Asli proved to be the firm's most stable workforce. They were employed in various capacities including in pre-felling activities (such as timber tree survey and tagging), felling, and post-felling silvicultural activities. Eleven Orang Asli workers perform multi-function tasks involving logging road maintenance and tree surveying including reading using measuring equipments such as clinometers to determine a tree's height. Another eight workers perform specific felling operations like chainsaw attendance and pulling of cable to facilitate skidding operations. This program required on-the-job training of these Orang Asli workers, including inculcating a more disciplined work attitude. There was no discrimination against the Orang Asli workers and there was no wage difference between Malay and Chinese workers. The wage rate for a worker is RM30/day* [US$1 = RM3.8] and an Orang Asli worker can obtain a monthly salary of about RM700 plus an amount for employment providence funds (EPF).

PITC also supports the Government's program to promote the involvement of local small and medium scale entrepreneurs in the wood-based processing industry. Under its Bumiputra Entrepreneur Development Program, three Bumiputra entrepreneurs involved in the manufacturing of furniture components were given priority in obtaining FSC accredited sawn timber supplies from PITC sawmills. This has enhanced the international trade opportunities of these Bumiputra firms.

Economic

In terms of market opportunities, for the few forest concessionaires having FSC certification, access to export markets have been brisk – so much so that some orders could not be met. Although the door of opportunity is opened, but with a limited annual allowable cut, only a limited volume of wood material can be processed and exported. For the moment, the surplus demand for certified material is fetching a price premium. This is the experience of concessionaires like PITC and Deramakot DFM project – a situation noticed by other concessionaires. Despite having an MTCC certification, KPKKT is seeking FSC certification as well as a means of getting more access into markets that demand it.

There are definite indications that firms obtaining FSC accreditation have received an economic benefit. Peninsular Malaysia has imposed a ban on the exportation of logs in a bid to encourage domestic processing and to meet local demand under a log-supply deficit situation. Any export of timber has to be processed. Hence, PITC is involved in the sawmilling industry and in sawn timber exporting. PITC exports sawn timber to niche markets requiring FSC labeled supplies. It has received sawn timber orders at prices with an average premium of 37 percent. These higher prices occurred due to direct ordering by international manufacturing firms. Hence, not all of the premium should be allocated to effects of certification. The higher premium was possible due to a transfer of the marketing margin that normally goes to traders or middlemen direct to PITC.

Prices quoted by buyers vary by destinations. PITC has exported to Germany, U.K. and Holland, with the German market offering 20 percent higher prices than the UK market. Currently PITC manages 300 ha producing an average yield of 40 m^3/ha, a reduction from its previous production of more than 80 m3/ha from virgin forest and 60 m^3/ha from previously logged forest. PITC has computed that at its increased production cost, the break-even point production has to be 30 m^3/ha. The breakdown log production is 40 percent Shorea sp., 20 percent other popular or known species (such as keruing, merbau, kledang and kelat), and the rest from lesser-known species (LKS). The average price ranges from RM1,100/ton (RM611/m^3) for shorea sp., to RM700/ton (RM389/m^3) for other known species, to RM500/ton (RM278/m^3) for the LKS.

As expected, firms obtaining forest certification have to incur incremental costs owing to compliance to additional forest management activities. PITC reported an average increase in direct production cost of about 15 percent to RM160/ton or RM89/m^3. This is not inclusive of cost of pre-felling and post-felling activities. An International Tropical Timber Organization-Forest Research Institute Malaysia research project conducted in the MTCC forest certified compartment belonging to Kompleks Pengurusan Kayu-Kayan Terengganu (KPKKT) found that overall log production cost inclusive of pre-felling, felling and post-felling activities increased 50 percent to RM167/m^3 (Mohd Shahwahid *et al.* 2002). But of course, this higher proportion is due to the comprehensive cost elements included such as on forest management and harvesting plans, pre- and post-felling inventory activities, incremental training to adhere to certification SoP and management activities including greater supervisions and inspections (not only by the contracted harvesting team and concessionaire but also by the Forestry Department as trustee of forest reserves).

The computed shares of the incremental costs are 11.9 percent by the Forestry Department, 23.5 percent by the concessionaire and 64.7 percent by the harvesting contractor. The incremental costs incurred by the contractors during pre-felling and felling activities are for salaries and wages, and material and machinery rental for excavators needed in road construction. The Forestry Department would incur incremental costs for supervisory and monitoring costs during tree marking and mapping operations and road design. The concessionaire's cost was mainly on salary and wages for supervision and monitoring. In complying with forest certification, there is limited evidence of changing effects upon annual allowable cut area but annual allowable volume was reduced.

Doubts exist whether the Selective Management System (SMS) could generate a sustainable forest at a 30-year rotation/cutting cycle. It should be noted that provisions exist in the "Guideline on the Determination of Cutting Limit from Pre-felling Inventory Information" to lengthen the cutting cycle in areas with less than 32 residual trees from 30-45 cm class by using the equivalent concept of trees in the 15-30 cm class. The cutting cycle can in fact be longer (between 30 and 44) years to ensure sufficient economic cut in the next cutting cycle.

Environmental

Certification has led to greater planning and monitoring of the environment. This assertion can be deduced from reviews of certification audits of forest concessions and responding comments from state forestry departments. Taking the case of the certification audit for the state of Trengganu, several activities were conducted taking environmental concerns into consideration (Terengganu State Forestry Department 2002). Although various forest plans were prepared, such reports had to be redrafted in response to certification audits to incorporate environmental and social concerns. For instance, the Forest Management Plans (FMP) were prepared following a new format whereby information related to the environment, community participation and social issues were considered as well. Mother trees and threatened or endangered trees were marked in areas to be felled. The requirement is that four mother trees be marked for every hectare of felling area. The 1:50,000 resource map is updated with markings of all illegal logging areas if such activity does in fact occur in or outside active logging licenses from information recorded in the Forest Offence Record Book.

Although previously buffer zones were reserved for primary rivers with free flowing water, the State Forestry Department is now willing to include buffer zones for seasonal rivers as well. To minimize environmental damage during road construction due to bulldozers, excavators are now being used as a replacement in cutting earthworks on sloping areas.

Further, state forestry departments have committed themselves to revise the License Closing Report to incorporate information related to environmental monitoring including information on area lost or destroyed after logging, the number and length of secondary/skid trails, and area of log yards.

CONCLUSION

Summary

Forest certification emerges from several initiatives including from direct initiatives of the states' forestry departments as trustees of PFEs, bilateral projects for sustainable forest management between the state forestry departments with international bodies, and direct interest from individual forest concessionaires. The FSC certification of Deramakot Forest Reserve is a typical bilateral project while the MTCC certification of forest management units in seven Peninsular Malaysian states is an illustration of direct support from state governments. The FSC certification of PITC forest concession is the case of a direct private sector initiative. As it stands certification is still at the growth stage in the country and there are no indications of path dependence.

The state governments and forestry departments of the three regions are all committed to supporting the certification program with a view that the program is voluntary and market driven. The belief is that the program could serve as a tool towards achieving SFM and in gaining market access. More and more concessionaires are

seeking certification in line with meeting the requirements of their customers. It is not appropriate to single out any particular group as championing certification in Malaysia. Various parties including national and international NGOs, governmental agencies, and international markets play their synergistic roles towards garnering domestic support for certification and in streamlining the national MTCC certification in its phased approach towards global acceptance.

Market forces, particularly from international customers' demand, have provided the necessary impetus for forest certification among concessionaires. The positive impacts of the certification drive can be seen from the primary stakeholders' acceptance and willingness to comply with SFM practices, albeit with appropriate supervision and regular inspection. It has provided hope that SFM is attainable. Certification has provided a new dimension in forest management. Forest management is no longer principally the domain of state forestry departments; nor does it revolve solely around the issue of sustainable timber production. Social considerations have to be taken into the picture and indigenous peoples concerns have to be taken on board. The negative impacts pertain to the difficulty of resolving issues on NCR land. It has been perceived that certification is encroaching into sovereignty rights of independent nations.

Compliance with certification rights also proved to be costly. Despite that, price premiums are obtained by FSC certified concessions that are currently trading certified timbers on a limited scale. It is not certain that such advantage in price premium could be sustained once sizeable areas are certified. Similar circumstances for MTCC-certified FMUs have not been reported.

Owing to the need to comply with principles, criteria, indicators and standards of performance, forest management of PFEs has become more systematic, transparent and sensitive to accepted international trade practices. The requirements of the COC have made the country more conscious on controlling illegal logging. Certification has made concessionaires more aware of international customers' requirements for timbers from well-managed forests. This has indirectly disciplined harvesting crews in certified concessions. Certification has not tackled the conversion of state land forests that are earmarked for development projects. It is not appropriate in this paper to make any conclusion on this specific matter as the Government has its own development master plan.

Roadblocks and Challenges

There are various roadblocks and challenges to certification. Since the draft MTCC 2002 standards are closely aligned to the FSC (Maynard, personal communication, 2004), the main barrier is not their content but more their procedural aspects, especially on the consultative processes. The main challenges gravitate around the recognition of the rights of the indigenous peoples, land and forest disputes, the lack of consensus among the social groups, and the inability of obtaining mutual recognition of MTCC certification program from FSC.

Indigenous People

Obtaining the approval of NGOs forms the biggest roadblock and challenge to obtaining endorsement by FSC of MTCC certification scheme. These NGOs continue to reiterate the rights of indigenous peoples to customary lands and forests and livelihoods of the people who live in and around the forests. Many NGOs who had agreed to participate in the stakeholder consultative processes felt that the MTCC was not able to resolve critical "stakeholders" issues. Various meetings and workshops gave little room for real dialogue and they felt their presence might be used to legitimize indigenous and local forest communities' participation in the process.

The NGOs have withdrawn their involvement in the MTCC/MC&I process until their concerns and demands are on the way to being met. These NGOs, community-based organizations and Indigenous Peoples' organizations do not endorse the MC&I as currently proposed by MTCC. The main issues in contention included:

- The encroachments of FMUs, Protected Areas and logging concessions into the community's forest areas takes away or restrict the community's ownership rights, user rights and access to resources. Many of these areas are still being disputed because they are either part or the whole of the NCR lands/forests of the communities and individuals within the community.
- The concept and process of SFM as enforced through legislation and forest management plans are different from communities who see SFM as a means to ensure the continuity of forest resources for food, medicines, other daily needs and inheritance to the future generations.
- Indigenous peoples have particular rights to land and use of forestland, which is different from other forest users. There must be due recognition and respect for indigenous values, knowledge and practices related to forestland.
- Indigenous peoples, particularly forest-dwellers (e.g. Penans and Bhukets of Sarawak or the Orang Asli Batek and Jahai), are not "just another stakeholder" in forest management. They are the rightful stewards of the forest and thus there must be protection of their way of life.
- Involuntary relocation of villages in the FMU results in the loss of ownership and user rights. Further, governments and development agencies often make decisions to move the communities without consulting them first, resulting in further impoverishment of the communities.
- Participation of indigenous and local forest communities must not be limited to just a few appointed leaders or members of the community. The entire village must be informed, consulted and involved in decision-making processes in order to have meaningful participation before they give their informed consent to the planning or implementation of development on their land or forest areas.

Land and Forest Disputes

Land and forest disputes between the communities on the one hand, and the government, logging concessionaires and licensee on the other hand, are serious especially in Sarawak where there are greater number of communities living in the forests (Malaysian NGOs Position statement, October 1999). Workshops on Community Consultations on Forest Certification (February-April 2001) proposed that the way to accord legal recognition and protection to native customary rights (NCR) over land for the Sarawak indigenous peoples is to amend the laws on land, in particular Section 5 of the Sarawak Land Code.

The concern is about the full recognition of NCR over land of the Orang Asli of Sarawak as well as Sabah and Peninsular Malaysia, in accordance with the native laws and customary practice of the particular native community occupying that land and that native customary rights over land shall not be extinguished or terminated without the consent of the natives or unless the natives have voluntarily surrendered, after full information, such rights.

Lack of Consensus

The formation of a Multi-Stakeholder National Working Group into three or four different sectors is not working well since they are not working towards a common goal of SFM but instead promoting their own interest. There has been no consensus on proceeding with four "chambers" involving representatives from social, environment, economic and direct resource manager interests. Yet the MTCC and NSC are currently proceeding along this path. This is a source of major disagreement.

There is also a rift between the aspirations of members of the Social Group. The potential for the Social Group to reach consensus is difficult as the workers' union has conflicting interest with community organizations within the group. According to the NGOs, the union representatives have demonstrated inflexibility and lack of openness to indigenous peoples' concerns. To make matters worse, representatives of community organizations question the union's legitimacy to be within this group and thus need clarification on their position and interests.

FSC Endorsement

Malaysia through the NTCC approached the FSC as early as 1999 to work together on timber certification. FSC does not support mutual recognition of MC&I. Instead Malaysia has to adapt its P&Cs to obtain FSC endorsement/certification.

Further, FSC has several reservations with the MC&I for SFM (Synnott, quoted in Gilley 2000). These reservations particularly include two points (Gilley 2000):

- Rights for workers and indigenous peoples;
- Better forest management.

The rights of workers and indigenous peoples is a foundation of the environmental groups that make up the FSC, many of which started by protecting

people dispossessed by the forestry industry in Central and South America. The FSC wants Malaysia to entrench more legal rights for workers and indigenous peoples on issues such as compensation and consultation. The Malaysian agencies felt that their own system is adequate, and like other timber-producing countries, sees such demands as an encroachment on its national sovereignty.

Despite the lengthy and repeated explanations by MTCC, the indigenous community rejected the MTCC with endorsements from 59 communities, 80 villages in Sabah and 114 longhouses in Sarawak (John 2004).

With respect to SFM, the FSC wants changes in areas such as removing felled logs from forests using overhead winching to on-the-ground dragging and efforts at protecting ecological diversity.

Future Developments

The Malaysian government is committed to ensuring that MTCC certification remains relevant and globally accepted. The current popular certification scheme globally is FSC. These two schemes are expected to remain important in Malaysia. With the MTCC certifications sanctioned by the government and the FSC recognized by customers, it is anticipated that concessionaires may have to seek both certifications. In Peninsular Malaysia, concessionaires who obtain long-term harvesting rights from the Forestry Department would have to comply with its request to obtain MTCC certification. At the same time, in compliance with requests from customers, these concessionaires would have to seek FSC certifications.

NGOs and indigenous peoples' concerns over recognition due the customary land rights, tenures, and user rights of indigenous and local forest communities, and interests over adequacy of social value safeguards and environmental conservation, are expected to take centre stage over FSC recognition of the MTCC certification program.

Owing to the above stalemate, the private sector may be impatient and might seek alternative approaches while waiting for the recognition of the MTCC certification program. The concessionaires would need an interim program that, if subscribed, would show strong commitment towards fulfilling FSC requirements. Such a support program should be temporary in the run up to full certification compliance to any of the recognized programs. One support program is WWF's step-wise approach towards credible certification and wood tracking for legal verification of origin of the wood material based upon the Global Forest Trade Network (GFTN). In Malaysia one of the service providers is Global Forest Services (GFS), which has designed their forestry programs to meet the requirements set by GFTN.

Future Research

Further research has to be conducted to advance understanding of forest certification and its impacts in Malaysia. Considering the important role that government has in the development of forest certification and how it managed change and built on the decision making process, an obvious research topic is the role of government.

Government involves multiple agencies and functions, be it policy or implementation. It is important to identify specifically the different agencies involved and the functions they play. An understanding of government agencies' motivations and basis of action would go a long way in understanding the way they behave. To be meaningful, there is a need to engage in empirical assessment using testable hypotheses.

Another interesting issue is that certification involves a long supply chain involving many parties. It is necessary to analyze the political and socio-economic structure all along the supply chain to understand why certain decisions are made.

Finally, certification involves cost and contributes to various impacts. It is interesting to observe the incremental and full cost of a certification program at the firm and country levels. A cost-benefit analysis could be conducted on forest certification programs in the country to obtain a better understanding of the impacts for various parties and along the supply chain.

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ACRONYMS

AAC	Annual Allowable Cut
C&I	Criteria and Indicator
CMSTFM	Criteria for the Measurement of Sustainable Tropical Forest Management
EMS	Environmental Management System
FMP	Forest Management Plan
FMU	Forest Management Unit
FSC	Forest Stewardship Council
FSCNWG	FSC National Working Group
GFS	Global Forest Services
GFTN	Global Forest Trade Network
HCVF	High Conservation Value Forests
ITTO	International Tropical Timber Organization
KPK	Kumpulan Perkayuan Kelantan
KPKKT	Kumpulan Pengurusan Kayu-Kayan Terengganu
MC&I	Malaysian Criteria and Indicators
M-GSFMP	Malaysian-German Sustainable Forest Management Project
M-NJWG	Malaysia-Netherlands Joint Working Group
MR	Mutual Recognition
MTCC	Malaysian Timber Certification Council
MTIB	Malaysian Timber Industry Board
NCR	Native Customary Rights
NGO	Non-Governmental Organization
NSC	National Steering Committee
NTCC	National Timber Certification Council
NTTA	Netherlands Timber Trade Association
P&C	Principles and Criteria
PFE	Permanent Forest Estate
PITC	Perak Integrated Timber Complex
RAP / CoC	Requirements and Assessments Procedures of Chain-of-Custody Certification
SFM	Sustainable Forest Management
SMS	Selective Management System
SoP	Standards of Performance
STA	Sarawak Timber Association
TI	Tropenwald Initiative
UNCED	United Nations Conference on Environment and Development
WPSNFM	Working Party on Sustainable Natural Forest Management
WWF	World Wide Fund for Nature

Forest Certification in Papua New Guinea

Yati Bun and Israel Bewang***

ABSTRACT

In Papua New Guinea (PNG), 97 percent of the land and forest resources are customary owned and constitute some of the most important assets that sustain livelihoods. As a result, people have a direct relationship with both.

With the introduction of commercial logging, landowners have been marginalized in decision-making concerning their forest resources. Forest resource owners continue to have to deal with the negative consequences of decisions made by others. While such individuals are interested in forest certification because they think it can be a solution to the ongoing problems related to large-scale logging, they do not have the economic, technical and resource capacity to undertake it. The high cost of forest certification precludes implementation in PNG, meaning that forest management that is economically viable, socially beneficial and environmentally sound cannot be achieved using this tool.

The Papua New Guinea Government, through the National Forest Authority's administrative arm, the National Forest Service, is aware of certification, but most large-scale logging companies show no interest. These companies can be attracted to certification if there is a price premium, market demand, and the costs of getting certified are affordable. There is a need too for greater publicity about forest certification so that stakeholders can make an informed choice. Forest certification in PNG will require continued assistance if it is to promote change from unscrupulous forest management to improved certified practices. Medium- and small-scale producers are very interested in FSC forest certification and are working on it; only community-managed forests are certified in PNG.

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INTRODUCTION

The most developed forest certification scheme in Papua New Guinea is the Forest Stewardship Council (FSC), with national standards being developed and submitted to the FSC International Secretariat for endorsement. Before these were developed, the international FSC standards were used to certify community managed forests and were funded by foreign donors. The process of developing the PNG national standards began in 1996, and was carried out mainly by local NGOs funded by international donors. Initial requests to have FSC International endorse the PNG FSC standards were not successful because of significant flaws. Work is continuing to produce a set of nationally accepted FSC standards.

The PNG government is also working to develop an International Tropical Timber Organisation (ITTO) standard, especially criteria and indicators for sustainable forest management at both the national and forest management unit levels, because PNG is an ITTO member country. The large-scale logging companies within the Forest Industry Association (FIA) are working on a certification system similar to the Malaysian Timber Certification Council (MTCC) in an effort to unify other Pacific countries with a regional standard that is acceptable and affordable. Only one large scale logging company is pursuing FSC certification.

According to FIA, PNG is a developing country and therefore has different needs, possibilities and resources regarding forest certification than developed countries. Certification is perceived as another market requirement imposed by importers; it is difficult to meet and may constitute a barrier to trade rather than promotion of export. FSC forest certification in PNG is spearheaded by individual volunteers and national NGOs, backed by international NGOs with little or no support from the government. International donors are playing a very important role in the establishment of forest certification, especially by providing funds for FSC accredited certifiers and getting the communities to prepare their forest areas for certification.

Forest certification is donor funded and occurs in response to project proposals being submitted by interested stakeholders. Without donor funding, forest certification would be unable to sustain itself, as there are many costs involved. There is a trend in PNG of projects related to forest certification ceasing when donor funding stops. For example, PNG had community forestry groups enrolled in two FSC group certificates, but these have now expired due to a lack of review visits, caused in turn by the high cost of certification, ignorance, and expiration of donor funding.

Forest certification in PNG has the potential to serve as a leading example of what can be done to improve locally owned and managed forests. However, to be successful, certification needs to be economically viable, and there is a need for business management skills amongst the community groups pursuing certification, so that they can effectively manage the financial resources received from marketing certified products.

This case study analyses the situation currently faced in PNG and traces the lessons learned about forest certification.

BACKGROUND

Historical Context

Forestry Problems

The major problems in the logging industry in PNG are (a) forest management problems (such as destruction of biological diversity, water pollution, unsustainable practices leading to resource exhaustion); and (b) widespread corruption (including illegal logging) in all levels of the forestry sector. Other reported problems include difficult working conditions (with logging companies working in tough physical conditions on project sites that are remote and mountainous, increasing operational costs); and negative impacts on women (who are directly linked to the forests via the collection of food, building materials, and medicine).

With respect to (a), the current forestry practice is more like mining than managing the forests. Good forest management practices that ensure the maintenance of forest cover over the long-term are not being carried out. Logging companies appear to have a free hand, with the main role of the forest authority being to acquire the forest resources and allocate them to logging companies. Current practices do not treat forests holistically, and do not recognize the many other non-monetary benefits that can be derived from forests. There are a large number of stakeholders (resource owners, the private sector, donor agencies, politicians, public servants and NGOs) involved in using forest resources and hence there is a need to take on board these varying interest groups and uses.

Interviews with representatives of forest resource owners from Madang Province highlight these problems. The Gogol/Naru Resource Owners' Association is one of the oldest landowner groups in PNG and the Madang Forest Resource Owners Association (MFROA) is one of the biggest (over 120 members) and well-organized resource owner groups. These community activists noted that during the Colonial period, customary resource owners were given little choice in managing their lands, because the state wanted to own everything in the name of development. Logging was allowed and police imprisoned those who opposed it. Between the early 1950s and early 70s, the state controlled the forest resource, a large-scale forest industry developed, and customary forest resource owners were not involved in planning or management. Resource owners were treated as *kanakas* (natives without any knowledge and of the lower class).

In 1971, PNG was under self-government and, together with Australia, negotiated the Timber Rights Purchase (TRP) arrangement to clear fell the Gogol/Naru area. In 1972, the operation commenced, trees were felled with bulldozers, and trucks took the logs to town where they were processed into chips for JANT, a New Guinea timber company. From the point of view of community activists, this was a disaster, as the forest, which was once the natural wealth of their forefathers, was denuded and turned into bare land. The environmental, social and economic effects have been serious. With the destruction of the forests, the social fabric was strained, and there was very little economic development (only K5 was paid per cubic metre for the logs).

Following this clear felling of the natural forests, *Acacia mangium* plantations were established and today the area produces woodchips.

It has been estimated that 300,000 ha of forest is removed annually (60,000 ha through logging, 200,000 ha through shifting cultivation and 40,000 ha through mineral exploitation according to Foundation of South Pacific (FSP) in 1993). Most recently, an increasing amount of the forest resources were destroyed through wild fires during extreme dry periods.

In addition to destructive logging practices, there is widespread corruption in the logging industry. Logging companies often do not comply with the conditions of their permits, creating many problems. Government officers responsible for monitoring such operations do not have the capacity to carry out their jobs or are negligent. The logging companies are able to evade effective regulation without anybody holding them accountable.

Moreover, government procedures for acquiring forest resources and tendering out logging contracts are not being followed. There have been many instances of irregularities in the issuing of permits to timber companies. Timber permit obligations are not fully complied with or, in some cases, not complied with at all. Landowners are left with temporary roads, sub-standard buildings, and many unfinished or uncompleted projects. No one in authority is willing to take seriously the fact that permit obligations are not honoured. Corruption is experienced during all phases of a project's implementation, resulting in disputes, jealousy, and dishonesty as many landowners miss out on the benefits.

Landowners are supposed to be the biggest beneficiaries of the logging that takes place in their forests. Unfortunately, since logging began seriously in the late 1970s in PNG, landowners have always been sidelined and have little or no say in how their forests are managed. There is no respect at all for the traditional way of life and usually all is lost when the bulldozer goes into the forests. When landowners raise a protest, they are often threatened with legal action or are thrown into jail, Berry (2004) argues. Greenpeace's 2004 report entitled "The Untouchables" states that in PNG, Malaysian logging companies routinely resort to corruption, payoffs, human rights abuses – and occasionally even condone torture and rape – all in order to carry out extremely environmentally and socially damaging ancient forest liquidation. Rimbunan Hijau of Malaysia, which dominates PNG's timber industry and politics, is alleged to be one of the major players in global forest crime. These reports highlight the degree to which global trade in illegal and destructively logged timber from the Earth's last fully intact and operable forest ecosystems is out of control.

The Role of Forest Certification

To address the above problems, forest certification can assist Papua New Guineans to set standards that will help save their forests, bringing them greater benefits than they can earn from foreign owned large-scale logging. However, it is unable to assist them in meeting the cost of preparing certifiable forests or to cause the government to make changes to forest policies to accommodate internationally accepted standards of sustainable forest management such as FSC's.

Forest certification combined with small-scale sawmilling is environmentally sound, but there are problems linking forest areas to the markets and maintaining supply. Such activities are labour intensive and there are significant transport problems due to the rugged terrain and lack of transport infrastructure including roads and bridges. In order for forest certification to make a real impact, the national standards need to be accepted willingly by the different stakeholders, including the government, without fear of national sovereignty being compromised by international certification schemes. Only then can certification be included in the national forest policy and be able to address the problems faced.

Policy Responses

The Papua New Guinea Forest Authority (PNGFA) has initiated a resource development and allocation process as outlined below and forest development must comply with the National Forest Plan of 1996. The process involved in resource allocation is as follows:

- Forest Land to be developed for Long Term Production Forestry
- Landowner Awareness Programme
- Development Options Study
- Forest Management Agreement
- Call for Project Proposal
- Selection of Preferred Developer
- Developer Feasibility Study
- Project Agreement
- Approval of Project Agreement under Environment Planning Act
- Timber Permit
- Performance Bond and Operational Planning Approvals
- Harvest Authorisation

There are three basic arrangements for obtaining rights to harvest timber: timber permits, timber authorities and timber licences. There used to be Local Forest Areas (LFA) arrangements, where landowners dealt directly with logging companies, but these were eliminated in the 1991 amendments to the Forestry Act. However, some LFAs that have not expired remain.

Timber Permits are issued by the National Forest Minister to logging companies and constitute Forest Management Agreements (FMA) with big volumes for periods of over 10 years. Timber Permits are the major avenues for forest development in the country. The projects take place after necessary documents are signed between the government, the landowners and the company. According to PNG National Forest Policy 1991, the following steps are to be followed when issuing a Timber Permit:

- PNGFA enters into a FMA with landowners that sets out who is to carry out the forestry operations, what is required of them under the timber permit conditions, and how the benefits to be received by landowners for the rights granted are to be distributed.

- All FMAs are to specify the volume and quantity of merchantable timber, with terms of sufficient duration for proper forestry management to be applied; a map of forest area; certainty of tenure (either via legal land title or written assent to the agreement). The Provincial Forest Management Committee (PFMC) must also be satisfied as to the authenticity of the land tenure claims of the resource owners.
- Forestry operations are permitted on state land approved by the National Forest Board (NFB), on state leasehold land where the lessee consents (and subject to lease conditions), and on customary land where a FMA has been entered into with customary owners and PNGFA.
- Where the PNGFA enters into a FMA, the NFB consults resource owners and the relevant provincial government with respect of its intentions in the allocation of timber permits over the forest area covered by the FMA.

In contrast to Timber Permits, Timber Authorities are issued to forest developers by provincial forest ministers. Timber Authorities may be issued when the annual harvest is not more than 5,000 cubic meters and the timber is for local consumption. Such licences are normally granted for clearing related to agricultural development or road line alignment. Timber Licenses are issued when cases occur that do not fall under the Timber Permit and/or the Timber Authorities. The National Forest Minister issues the license with a usual period of 12 months.

The PNG Forest Authority has developed a Logging Code of Practice (LCOP) that is supposed to be used by all logging companies in their logging operations. LCOP is designed to be used in association with other regulations, and offers guidance on how to reduce adverse impacts of logging on the forests and communities living in them, protect the environment, and maintain forest productivity through economically viable operations within acceptable safety standards (PNGFA 1996). LCOP contains technical operational guidelines setting out how logging will be done in a less environmentally destructive way; however, it does not deal with forest tenure arrangements or social and economic issues.

The aim of LCOP is to reduce the impact on the environment by promoting the use of the Selective Logging Extraction System in the natural forests. All timber companies are supposed to use selective cutting systems in logging concession areas. They are supposed to mark trees to be felled, conduct pre- and post-harvesting inventories, and harvest trees using directional felling to minimize adverse damage to the residual stock and the environment. However, overall, companies are not adhering to this system, in part because the Forestry Act does not impose penalties for excessive damage to the residual stock (PNGFSP 1993). Also, LCOP does not apply in plantations where clear-felling is being practiced, such as those carried out in JANT-owned Acacia Plantations in Madang and in other operations around the country (such as Bulolo pine plantations in Morobe province, Balsa wood in East New Britain Province, Lapegu, Fayantina and Norikori plantations in Eastern Highlands province, and the Brown River Teak Plantations in Central province).

Despite the existence of the Logging Code of Practice and other legal arrangements, PNG's forest resources are mismanaged and resource owners do not get the maximum benefit from their resources. Local land and community groups are marginalised and mistreated and are fought in court. One example of this mismanagement occurred when the National Forest Board gave approval for what was presented as a small agricultural clearance operation that turned out to be a large-scale logging operation involving the export of logs worth over US$10 million. This project was sponsored by a logging company with a record of illegal forest practices (Masalai 2002) and illustrates the complete failure of governance in the logging sector.

In another example, Justice Mark Sevua of the National Court commented that national government turns a blind eye to the cries of the resource owners of PNG and ignores their interests. He stated that the Minister for Forests did not take the interests of the village people who own the forest resources into consideration; he argued that the interests of the resource owners could not be brushed aside. Judge Sevua's comments were made in a case involving Frontier Holdings (a subsidiary of the giant Malaysian logging company Rimbunan Hijau) being sued by Vailala Purari (a landowner company) (Post Courier 2003).

Mistreatment such as that outlined above is often exposed by non-government organizations. An NGO umbrella organization called Eco-forestry Forum (EFF) and other legal organizations have helped local communities and have had some successes. For instance, Greenpeace is one prominent organisation that supports the local customary forest owners and fights illegal deals that are environmentally unsustainable. Legal NGOs assisting the forest resource owners in their court battles include Centre for Environmental Law and Community Rights (CELCOR) and the Environmental Law Centre (ELC). In addition, local eco-forestry and community development NGOs like Foundation for People and Community Development Inc. (FPCD), Village Development Trust (VDT) and the former Pacific Heritage Foundation (PHF) attempt to produce sustainable certified alternatives using small sawmills.

Structural Features

Forest Area and Location

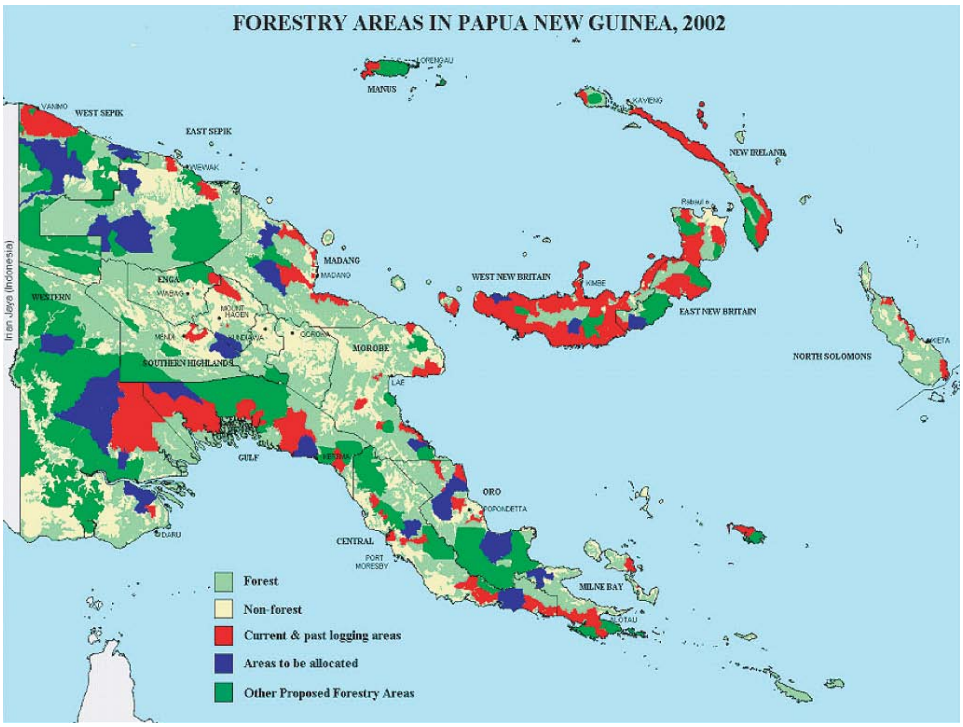
Papua New Guinea extends from 3 degrees below the equator to 12 degrees south and is directly north of Australia and east of Indonesia. PNG has by far the largest area of tropical rainforest in the Oceania region. The forests of the Island of New Guinea (PNG and West Papua together) account for the third largest remaining block of tropical rainforest on the planet after the Amazon and Congo forests (Chatterton *et al.* 2000). The total land area of PNG is 46 million ha, and over 77 percent is covered in some kind of forest ranging from mangroves on the coast to high altitude alpine forest at about 3,000 meters above sea level.

About 80 percent of the total population of PNG (5.2 million with a growth rate of 2 percent) are based in rural areas and there are over 800 languages and tribal groups (FSP/PNG 1993). Ninety-seven percent of land in PNG is customary owned by traditional land groups; the state owns the other 3 percent, which is mainly in urban areas.

For any developmental purpose regarding land-based resources, consent has to be sought from the landowners. Agreements on resource use are usually made between three main parties: customary owners, the state, and the developer.

The forests that are constantly harvested are found in the lowland rainforest and other mid-montane forests, but most other forest types are located in the higher inaccessible areas. Presently some of these forests are under threat from major developments like oil palm, mining, and large-scale logging.

Figure 1 Map showing the extent of the allocation of PNG's forest resources to the logging industry

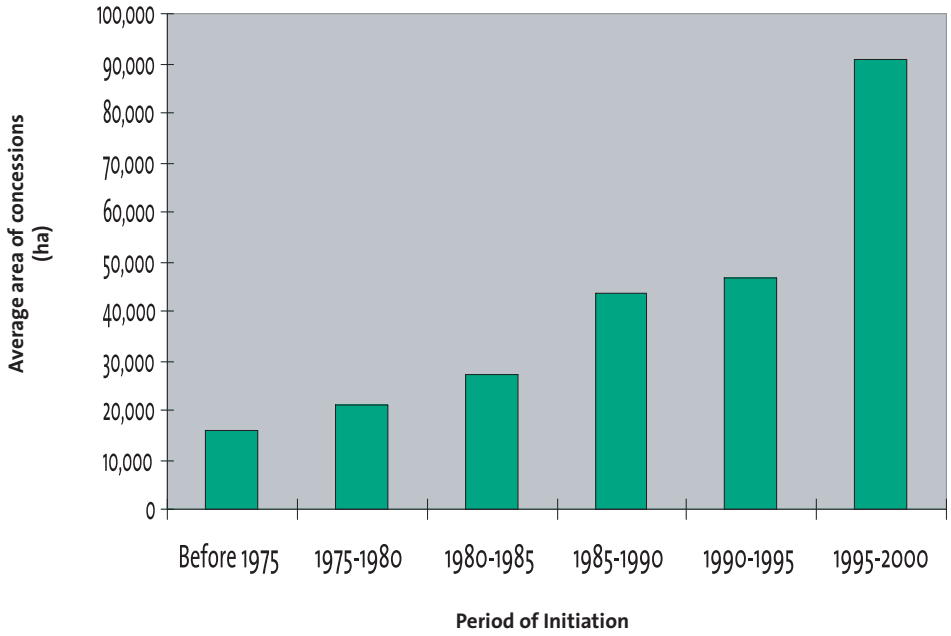


Source: Shearman and Cannon 2002

It is important to note that the majority of what here is termed "proposed forestry areas" cannot be logged: many are completely inaccessible and some do not include much merchantable forest type, and indeed, some have been logged already.

The graph in Figure 2 shows how over the last 30 years, the size of concessions being allocated to the industry has expanded significantly.

Figure 2 Concession Expansion 1975-2000



Source: Shearman and Cannon 2002

Of the total forest area of Papua New Guinea (26.1 million hectares), 7.1 million hectares (27 percent), had been allocated to forestry operations by 1996. By the year 2002, this figure had increased to 11.2 million hectares (42 percent), allocated to either working concessions or earmarked for forestry in unallocated concessions. While 14.9 million hectares remained unallocated, of the total forest resource available in 1996, only 11.7 million hectares was suitable for forestry operations (see Table 1). Of this area of unconstrained forest (accessible or operable), some 6.7 million hectares or 57 percent has been allocated to the forestry sector.

When these figures are adjusted to equate to log volumes per hectare, approximately 70 percent of the total timber resources have already been allocated to the timber industry. This is because the most attractive areas in terms of access and timber volumes have already been logged. It is unclear what portion of the land has been set aside as protected areas and parks, and most of it is located in the constrained forests.

Table 1 Natural forest area by geographic region

Province	Area of Province (sq km)	Gross Forest Area 1996 (sq km)	Area that is accessible and operable
Western	984,520	369,630	306,890
West Sepik	360,540	293,130	148,720
Gulf	3480,010	235,080	137,550
East Sepik	438,130	202,690	64,740
Morobe	339,330	198,100	44,510
Southern Highlands	25,480	186,950	64,770
Madang	290,950	186,820	74,830
Central	298,720	175,490	70,650
Oro	227,720	148,990	55,230
West New Britain	204,560	106,090	33,050
East New Britain	153,440	100,820	26,730
Milne Bay	142,640	85,010	36,150
Enga	118,240	71,490	4,000
North Solomons	94,330	63,210	32,840
Eastern Highlands	112,050	53,520	13,310
New Ireland	96,100	47,390	24,500
Western Highlands	91,410	41,180	6,140
Chimbu	61,340	35,480	14,450
Manus	21,500	9,720	9,270
Total	**46,410,100**	**26,107,900**	**11,683,300**

Source: PNGRIS 2000

As evident in Table 2, the majority of forest area unallocated in 2002 has been captured in areas defined as Proposed Forestry Developments (PFDs).[1] PFDs are forest areas that are planned for development into FMAs and other forestry activities like development of future industrial wood production. The national and provincial forest plans developed in PNG provide for PFDs, although many of these areas are in reality probably not feasible for timber harvesting due to physical restrictions to access. The discrepancies in some provinces where there exists a greater area of PFDs than actual unallocated forest is due to several of the PFDs containing non-merchantable vegetation types.

[1] National Forest Authority 2000.

Table 2 Natural forest area under production by geographic region

Province	Gross Forest Area 1996 (sq km) (a)	Total Allocated to Forestry in 2002	Unallocated in 2002	Area of PFDs
Western	369,630	205,930	163,700	153,850
West Sepik	293,130	70,080	223,050	304,780
Gulf	235,080	170,950	64,130	20,750
East Sepik	202,690	74,620	128,070	98,830
Morobe	198,100	39,720	158,380	19,760
Southern Highlands	186,950	16,240	170,710	93,480
Madang	186,820	54,630	132,190	12,970
Central	175,490	58,480	117,010	65,080
Oro	148,990	58,150	90,840	76,580
West New Britain	106,090	197,240	0	13,340
East New Britain	100,820	67,350	33,470	39,240
Milne Bay	85,010	31,160	53,850	19,770
Enga	71,490	4160	67,330	16,430
North Solomons	63,210	9,480	53,730	0
Eastern Highlands	53,520	0	53,520	0
New Ireland	47,390	47,420	0	19,870
Western Highlands	41,180	13,030	28,150	0
Chimbu	35,480	0	35,480	0
Manus	9,720	5,270	4,450	14,790
Total	**26,107,900**	**11,239,000**	**14,868,900**	**969,520**

Source: PNGRIS 2000

To date, for the entire country, a total of 217 Timber Rights Purchase (TRP), LFAs or FMAs have been allocated covering some 10.5 million ha. Many commentators believe that such a rate of utilisation of PNG's forest resources cannot be sustained.

Ownership and Tenure

Land and forest resources are customary owned and this is recognised by the constitution of Papua New Guinea. Consequently, there are very few leases in operation and land is not "alienable" in the common legal sense. According to Melanesian tradition, the forest resources and land are important to one's whole livelihood (spiritual, economic and medicinal), and are some of the most important assets for sustaining human lives. The forests provide food, building and ornamental products and contribute to preventing poverty, malnutrition and other related diseases. Most NGOs and landowner groups believe that no logging should take place without consent from the landowners and that the treatment of landowners to date has been poor as they are taken as token participants in almost all cases. It is alleged that landowners are marginalized in all forestry decisions and practices, once the government takes the timber rights away from them. All they are left with is a pittance in royalties, together with uncompleted or unfulfilled obligations by other parties.

The NFA negotiates Forest Management Agreements (FMAs) (formerly Timber Purchase Right Agreements (TRP)) with the landowners and acquires rights and pays relevant royalties. The procedures for such acquisitions are provided for in the Forestry Act 1991 as amended. When a feasible forestry project is identified, the company and government officers meet with the landowners to explain the steps involved in its development including the incorporation of the correct landowners, an explanation of the legally binding agreement, and details of the benefits including stumpage payments (Power 1999).

Markets

The main forest product in PNG is round log exports (see Table 3). Export of timber (round logs, sawn timber, wood chips, veneer and plywood) forms an important part of PNG's national economy and China is a major consumer. In the period from 2000-2002 log exports from PNG to China/Hong Kong increased from 741,000 cubic meters (37 percent of total exports) to 1,115,000 cubic meters (62 percent of total exports). In addition to China, Hong Kong, Japan, Korea, Taiwan and the Philippines are important destinations of log exports from Papua New Guinea, with these markets being mainly supplied by the Malaysian company, Rimbunan Hijau.

The major players in the forest industry are large-scale, usually foreign-owned, logging companies (see Table 4). These companies open up primary forest areas and produce round logs, which are directly exported abroad. There is very little downstream processing.

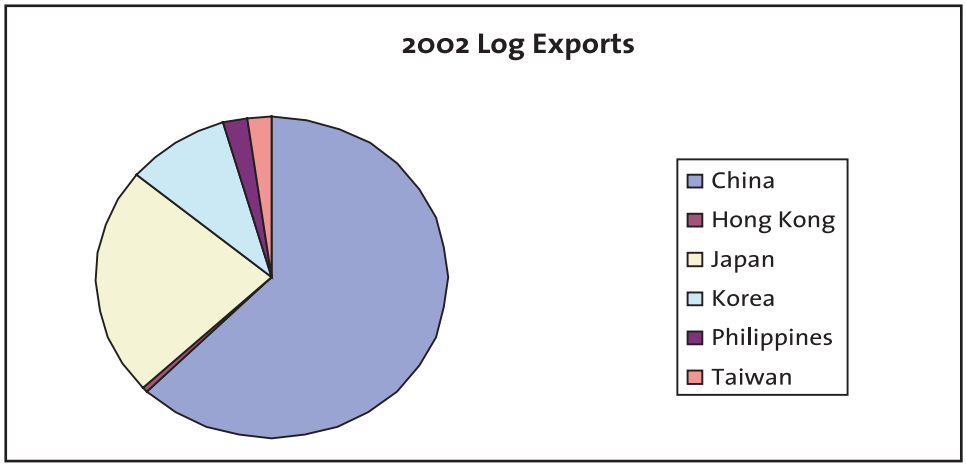
Table 3 Annual production of timber products in PNG 2000-2002

Annual volumes	2000	2001	2002	Average
Log production	2,241,000	1,877,000	N/A	2,060,000
Log exports	1,993,000	1,566,000	1,840,000	1,800,000
Veneer	20,000	68,000	Not available	44,000
Plywood	500	900	1,700	1,033
Woodchips*	120,000	97,000	Not available	108,500
Lumber	40,000	40,000	42,000	40,667
Balsa	1,000	2,050	2,700	1916

Source: SGS and PNG Forest Authority.

* The source of these figures is the PNG Forest Industries Association. The records of the PNG Forest Authority give a much lower annual export volume for woodchips (20,000, 10,000, and 0 respectively)

Figure 3 Log export destinations in 2002



Source: Bun, Shearman, King 2003

The forestry sector annual allowable cut (AAC) is 3.3 million cubic meters. Many estimates suggest that, if managed properly, the forestry sector could contribute about US$270 million to PNG's GDP annually (which includes US$85 million paid in export taxes/levies and landowners receiving some US$20 million in direct payments). The AAC is initially set based on the size and economics of the operation, is prescribed in timber permits, and is subject to review as specified in the permit (Ministry of Forests 1991, 20). It is calculated by dividing the total volume of timber in the operable forest area by the number of years allocated to each developer (i.e. total area by volume per hectare over time).

The PNG timber industry is dominated by Malaysian timber companies. Ribunan Hijau is the major company and is responsible for the exploitation of most of PNG's production forests. These large logging companies have so far shown little interest in forest certification because their management views forest certification as something that NGOs support and is for small industries.

Those community forestry operations that have been certified produce mainly rough sawn timber (Table 5). Their markets are already guaranteed and they sell to local exporters. The timber is bought at a price higher than that available in niche and local markets.

Table 4 Ownership of timber production

Location	Logging company	Ownership	Origin
Alimbit Andru	Island Forest Resources	Rimbunan Hijau	Malaysia
Ania Kapiura	Grand Alliance/SBLC	Nissho Iwai	Japan
Bakada Mededua	Hugo Sawmilling	Kerawara	Malaysia
Buhem Mongi Busega	Willis Kent	Private	Malaysia
Cape Orford	Niugini Lumber	Rimbunan Hijau	Malaysia
Central Arowe	Cakara Alam	Overseas and General	Malaysia
East Kikori	Rimbunan Hijau	Rimbunan Hijau	Malaysia
Kumil	Bismarck Industries	Samling	Malaysia
Iva Inika	Hugo Sawmilling	Kerawara	Malaysia
Jaha (south Coast)	Monarch Investments	Rimbunan Hijau	Malaysia
Kali Bay	Rivergoi No.6	Rimbunan Hijau	Malaysia
Kapuluk	Bismarck Industries	Samling	Malaysia
Kiunga-Aiambak	Concord Pacific	Samling	Malaysia
Kula Dagi	Grand Alliance/SBLC	Nissho Iwai	Japan
Makapa	Innovision	Innoprise	Malaysia
Manus West Coast	Seal (Manus)	Rimbunan Hijau	Malaysia
Ome Ome	Hugo Sawmilling	Kerawara	Malaysia
Open Bay	Open Bay Timbers	Kowa Lumber	Japan
Sagarai Gadaisu	Saban Enterprises	Rimbunan Hijau	Malaysia
Seraji and Extension	SSG Services	Kerawara	Malaysia
Simbali	Hugo Sawmilling	Kerawara	Malaysia
Tokoi Matong	Niugini Lumber	Rimbunan Hijau	Malaysia
Turama Extension	Turama Forest Industries	Rimbunan Hijau	Malaysia
Vailala Block 1	Niugini International	Rimbunan Hijau	Malaysia
Vailala Blocks 2&3	Frontier Holdings	Rimbunan Hijau	Malaysia
Vanimo	Vanimo Forest Products	WTK	Malaysia
Wawoi Guavi	Wawoi Guavi Timber	Rimbunan Hijau	Malaysia
West Arowe	Cakara Alam	Overseas and General	Malaysia
West Kaut	Tutuman Development	Private	PNG

Source: SGS 2000

Table 5 Past and present FSC-certified community forestry operations

Project Name/Manager	Timber area	Area (ha)	Year	Status
Bainings Project, Pacific Heritage Foundation	Rabaul, ENBP	12,500	1994	expired
Islands Region Environmental & Community Development Programme (IRECDP)	Kimbe, WNBP	10,000	1999	Up for review

Source: Chatterton *et al.* 2000

Table 6 Community forestry support groups

Organisation	No. of groups	Av. pop/group	Total Area (ha)
Aitape, Sandaun	15	30	30,000
FPCD, Madang	120	35	50,000
VDT, Lae	10	100	15,000
EFP, Kimbe	6	50	10,000

Source: Chatterton *et al.* 2000

The Bainings (Rabaul) project comprising 12,500 hectares was initially managed by the Pacific Heritage Foundation (PHF), a local not-for-profit organisation based in Rabaul, East New Britain Province, which folded in December 2003 due to management problems. PHF was supported by B&Q of Britain (a major timber importer) to improve forest management and also to apply for certification. B&Q supports certification and good forestry and wants to see certified products on its shelves (Bass *et al.* 2001).

Although the PNG Bainings group was supported by a British do-it-yourself-retailer to improve forest management and apply for forest certification (Lindemalm 1997), the project ceased operations in December 2003 due to the expiration of its major funding contract. Some of the lessons learned have been applied towards the development of improved administrative systems in other operations.

According to former PHF staff members Wesley Watt (Eco-forestry officer) and David Samson (Programme Co-ordinator) who were managing the Bainings Eco-forestry FSC group certificate from 1994-1996, difficulties faced included:

- Market access: trouble in supplying the overseas markets and meeting demand on time with quality and quantity of required timber and absence of local niche market for FSC certified timber;
- 1994 disruption of normal business operations due to volcanic eruption;
- Technical complications, including the absence of Forest Management Plans and lack of compliance;
- Problems implementing the FSC International Standards with Correction Action Requests (CARs) not met on time;

- Absence of documented guidelines and directions for FSC Certification requirements;
- Very high costs of maintaining the FSC certificate;
- Inability of producers to implement certification themselves without assistance from PHF or donors;
- Low staff capacity (unskilled in forest verification and management);
- Very low NGO financial, technical, and capital capacity.

The operation was described as 'brukim bus' meaning it was carried out without any experience and on a trial basis. The major challenge was the rigor of the FSC certification process, which forced significant changes on forest owners in the way forests were being managed. It was recommended by these staff that community ownership of such projects was important, a difficulty in this case since the project was owned and managed by PHF. Although the community had the potential, they lacked the capacity, and staff argued that they should have been empowered in project management to sustain the FSC certificate.

The European Commission made certification a condition for continued funding of the Islands Region Environmental & Community Development Programme's (IRECPD) community forestry projects. Certification was used as an indicator of progress towards sustainable forest management in its overseas aid projects (Bass *et al.* 2001). As a consequence, 10,000 hectares of forests were certified by October 2000; these were community eco-forestry operations managed by the landowners in West New Britain Province, under IRECDP. They were certified by SGS under FSC's generic international standards (Damien 2002). In total, 22,500 hectares were certified in PNG under two FSC group certificates (PHF and IRECDP managed). Unfortunately both certificates expired and were not renewed because the groups could not meet the costs of the required annual review.

Currently, the European Union is funding a K 22.5 million (US$ 6.63 million), five-year, Eco-Forestry Project aimed at assisting landowners with small-scale sawmilling and the export of certified timber. The money is being used by the Forest Authority's Eco-Forestry Programme (EFP) to develop community eco-forestry services that assist land and resource owners in PNG. It is also being used to fund the FSC PNG National Working Group meetings to develop the National Standards.

As can be noted in Tables 5 and 6, the community forestry programmes, whether certified or not, currently do not contribute much directly to the national accounts compared with conventional logging. There is still much work to be done in the community forestry sector. Many NGOs believe that forest certification is able to ameliorate environmental and social problems associated with forest management; however, they are conscious also that it demands both economic and labour commitment. Furthermore, most NGOs believe that forest certification is able to influence government policies in the forestry sector.

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

A country assessment on forest certification, commissioned by the interim group behind the formation of the Forest Stewardship Council (FSC), was undertaken in PNG in 1993 (Bun 1993). The study was coordinated by Jamie Ervin and undertaken by Yati Bun and the findings were presented at the FSC Founding Assembly in Toronto, Canada later that year. Shortly afterwards, forest certification commenced in PNG when the Bainings Community Forestry programme, based in Rabaul, East New Britain Province, was certified by SGS in July 1994.

The certificate was for five years with an annual review. Even then, despite the income generated by certified timber, there was little or no interest in forest certification by stakeholders. In the mid 1990s, SGS conducted a few training workshops for forest industry and government officials but there was no further interest.

For the 1993 certification country assessment in PNG, individuals and organisations were interviewed from social, environmental and economic sectors. These eventually formed into chambers for the development of a national FSC working group. However, the response for the FSC certification proposal from all stakeholders, particularly large scale logging companies, was poor. Major forest companies were of the view that forest certification was only for the smaller firms. The assessment report made the following five recommendations:

- FSC should be a general umbrella body, with clearly defined terms of reference and legally incorporated;
- PNG needed help to establish a national FSC working group;
- Where there was a conflict between FSC provisions and PNG laws, the latter would prevail;
- Allowances should be made for periodic review to permit changes as the process evolved; and
- Representation on the national board should be fair, with no single group able to dominate the board.

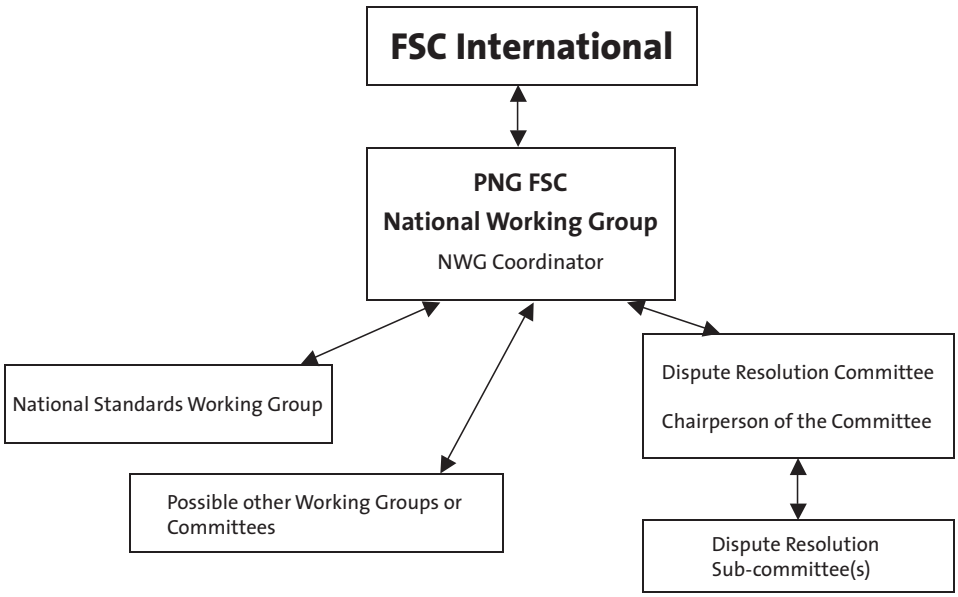
In the same year a delegation from PNG composed of Yati Bun (FSP), David Vosseler, Kalit Kelly (WWF South Pacific PNG Program) and Sasa Zibe (VDT) was invited to Toronto for the international FSC Founding Assembly.

By 1994 the major players that introduced forest certification in PNG were NGOs, especially the Pacific Heritage Foundation based in Rabaul, East New Britain Province. PHF managed the Bainings community forestry programme that was subsidised by B&Q of UK and it was one of the first community forestry projects in the world to be certified by SGS under the auspices of the FSC. This PHF-managed project demonstrated that community forestry and forest certification had the potential to preserve high levels of natural tropical production forests. A field study carried out on the Bainings site showed that certified portable sawmilling had less environmental impact than uncertified large-scale logging operations (Lindemalm 1997).

In 1996 PNG officially established an FSC certification process, with Yati Bun appointed as the country's first contact person to co-ordinate the PNG-FSC national standards development process. Attempts were made at this time to sensitise the PNG government to recognise the potential role that community forestry could play in forest management. Proponents of community forestry argued in favour of its importance in PNG where land and forest resources are customary owned. However, there was little government support or logging industry interest.

At the same time, a lot of media coverage occurred about bad logging practices and of disputes between companies and landowners over logging deals. Newspapers regularly carried stories of forestry operations that has been stopped by landowners or brought to court for non-compliance of contractual obligations. Proponents of certification argued there was a need to look for solutions and find alternative ways of doing things. The final organizational structure of PNG FSC that emerged over the years is presented in Figure 4.

Figure 4 Organizational chart for PNG FSC-National Working Group, February 2004



Source: PNG FSC Initiative Inc., 2004

The PNG-FSC national working group works closely with FSC International to ensure that it meets requirements. However, despite certification being implemented now for more than a decade in PNG, it has not provided an incentive for companies, forest producers and communities to get involved. One reason for this, contained in Bun's initial study, is an indifferent attitude towards certification among potential participants. People's interest in forest certification depended on whether it was useful for them or not. The market situation in PNG does not support certification because most

major players in the forest industry do not supply the certified market, although this may be changing with Innovision, a company operating in the Makapa Timber area of Western Province, considering becoming FSC certified because its major buyers are beginning to demand certified products under the FSC system. As of the time of this writing, Innovision had undergone a number of scoping visits, with full certification a possibility on the horizon.

Institutional Design

The National Forest Authority (NFA) serves under a Forest Minister and has a National Forest Board (NFB) with a secretariat that advises the director on matters brought to the Board for consideration. There is an NFB Advisory Committee and numerous Provincial Forest Management Committees (PFMCs). The Advisory Committee's role is to carry out research, training and education, marketing and industry development, and resource assessment policy and planning. The role of the PFMCs, on the other hand, which cover individual provinces, is to provide planning advice, make recommendations to NFB on the acquisition, allocation, enforcement, and supervision of logging licences and extensions, as well as to oversee rental payments and provide a forum for consultation. These activities are carried out by specialists and advisory and field staff employed by the NFA.

Although PNG's National Forest Authority has the mandate to manage the forest resources of the country and to set the rules and policies, problems arose in the 1970s and 1980s and corruption is rife. A major commission of enquiry in the late 1980s was held into the forestry sector to clean up the corrupt practices that were occurring (Barnett 1989). As a consequence of the enquiry's report, there have been major legislative and policy changes that came into effect in 1991. In spite of this, it seems that things have still not changed. The reality on the ground is that the practices of the past are being repeated but in a smarter and more dangerous way. The victims are the traditional landowners as well as the country as a whole.

The customary landowners are marginalised in the decision making process. They are seen by authorities as impediments to forestry development and do not get a fair return from their forests, which in many cases are their livelihoods. Many are now turning to developing their forest resources themselves, separately from the government system, and are looking to NGOs to help them. Unfortunately NGOs do not have the kind of resources that government and industry have and this has led to many frustrations from all quarters.

The PNG Forest Authority, which has the mandate to manage the forests, does not necessarily have the technical know-how or the professional knowledge to do the job. Poor decisions have been made due to lack of professional competence.

Today there are many stakeholders who care about how the forests are being managed and about the environmental degradation that is going on. Many initiatives are being taken outside of the government system towards achieving the overall goal of good forest management in the country. One such case is the initiative of NGOs taking the lead in developing national standards for forest management based on

FSC's ten Principles and Criteria. The FSC working group has succeeded in involving government representatives – a good initiative where cooperation has occurred.

The NGOs that are overseeing the FSC process are ensuring that the right things are done to enable forest certification to occur. A body has been established according to FSC's requirements for national initiatives and under the laws of PNG, and will oversee forest certification work in the country.

Standards

In developing PNG FSC's National Standards, key issues to be addressed included bribery of leaders at all levels of forestry, transfer pricing of species and unequal sharing of benefits, and mistreatment of customary forest resource owners. For the first time, the forest resource owners were allowed to represent themselves in the FSC National Standards development process and were able to speak their minds about how they wanted to plan and manage their resources. But at the same time, this participation created difficulties for the large-scale logging companies, who feared they would not be able to comply with the very high standards set by the NGOs, small to medium scale producers, land owners, the government, and academics.

In the PNG FSC experience, the National FSC Standards can be too hard for certifiers to use and monitor logging operations and require amending after field tests. During standard setting in PNG, the danger of bias towards resource owners and environmental NGOs needed to be resisted if the standard is to be both economically viable and realistic. The national working group incorporated comments from the large-scale Forest Industry Association (FIA) into the final version of the National Standards after consultative meetings; therefore the standards development process is a holistic representative process.

The process of developing PNG FSC National Standards for Forest Management began in March 1996 with a national education and awareness workshop on certification that was attended by representatives from government, industry and NGOs. Yati Bun was appointed the National FSC Coordinator by the PNG FSC National Initiative. At that same meeting, broad terms of references were drawn up for a National Working Group composed of three representatives from three chambers (Social, Economic and Environment). Gender balance was also considered to be an important criterion in determining chamber representation.

Working group members met in March 1997 and the process of developing national standards began. The organizations that currently represent the different chambers are: (a) Economic chamber: VDT, Tavilo Timbers, National Forest Authority (NFA); (b) Environment chamber: Forest Research Institute (FRI), EFF and PHF (since PHF ceased a replacement is being sought); and (c) Social Chamber: East Sepik Council of Women (ESCOW), PNG Council of Churches (PNGCC) and East New Britain Eksen Komiti (ENBSEK).

The National Standards are developed by the PNG-FSC National Working Group Members are co-ordinated by Yati Bun and with technical assistance from Israel Bewang (an FPCD employee) and Peter Dam (who used to be a private consultant and

is currently the FORCERT Manager (see below)). The PNG-FSC Working Group was registered in May 2003 with the Investment Promotion Authority (IPA), with the help of ELC lawyers. After constitutional amendments are completed it will elect a Board of Directors and proceed to implement several important tasks including the finalisation of the national standards, the establishment of a National FSC body, and a field test of standards. Funding for the National Standards Working Group comes from the Inter-Church Organization for Development Cooperation (ICCO), FSC International and the PNG Government's European Union-funded Eco-forestry Programme (EFP). This working group is voluntary and there is very little financial support for FSC-PNG.

Due to lack of funding and a full-time worker in PNG-FSC matters, the Working Group developed the standards over several years and completed them in September 2000. During the standards development process, international FSC working group procedures were followed, with fair decision-making procedures, maintaining transparency and accountability, adequate participation and representation from the government and forest industry and a clear mechanism for their future revision. Harmonization with international standards was closely monitored.

The process of endorsing the PNG FSC certification standards has been going for some time now. In April 2001 PNG's FSC standards were submitted to FSC International Secretariat for endorsement, but were returned with pre-conditions because not all the formal requirements were met. These included (a) the removal of text from FSC's original P&C wording; (b) the high number of non-FSC international members on the working group; (c) the absence of a legally registered FSC National Working Group; (d) the replacement of terms from the original text; and (d) the absence of formally recorded minutes of the meeting that endorsed the standards. When the standards were resubmitted in 2003 one of the major comments was that the documentation submitted to FSC did not fully reflect the consultation process that led to the development of the PNG standards.

The FSC Accreditation Business Unit recommended that the PNG Working Group keep more formal records relating to the management and future development of the PNG National Standard. The PNG standards were resubmitted in early 2004 with improvements as recommended and are with the FSC International Board for endorsement. All stakeholders were given the opportunity to make comments on all drafts of the standards before they were submitted. After the pre-conditions are met the standards will be endorsed with conditions of compliance.

Despite these delays in endorsing the standards, PNG remains one of the pioneer countries in FSC in the Asia Pacific Region. By 1998 three projects were certified using International FSC Standards and the large-scale logging company Makapa Innovision PNG Limited is showing interest in pursuing it. Two other large companies, Stetin Bay Lumber Company (SBLC) and JANT, have also expressed interest.

There is still much to be done with the PNG standards. There is a need to field test the standards at both the large-scale logging and community-based forestry levels and make necessary improvements. The field test will be done with companies that are willing to move into forest certification and are willing to pay for certification.

The other standards being developed are those initiated by the International Tropical Timber Organisation (ITTO). As PNG is a member of ITTO, it is obliged to comply with what is proposed by ITTO. There is a PNG-ITTO committee in place whose task is to be a conduit for work coming into and going out of the country. The PNG-ITTO working group has not been active, although it was formed some two years ago. There was a workshop on National Criteria and Indicators for Sustainable Management of Natural Tropical Forests in August 2002 that was attended by various stakeholders, including the industry, NGOs and the government. In it, the Criteria and Indicators for forest management at the national and forest management unit level are being developed. The workshop aimed to develop a set of ITTO compatible standards that could then constitute a PNG national standard that could be accredited with the PEFC. However, not much progress has been made thus far.

THE REACTION TO CERTIFICATION

Forest Policy Community

The main supporters of certification are NGOs, including FPCD, PHF, WWF, EFF, the recently established FORCERT and legal NGOs like ELC. The government's Eco-Forestry Programme is also supportive, as it was one of the earlier groups to back FSC certification in PNG and to successfully obtain a FSC group certificate. Donors that support certification (via donations and/or other assistance) to the above NGOs include the European Union, the Evangelischer Entwicklungsdienst (EED) (an association of Protestant churches in Germany), the John D. and Catherine T. MacArthur Foundation, the InterChurch Organization for Development Cooperation (ICCO) of the Netherlands, FSC International, DOEN Foundation of the Netherlands, and B&Q of UK.

There are also a few logging companies that have provided assistance to forest certification as part of their work, but their support has been inconsistent and has not been followed up. NGOs are viewed as more reliable and have more clearly specified objectives on what they want to achieve. They have established groups like the Eco-Forestry Forum (EFF) through which they contribute towards awareness and promotion of certification ideas through advocacy and media.

The main challenge confronting NGOs is to convince the landowners that forest certification is more beneficial to them in the long run compared to the current practices. With the current economic situation in PNG, it is not easy to convince producers to undertake a lengthy and expensive certification process before being able to market products as certified.

Certification has proceeded slowly in PNG. Although there is some interest, as demonstrated in 1999 when a large logging company, Innovision (PNG) Ltd, opted for FSC under SGS's Certification Support Program (CSP), so far very few companies have taken it seriously. The most obvious reason for this low level of interest is the cost of certification. While such costs could be offset by a price premium for certified timber, many timber producers claim that no such premium exists (Bass *et al.*, 2001).

While NGOs are in general enthusiastic about certification, the PNG government seems to be neutral about it (Avosa 2002). This is so even though two community forestry groups have received certificates issued under the FSC certification system since 1994; the first draft of the PNG standards following the FSC global principles and criteria was presented to them; and the EU-funded PNG Eco-Forestry Program, which the PNG government is now in charge of, is promoting certification.

The main reason that the PNG government does not fully support certification is that most of the country's logging companies are supplying logs to non-certified markets. It is only when the buyers are prepared to pay more for certified logs from PNG – resulting in higher log prices – that the government will be convinced. It is apparent the big logging companies have been disinterested in forest certification with the exception of one or two. It is only when government supports forest certification and sets accepted policy standards that the logging companies will consider compliance with the standards (Mondiai, personal communication, 2004).

Michael Avosa, the Country Foreign Aid Co-ordinator of the National Forest Authority, observes in relation to the role of government towards forest certification:

> The PNG Government is neutral on the issues surrounding forest certification at the political level. There is participation from the administrative arm responsible for forests in both national and international levels. The Government's attitude in general has been to accommodate, facilitate and recognize the process of forest certification of any form. The government accepts invitations to attend meetings including a meeting in Nadi, Fiji in 2002, which provided the mandate to facilitate a better understanding of forest certification issues, costs and benefits and formulation of strategies towards countries in accepting forest certification as a tool for sustainable forest management.
>
> Government remains a partner and recognizes certification without any political support and, through its EU funded EFP programme, supports the FSC Standards and Working Group meetings and it does not mean that Government is aligned to FSC certification scheme. The Government at administrative level supports ITTO Criteria and Indicators workshop for good forest management too and there is a working group working on that. The Government's draft policy indicates that timber certification is a market driven process to be left to the industry and the civil society groups assisting resource owners to satisfy the market demands. Government is working closely with FSC National Standards Working Group and its firm stand is that it is committed to issue of forest certification is dealing with it in a manner that is fit for public consumption especially the village based community (Written contribution, National Forest Authority 2004).

The above statement from the NFA clearly shows that the PNG government is partaking and making some efforts in forest certification. However, FSC certification is striving to get itself established in the absence of political support from the government, apart from its commitments under the European Union-funded Eco-Forestry

Programme. The government wishes to remain neutral with respect to certification. Judging from the latest international statement by the Minister of Forests at a recent ITTO meeting, they prefer to leave the matter to industry and interested parties to pursue (Post Courier 2004).

Industry

The Forest Industry Association (FIA) is a lobby group representing the interests of around 85 percent of the overseas logging companies operating in PNG. The FIA is funded through a voluntary levy paid by its members according to the volume of their log exports. It is dominated by one company, Rimbunan Hijau, which provides around two thirds of the FIA's annual operating costs. In a recent comment, FIA's view was reported as follows:

> PNG is a developing country and in a different situation compared to developed countries with regard to their needs, possibilities and resources in making use of forest certification. Certification is perceived as another market requirement imposed by importers, is difficult to meet and may constitute a barrier to trade rather than promotion of export. PNG's forest industry is working towards a PNG National Forest Standard encompassing forest and timber attributes in PNG. FIA is spearheading the approach of mobilizing the Pacific Island Forest Industries to achieve Sustainable Forest Management (SFM) through working under the umbrella of a format of a regional forest and forest product quality certification scheme that is similar to Malaysian Timber Certification Council (MTCC), utilizing where possible components of ITTO sustainable forest management criteria to create a comparative advantage in Pacific island tropical forest product industries from a global to a regional to an individual country perspective.
>
> Given relative high cost and limited uptake of certification, certification schemes over recent years throughout tropics and PNG in particular, greater interest is being shown in procedures to independently verify the legal status of forestry operations. This alternative is a cheaper and more realistic option in many countries than full certification to sustainable forest standards. This interest is being encouraged at an international level through organizations like ITTO (National 2004).

The above statement clearly outlines the FIA stand on forest certification, showing that FIA is concerned about the cost of full certification and thinks it is unrealistic for developing countries like PNG. FIA, however, has not tried the FSC scheme and has no field experiences with it in PNG.

The logging industry demonstrated an interest in forest certification only after hearing expressions of interest from their buyers. A classic example is the Makapa Forest Concession, which decided to adopt FSC certification only after their buyers demanded it (IKEA 2000). Those that are moving into certification have been pressured to take that route by buyers. The Innovision Company in Makapa is preparing

for certification and believes that forest resource sustainability is very important and when all requirements are met the market can be very rewarding (Mamalai, personal communication, 2004). They are also supported by Greenpeace and have access to premium markets in Australia and New Zealand under a Certificate of Origin. They are still undergoing preparation for certification with advice from SGS Malaysia.

Currently a lot of timber buyers have called to ask for certified wood. In the region specifically, there is interest from buyers in New Zealand and Australia. According to Greenpeace, Bunnings – Australia's largest hardware retailer – pledged to buy only from legally operated timber projects in Asia-Pacific region, with timber being tracked through a Chain of Custody process to verify that it is coming from well managed and legally operating forests, preferably certified under the FSC Scheme. The logging industry and governments may yet respond to this market (Iko-Forestri Nius 2003).

Other markets include the Woodage (Mittagong, NSW, Australia), which supplies FSC certified timber, furniture and joinery timber, flooring and other manufactured timber products. This company wishes to work with PNG to develop trade in eco-timber products in a manner that satisfies the long-term needs of all parties (Iko-Forestri Nius 2002b). The ITTG market in New Zealand is also under-supplied. If the current markets were supplied, then this could lead to other markets in Europe that could be arranged through the Ecohout Foundation, which is in touch with number of FSC buyers in Netherlands, Germany and United Kingdom. The details of European and American buyers can be arranged through WWF's Global Forest & Trade Network.

Forest Owners

Forest owners that have obtained certification have been very supportive. They did not pay for certification, however, as it was paid for by third parties — in one case, by B&Q of UK and in another case, by the European Union. Landowners needed to be educated and there is currently no government policy in place to do so. About 80 percent of the population are rurally based and the level of illiteracy is about the same. Many of these illiterate landowners do not make informed decisions when it comes to dealing with their forest resources. They sign away their rights to the government for logging to take place. NGOs have been very limited in their resources. Currently they are active in 10-20 percent of the country and the rest of the country and resource owners are left to their own devices. The current government systems are geared towards round log exports and to large-scale logging companies and there is insufficient energy to put into certification.

The FSC certification process enables landowners to have equal representation and rights to the development of their forest, hence all the more reason to ensure the FSC system is followed. More importantly, landowners realise that they will have a sustainable source of income if they comply with FSC's principles and criteria. To the resource owners who try to be forest managers themselves, the more scientific and detailed the process is, the more time consuming and laborious it becomes; this could discourage resource owners who are unused to such practices. However, the long-term sustainability of biological diversity is still in question because the economic benefit combined with increasing population growth puts a lot of pressure on the natural forests.

FORCERT

A process has begun in PNG under the FSC system to make certification more accessible to communities seeking forest certification. The process is called Forest Management and Product Certification Service Ltd (FORCERT) (see Figure 5). It is being established after a National Forest Certification Service (NFCS) feasibility study that took place from August 2001 to June 2002, which demonstrated that there was a clear interest from small scale producers and timber yards.

FORCERT is a partnership not-for-profit organization that aims to assist both community-based, small-scale milling operations working on their own land and contractors working on customary land under an agreement recognized by FORCERT as certifiable according to FSC National Standards' Principles and Criteria (Dam 2004). The role of FORCERT is to guide the partner organizations in a collaborative manner, based on a working agreement between the partner organization and FORCERT, so that they can have access to certification. FORCERT was initiated to overcome the difficulties experienced by many producers in obtaining access to certification.

FORCERT's plans are to facilitate certification by surmounting the very high costs of forest certification that can cripple a producer's operation. At the same time, it aims to identify premium timber markets that want to buy certified timber from PNG and trade directly with them. The trend in PNG has been that certification is a donor-funded activity and once the money runs out, certification ends. FORCERT aims to be a self-funding entity that operates independently of external funding. The partner organizations include service providers (like NGOs and research institutions), forest resource owner organizations, timber producers, and company owners. FORCERT will use just one forest management certification system that is easily understood by all stakeholders who want their forests to be certified. They will apply to have a single FSC-Group Certificate covering all members, which will be managed by FORCERT. Its generic checklist for assisting producers to prepare for certification is derived from PNG FSC National Standards. It plans to assist forest managers to prepare their forests for certification. FORCERT will manage the group FSC-certificate when it is obtained and member-producers will sell their products through it.

FORCERT currently has four members of staff who take care of the management of the organization. Peter Dam is the Manager and is the key consultant who drafted and directed the PNG FSC National Standards under coordination and assistance from the authors. He works with three other foresters located in different regions. FORCERT supporters believe that it can solve problems of forest certification being faced by producers in PNG. The diagram below shows how FORCERT will operate its service with the networking stakeholders.

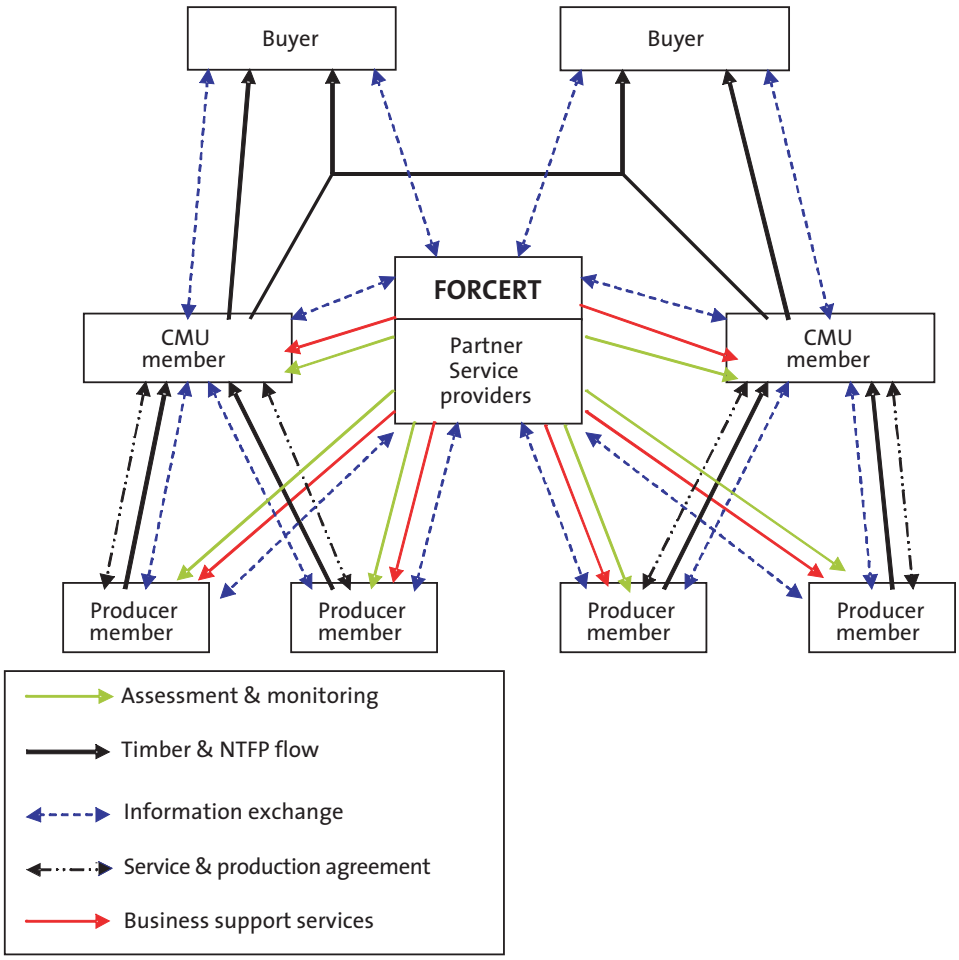
Current Status of Forest Certification

Tables 5 and 6 set out the certified areas and community forestry programmes that either are, or are ready to be, certified under the FSC system. The area to date is less than one percent of the total production forest area. The main certified product is sawn timber based upon the proper and controlled use of portable sawmills. The areas

were certified under the FSC group certificate program of SGS and do not register in the overall national economy.

If Innovision Makapa Timber or any one of the large logging companies takes forest certification seriously, then it could be a big milestone. The Makapa Timber area operated by Innovision of Malaysia has been undergoing a certification support project (CSP), an SGS initiative for the past 2 years. Innovision Makapa Timber area has about 60,000 hectares and is ready to be certified fully. However, recently Innovision contracted a logging company to do its logging, complicating its certification efforts.

Figure 5 PNG Group Certification Service Network Organogram (FORCERT)



Source: FORCERT Organizational Profile 2004

Current Status of the Certified Marketplace

A community forestry operation cuts about an average of one cubic meter a day. Moreover, it only cuts as and when money is needed and it is not a full time business. The current market of the certified communities in Kimbe is the Walindi Timber Yard. The Walindi Timber Yard then exports the timber products. There are other community groups that have worked towards certification and have exported and marketed timber that has some kind of "eco-label" on it.

The Madang Forest Resource Owners Association (MFROA), for example, exports sawn timber under an "eco-label" to buyers in New Zealand. The buyers group in New Zealand has developed basic guidelines as to where they would get their timber. Through assistance from Greenpeace New Zealand, FPCD was able to link MFROA with New Zealand-based International Timber Trading Group (ITTG). ITTG has strict guidelines for environmentally appropriate, less destructive practices for good forest management and for ensuring that the timber is produced by the local people with minimum environmental impact and with the resource owners getting the maximum benefit from the product (Elliot 2002). It is not an alternative to forest certification but a way forward towards certification because, currently in PNG, the local resource owners do not have the financial capacity to meet the very high costs of certification. If nothing were done, this would mean that certification would not help those that it is intended for and would favour those with financial wealth who can meet the costs of certification. This group is trying to build their financial capacity and future so that they can have access to the certified premium markets. They earn very high premium prices compared to what they would earn from selling their product locally. The ITTG group prefers certified timber and expects the local groups to improve their forest management practices and get them certified and they offer the local groups a better price to do that.

In return the sawn timber producers have complied with the local FSC standards and are managing their forest resources within the set guidelines. Their product has not reached full FSC requirements as yet but in the interim these "eco-label" standards are being used. Eco-label products still do not meet market demand and are only cut to order. These groups are exporting about 20 cubic meters of premium-sawn timber every three months, a miniscule amount compared to the total production of the forest industry sector.

There are buyers in Australia who have shown interest in purchasing certified timber from PNG and to date demand far outweighs supply. There is no niche domestic market for certified timber in Papua New Guinea, but rumours are widespread that there is an existing premium market in Europe and America. However, this cannot be verified by the data, a factor that contributes to discouraging certification in PNG.

EFFECTS OF CERTIFICATION

Forest certification has not made much impact in PNG mainly because the major players in the sector are not pursuing certification. Current volumes of certified timber amount to less than one percent of commercial production forest and directly affect a population of less than 1,000 people. If, however, Innovision Makapa does get certified – or another logging company decides to pursue certification – then perhaps the story will be different.

Certification is another route to forest management, which enables landowners and all stakeholders to become meaningful and equitable partners in forest development and management. Forest certification enables all to see the forest as a whole, acknowledging the many and varied benefits the forest offers.

The returns that one gets from forestry are not restricted to timber alone and are not properly accounted for. Equity is fundamental and through certification all stakeholders meet to decide how best to manage the forest so that all benefit. Certification can also play a role in conflict resolution by ensuring that where there are disputes, processes are adopted to get them sorted out.

The overall goal is good forest management practices and therefore forest certification is a tool that is worth pursuing, especially in PNG where there has hardly been any forest area that has been managed properly in the past 30 or so year of logging in the country.

Power

The main impact is that those communities participating in the projects seem to be getting a better deal with timber exports. This has caused others to take an interest in certification; however, they are limited by their lack of access to portable sawmills that they could use to cut timber.

Many communities do not want to sell their timber resources to the government and industry but are seeking to develop their forest resource themselves. While they feel this is a better route to go, they are hindered by a lack of resources. Despite their interest, the biggest problem that confronts landowners is that the government machinery is set up to serve large-scale logging companies and not these community forestry initiatives. While the local people look to NGOs for help, NGOs do not have the resources to attend to landowner needs and aspirations. There is a possibility that if landowners continue to do things themselves, the tables could be turned and the government and the industry may find themselves being marginalised in forestry development.

Large-scale logging has a lot of influence in determining the way things are done in the country. There is no question about their financial muscle or their political influence. However there is also a growing local voice in the sector as well to ensure that things are done right.

The PNG government, through the Forest Authority, is now taking charge of the European Union-funded PNG Eco-Forestry Programme whereby four communities had been certified under the FSC certification system. There is no formal position of

the government in relation to certification, but by default they are already supporting the FSC group certification in community forestry that they have inherited from the EU. It remains to be seen whether the Forest Authority will continue to support those certified community groups after the EU-funded programme ends.

Social

The current certified community appears to have experienced benefits that non-certified communities have not. They are getting better prices for their timber as well as getting more attention concerning forest management.

In many respects the communities do not fully understand what certification is about because some of the projects, such as the EU Eco-Forestry Programme, are managed by a small group, not the community as a whole. It should be pointed out again that we are taking about a very small niche in the forestry sector – less than one percent of the total production forest areas. The whole country is still very much into large-scale logging and carrying on with business as usual.

The certification of community forestry has also made a dent in conventional forestry business and is making the industry as well as the government at least pay attention to forest certification. The certification experience under the FSC system that PNG has gone through was able to attend to issues not addressed by conventional logging practices. More importantly, forest certification has shown tangible ways of managing the forests, unlike conventional forestry practice.

The Melanesian societies throughout PNG learn from models or demonstrations from which one can benefit and earn a living. This is why certification or any good forestry model that brings benefits (short and long term) can be easily accepted and supported by local communities. Positive impact and benefits of forest certification on the livelihoods of the people of PNG is unclear at the moment and needs to be carefully demonstrated to have landowners' participation and commitment.

Economic

There is definitely a positive economic effect on communities that had their forest certified. These communities get a better price for their timber products and generally have a better lifestyle than those that are not certified. The biggest challenge is for the communities to maintain their group certificate, as up until now the whole certification work has been funded and managed by outsiders. The EU Eco-Forestry Program will be ending in a year or two and the test will come thereafter.

There is not much impact in the whole country, as the certified communities constitute a total of less than 25,000 hectares and the volume produced is less than 200 cubic meters annually. The ITTG group that is buying timber from MFROA is very important for building the capacity of the community involved because the timber is directly produced by the local communities and will have a direct impact to the communities.

Environmental

The 20,000 plus hectares of certified forests will be a model of how things should be done if they are maintained. However, because the current certified donors subsidize communities heavily, there are still many questions raised as to whether the communities can maintain their certificate after the funding support stops. However, in general, all community forestry/eco-forestry practitioners that have undergone forestry training manage their forest resources sustainably, taking on board the needs of FSC's three foundational chambers: the social, environmental and economic elements of forestry development. Environmental management is captured well under the FSC forest certification system. An added value is very important because customary landowners own the forests and it is in their interests to ensure proper practices are done so that communities continue to benefit from the many resources they get from the forests, apart from certified sawn timber, for many more years to come. To achieve minimal environmental impact, capacity is required to ensure that the policies are environmentally sound and practical and are implemented in the field.

CONCLUSION

Summary

Forest certification began in Papua New Guinea in 1993 by way of a national study commissioned by the interim group of the Forest Stewardship Council on eco-labelling, which was presented in Toronto at the FSC founding assembly the same year. Actual forest certification work took place in PNG in 1994 where a community forestry group based in East New Britain was certified. The work was certified by Société Généralé de Surveillance (SGS).

Roadblocks and Challenges

The roadblocks to forest certification are government indifference, the lack of education and awareness, and donor dependency.

The PNG government is officially neutral with respect to forest certification, although there are cases where there have been conflicting statements, creating confusion as to what the government's position actually is. Government indifference has led to little pressure for change in the forest management sector, resulting in continued problems for landowners. These people have lost out; apart from the pittance they are getting for their forests, their lives have been disrupted and very much affected by the logging operations.

The second challenge, therefore, is to educate the landowners to manage the forest resources themselves and improve their living standards by using the opportunities provided by certification. Many of the NGOs are working with landowners to meet this challenge and there are success stories of communities taking charge of their forest resources and doing things on their own after getting the proper training and advice.

On the other hand, and notwithstanding these small successes, certification appears to be in a stalemate in PNG, neither moving forwards nor backwards. While community groups like Madang Forest Resource Owners Association and similar community groups around the country seem to be interested in certification, they do not have the financial, technical, and resource capacity to move forward.

At present, certification is marginalised under a business-as-usual traditional forestry paradigm in which foreign owned companies collaborate with an indifferent government. What could make a significant difference is the adoption of certification by a major logging company. This would make a major impact and could turn the tide. The Forest Industry Association (FIA) is working on a step-wise certification system that can be adopted in PNG apart from the commonly supported FSC certification scheme, and ITTO and PNG stakeholders are developing Criteria and Indicators for Forest Management Units and National Standards.

Future Developments

For forest certification to make an impact in PNG, the international bodies need to continue to make the consumers aware of the need to purchase timber from credible sources and especially from sources where communities are managing it. This is important for tropical countries and especially important for countries like PNG where 97 percent of the land and forest resources are customary owned. For the international countries buying timber from PNG, special consideration needs to be taken as well of the uniqueness of PNG's situation and to be able to give incentives and or special attention so that it stands apart from the conventional way of doing things.

The down side of international involvement is that donor funding heavily subsidizes the certified operations, including most of those community forestry programmes. The challenge will be whether work will continue after funding has stopped. The other issue is whether premiums are being received from the sale of certified forest products. Currently in community forestry operations, the landowners are getting a better price for their products. If things develop and if a logging company gets certified, will they get premiums for the certified products? This question is still important.

Future Research

Research is needed in PNG to carefully analyze the effects of certification – specifically, its social and economic impacts. An independent assessment of forest certification through a participatory approach is needed. Especially urgent is research to determine why it is taking so long for forest certification to move forward in PNG, unlike other industrialised and neighbouring states like Indonesia and Malaysia.

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LIST OF ORGANIZATIONS CONSULTED

Organization	Date	Location
Madang Forest Resource Owners Association	26 Jun 2004	Madang, Madang, PNG
Gogol Naru Association	26 May 2004	Madang, Madang, PNG
National Forest Authority (Verbal & Written)	21 June 2004	Port Moresby, NCD PNG
Eco-forestry Forum	22 June 2004	Port Moresby, NCD PNG
Partners With Melanesia	22June 2004	Port Moresby, NCD PNG
Forest Industry Association (FIA) (Written)	19 June 2004	Port Moresby, NCD PNG
FORCERT	25 May 2004	Kimbe, WNB PNG
Innovision LTD	26 May 2004	Port Moresby, NCD PNG
PHF (Former Staff)	25 August 2004	Madang, PNG

ACRONYMS

AAC	Annual Allowable Cut
CAR	Corrective Action Request
C&I	Criteria and Indicators
CSP	Certification Support Program
CELCOR	Centre for Environmental Law and Community Rights
DEC	Department of Environment and Conservation
EED	Evangelischer Entwicklungsdienst (A Church Development Service-an Association of Protestant Churches in Germany)
ELC	Environmental Law Centre
ENBSEK	East New Britain Eksen Komiti
ESCOW	East Sepik Council of Women
FIA	Forest Industry Association
FMA	Forest Management Agreement
FORCERT	Forest Management and Product Certification Service Ltd
FPCD	Foundation For People and Community Development Inc.
FRI	Forest Research Institute
FSP	Foundation of People of South Pacific
ICCO	Inter-Church Organization for Development Cooperation
IPA	Investment Promotion Authority
IRECDP	Islands Region Environmental & Community Development Programme
ITTO	International Tropical Timber Organization
JANT	Japanese New Guinea Timber
LCOP	Logging Code of Practice
LFA	Local Forest Area
MFROA	Madang Forest Resource Owners Association
MTCC	Malaysian Timber Certification Council
NFA	National Forest Authority
NFB	National Forest Board
NFS	National Forest Service
PFDs	Proposed Forestry Developments
PFMC	Provincial Forest Management Committee
PHF	Pacific Heritage Foundation
PNG	Papua New Guinea
PNGCC PNG	Council of Churches
PNGFA PNG	Forest Authority
PNGFSCWG	PNG Forest Stewardship Council National Working Group
RH	Ribunan Hijau
SGS	Société Généralé de Surveillance
SBLC	Stetin Bay Lumber Company
TRP	Timber Rights Purchase
VDT	Village Development Trust

Forest Certification in Solomon Islands

*Morgan Wairiu**

ABSTRACT

A systematic assessment of the role and effects of forest certification in Solomon Islands was carried out from January to May 2004. It was conducted through a literature review and interviews with various stakeholders involved both directly and indirectly in forest certification. Only a few NGOs, supported through external funding, are promoting forest certification among landowners at a time when unsustainable commercial logging of forest resources of Solomon Islands is the major economic activity.

Although certification is market driven, NGOs see it as an additional tool for implementing sustainable forest harvesting by landowners. NGOs' pro-certification programs target landowners and village communities because they own 90 percent of the total forestland in the country under customary tenure. NGOs have invested time and resources in training and building the capacity of selected landowner operations for certification.

However, adoption of and compliance with certification standards by landowners has been slow. There is limited awareness or knowledge of forest certification among responsible authorities and decision makers. Consequently, policy change towards forest certification at the national level, and government support for its implementation at the community level, will take a long time.

Certification has had very little effect at the provincial and national government level or on the forestry industry at large. KFPL is currently the only FSC-certified commercial forest plantation in the country. Areas under commercial forest plantations are small. The major players in the forestry industry in Solomon Islands are the logging companies and SIG, and none of them are directly involved in certification. Domestic support for certification will require donor funding, international markets, and commitment from international and local NGOs and government agencies. Moreover, to raise interest in forest certification there must be a firm commitment from the government to promote sustainable forest harvesting.

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INTRODUCTION

Forest certification in Solomon Islands is being championed by a few national non-government organizations (NGOs) with international donor funding support. It is being promoted by NGOs to landowners as an additional tool to achieve sustainable forest management (SFM). This is in response to current illegal, unsustainable and destructive logging practices. Unsustainable logging is carried out mainly by foreign logging companies (mostly Malaysian companies) in partnership with local landowner companies and contractors. Exports consist mostly of raw logs going to the Chinese, South Korean, Japanese, and other Asian markets. Except for the Japanese, these markets are relatively insensitive to SFM and forest certification. Logging companies are aware of forest certification but are not prepared to adopt it because of the additional work and cost involved and a lack of demand for certified wood from existing markets.

Logging is the major economic activity in Solomon Islands. Log exports earn about 80 percent of the country's foreign exchange and account for approximately 30 percent of Gross Domestic Product (CBSI 2003). The current extraction rate of 700,000 m^3 per annum is unsustainable, with depletion of merchantable natural forest forecast by year 2018 at current rates (SIG 2003c). Although logging is important to the national economy, it has conferred few direct economic benefits to landowners and communities (Bennett 2000) and is also causing degradation to the environment, loss of biodiversity, and social antagonism among communities.

Forest certification was started in the early 1990s by a few NGOs working with a small number of landowners. Two small family operations in Malaita Province were the first to be certified by the Forest Stewardship Council (FSC) in 1995, followed by Solomon Western Island Fair Trade (SWIFT) in 1996 and Soltrust in 1998. Kolombangara Forest Products Limited (KFPL), a forest plantation company, was also certified in 1998 and remains the only current FSC-certified operation in the country. Forest certification initiatives experienced problems during the ethnic tension between 1999 and 2001, with Soltrust and SWIFT ceasing operations.

Progress in forest certification has been slow because of:

(1) a lack of demand for certified timber in pertinent export markets;

(2) close relations and dependencies between the Solomon Islands Government (SIG) and the export-oriented and foreign-owned timber industry; and

(3) the cost of taking action to move in the direction of SFM, which could prove unpopular due to the important role logging plays in the Solomon Islands economy (job provision and revenue through profits and taxes).

Efforts to establish certification also encountered difficult domestic circumstances, particularly during the period of ethnic tension when many early initiatives stalled.

Despite the slow pace of forest certification development, it has had some impact at the community level in reducing or even stopping commercial logging in certain

areas, in building capacity and skills of landowners in SFM and small business management, and in increasing village income.

It has had little impact, however, at the national level. Solomon Islands Government (SIG) has no policy on forest certification and is not directly involved in its development. To address the current unsustainable cut rate of 700,000 m^3 per annum to a sustainable level of around 150,000 m^3 per annum (SIG 2003c), SIG plans to enforce the 2002 Code of Logging Practice (COLP) through the new Forestry Act 2004 (the Bill). The Bill, which will ensure mandatory COLP implementation by logging companies (SIG 2003c), is now before the legislature for enactment. Effective enforcement of the Forest Act and monitoring of COLP will remain a major task for SIG, which could lose popularity due to the important role logging plays in the Solomon Islands economy and the strong influence of the logging companies.

This case study presents a systematic assessment of the role and effects of forest certification in Solomon Islands. It is based on a review of literature, personal interviews with various stakeholders directly and indirectly involved in forest certification, an analysis of primary documents, and personal experiences.

BACKGROUND FACTORS

Historical Context

Solomon Islands lies about 1,800 km northeast of Australia, between 155 30' and 170 30'E longitude and between 5 10' and 12 45'S latitude, forming a scattered archipelago of 900 forested, mountainous coral islands covering a total land area of about 27,000 km^2. About 350 of the islands are currently inhabited. The islands were first populated about 6,000 years ago by a Neolithic Southeast Asian population – the first proto-Melanesians (Smit 2002) – who settled in tribes under chiefly rule. About 86 percent of the population is still governed through a tribal chiefly system of traditional governance. The family is the basic social unit; members of extended families live together in hamlets and villages as clans. The total population of the Solomon Islands is around 410,000 people comprising 94.1 percent Melanesian; 4.0 percent Polynesian; 1.4 percent Micronesian; 0.4 percent European and 0.1 percent Chinese (SIG 2000). About 80 different tribal languages and dialects are spoken in the country. Pidgin is the lingua franca, while English is the official language for business and communication. All formal education is conducted in English.

When Solomon Islands was declared a British Protectorate in 1893, British administrators took control of the political, economic, and social activities of the country. This arrangement continued until Solomon Islands gained political independence from the British in 1978 and adopted a parliamentary democratic style of government based on the Westminster model. There are three tiers of government — the national government, nine provincial governments each led by a Premier, and area councils (local councils). Local councils were suspended in 1998 during a review of the provincial government system. The Legislature consists of the single chamber National Parliament, which has 50 elected Members of Parliament (MPs) each representing a

single constituency. General elections take place every 4 years. The Executive, comprising the Governor General, the Prime Minister and 20 Cabinet Ministers, formulates policies and action strategies for implementation by the public servants, some of whom are seconded to provincial governments. The national government is based in Honiara, the capital of Solomon Islands.

At the provincial level, elections operate under the same set of rules and procedures as the national government. Provincial representatives are elected every 4 years and the number of provincial members depends on the number of wards (a smaller political boundary) in each province. The process of electing both national and provincial representatives has contributed to a culture whereby politicians divert resources to a select minority of citizens/communities to reward them for their support during elections. The Multi-donor Economic Governance Mission (MEGM) stated in a recent report that it was evident that a number of politicians have become "rent seekers," seeking payment in return for favors undertaken for vested interests (MEGM 2002). At the national and provincial levels, poor leadership, corruption, inadequate service delivery and lack of participatory decision-making are major governance issues. Some of these issues have existed since colonial times, with "modern" governance (Westminster model) long considered a threat to the traditional governance structures and authority practiced by 86 percent of the population. There is much dissatisfaction by landowners (who own most of the resources) over "modern" governance, and the alienation they experience from its heavy-handed, top-down approach.

The dissatisfaction with modern governance alienation was partly responsible for the ethnic tension that surfaced in late 1998. The state's inability to deal effectively with the militant activities compounded the problem and resulted in an armed confrontation between the Guadalcanal militants, later known as the Isatabu Freedom Movement (IFM) and a reactionary force called the Malaita Eagle Force (MEF). The MEF joined with a group of sympathizers within the Royal Solomon Islands Police (RSIP) and forced the democratically elected Solomon Islands Alliance for Change (SIAC) government led by Prime Minister Bartholomew Ulufa'alu out of office in a coup on June 5, 2000. The armed conflict between IFM and MEF forces from 1999 to 2000 led to many deaths, the destruction of infrastructure, and the collapse of the national economy. Development initiatives came to a halt and investor confidence evaporated. These difficulties exacerbated already existing problems in the forestry industry, with illegal logging increasing following the breakdown in law and order.

Forestry Problems

Unsustainable and illegal logging, deforestation and loss of forest biodiversity; lack of natural forest management, and over-harvesting of forest non-timber resources are the major forestry problems in Solomon Islands. Logging companies, considered by many to be unscrupulous, are extracting unsustainable quantities of logs. Deforestation and loss of biodiversity through logging, shifting cultivation, and forest clearance for plantation agriculture and forestry are going on at an alarming rate. Existing legislation and land use plans to address these problems are out of date or

non-existent. Moreover, the SIG lacks resources and capacity to provide effective enforcement and monitoring.

Certification has the potential to address unsustainable and illegal logging, curb deforestation and loss of forest biodiversity, and promote SFM, but it is not effectively addressing these forest problems at the present time.

The effects of forest certification have been minimal because of:

(1) a lack of demand for certified timber in pertinent export markets;

(2) close relations and dependencies between SIG and the export-oriented and foreign-owned timber industry;

(3) the unpleasant economic consequences of taking action to move in the direction of SFM (which include decreases in jobs, company profits and government revenues); and

(4) a lack of support by the SIG in promoting certification.

At current forest extraction rates, the primary rainforest will be exhausted by the time forest certification gains a strong foothold in the country. Landowners require market pressure to start demanding certified timber from loggers to help save their forest.

Traditional/Existing Policy Responses

Weak central government administration, lack of capacity, and no enforcement of current out-of-date legislation are some of the factors contributing to Solomon Island's forest problems. Despite these problems, SIG aims to decrease the current logging rate to sustainable levels and strengthen sustainable management capacity through the implementation of the Code of Logging Practice (COLP), with punitive powers to prosecute violators for non-compliance. This tougher approach will become mandatory with the passage of the new Forest Bill 2004. SIG is also encouraging reforestation of logged-over sites by providing an enabling environment to private sector investors to invest in forestry plantations. Provisions include security of land-tenure and attractive taxation provisions. NGOs, meanwhile, are targeting landowners at the village level to raise awareness of sustainable resource management, small-scale forest enterprises, and forest certification.

STRUCTURAL FEATURES

Ownership and Tenure

About 90 percent of the land area in Solomon Islands is in traditional or customary ownership. During colonial times, in the late 1800s and early 1900s, the government alienated about 10 percent of customary land, some of which has subsequently passed to forestry or agricultural companies. About 2 percent of the alienated land area is held by the forest industry and most of this is under reforestation. Traditional or

customary ownership means that the land belongs to a tribe (communal ownership) or an extended family grouping or clan. This traditional or customary ownership is a form of private rather than state ownership. This is in contrast to many other countries whose natural forests are in public ownership and therefore under the jurisdiction of the government to manage in the national interest (SIG 2003c), a situation especially characteristic of the Eastern European countries. Most landowning groups or tribal members live in rural villages, which comprise 86 percent of the total population (SIG 2000). There is no distinction between land and forest ownership, since forests are considered an integral part of the land; therefore the word "landowner" is used throughout this chapter instead of forest owner. Tribal members have the right to use the land. The fabric of the customary tenure system and decision-making process over use of land has been impacted by the introduction of a cash economy, especially through commercial logging.

Although tribes own the land and have strong bargaining and negotiating power through this ownership, commercial logging activities have not worked in favor of traditional landowners. For example, in the logging agreements with companies, royalty payments to traditional landowners amount to 15 percent of the total log value or less, since many companies deduct the cost of road building from the landowner royalty. Solomon Islands' government receives 35 percent of the total log value through export duties and levies, while production costs and service charges incurred by the logging companies account for 20 percent. About 30 percent in the form of excess profits after production costs (this varies with log price) goes to logging companies (World Bank 1995).

Both the provincial and national governments play central roles in brokering and approving logging licenses. The national government issues timber rights after agreements are made between logging companies and landowners. All too often, the agreements work in favor of the logging companies.

Nowadays a few compliant landowners together with their foreign logging partners apply for timber rights (the right to extract timber from the land) and sub-contract their timber rights to foreign logging companies because they lack the capital to meet the high cost of machinery. In most cases, only certain individuals within a tribe or landowning group are granted timber rights by the government, either legally according to the procedures specified by the current Forest and Timber Utilization Act (SIG 1969) or, as is more often the case, illegally due to the government's failure to implement the legislation effectively.

In some cases, forest officers act on political directives to issue timber rights. These corrupt practices often end up in disputes and lengthy litigation, causing a lot of disturbance and division among tribal members because benefits go to individuals rather than the whole tribe or community. For example, in March 2004, landowners on Billy Island, Marovo in the western part of Solomon Islands were startled when logging commenced on the island and applied to the high court for an injunction to halt logging by two companies, Bulo and Metro. Bulo, a logging company owned by a few landowners from Marovo, holds the timber rights. It subcontracted Metro, a Malaysian logging company, to carry out the logging operations on Billy Island. The

landowners argued that the timber rights granted to Bulo by the SIG Forestry Department breached the Forest Resources and Timber Utilization Act of 1969 because the Forestry Department did not consult all of the landowners during the timber rights hearing. The majority of them want Billy Island to be a conservation area rather than be logged. There are many similar cases but the majority do not go to court because of the lack of financial resources by landowners.

The forest industry in Solomon Islands is comprised of the SIG Forestry Department headed by a Minister, the provincial government, logging contractors, and landowners. Timber rights are issued by the Forestry Department on the advice of the provincial government and landowners. This is done after going through a timber rights process where landowners consult each other to allow their timber to be harvested. In the timber rights process landowners apply to the Commissioner of Forest (COF) for consent to acquire timber rights. The responsible provincial government executive in the province where the landowners come from holds a public, timber rights hearing to determine the landowners' right. After confirmation of the timber rights hearing by the COF (on the advice from the provincial government), individuals opposed to its granting of Timber Rights may appeal to the Customary Land Appeals Court (CLAC) within thirty days. If there is no disagreement then the COF will grant the timber rights and the provincial government will issue the business-logging license. In most cases, however, no timber rights hearings are held or consultation processes followed; rather, a few individuals within tribal landowning groups secure timber rights under their names and proceed with logging to the dissatisfaction of the rest of the tribe.

In the last 15 years, a number of landowners have taken the initiative to develop small-scale saw milling operations that directly involve all tribal members in an effort to attain maximum benefit from their forest. Some landowners favor this option over industrial logging as they can earn up to three times more for sawn timber per cubic meter. Certified sawn timber may earn them even more.

Plantation forestry is also beginning to play a role in the country's economic development. Current forest plantations are located in various areas in the country and have an estimated combined commercial area of 28,000 ha, mostly on government alienated land. Recently, landowners began to establish significant areas of plantations on their customary land. These plantations, despite being small (on average 0.25-1 ha), have the potential to become a significant source of cash income and building materials. As of September 2003, there were about 1,600 individually owned stands, which are estimated to represent around 60 percent of total plantation area (SIG 2003c). Reforestation is currently being encouraged by the government since this will contribute to government revenue and relieve the pressure of natural forest exploitation.

Table 1 Current status of the forest sector in Solomon Islands

Features	Status
Forestland (as % of total land)	78
Plantation (as % of total land)	<2
Proportion (%) of area suitable for commercial logging	21
Total production per year (logs & sawn timber)	700,000 m^3 (3 times the sustainable level)
Amount exported (as % of total production)	90
Main export markets	75% to Japan & China (China has become the main log buyer), 25% to other Asian countries and Australia (sawn timber) and New Zealand (sawn timber)
Wood products export (as % of exports)	80
Wood products (as % of GDP)	30
Employees in Forest Sector (official)	3,600 (1/3 of official employed labor force)
Enforcement of Code of Logging Practice	Weak / non-existent.
Logging companies status	Foreign with some landowner companies

Source: Olivier and Siwatibau 1999

Solomon Islands does not have a land use planning system in place and there is no adequate network of parks and protected areas for biodiversity protection. Most of the lowland rainforest has been logged, resulting in environmental damage and social disharmony amongst communities.

In 2002 SIG approved the Code of Logging Practice (COLP), which is aimed at ensuring that where selective logging takes place, the ecological and cultural functions of the forest and its productivity in terms of wood and water production are protected.

The code applies to all forest harvesting operations in Solomon Islands and sets forth twelve key standards. These relate to:

(1) protected and exclusion areas
(2) roads and landings
(3) road line clearing
(4) road drainage
(5) landing size and number
(6) felling and skidding within buffers
(7) temporary crossings
(8) skid track width
(9) log value maximization
(10) weather restriction,
(11) decommissioning skid tracks
(12) decommissioning landings and log ponds (SIG 2003a).

The logging operations are assessed against the twelve standards criteria on a scale of 1 to 10 for each standard. Any operation that has a total score of 60 or less is considered unsustainable and will have their logging license suspended. The enforcement of the COLP will however become mandatory under the new Forest Bill 2004, which has yet to be enacted. SIG remains passive about forest certification since any strategy to promote SFM by the government would drastically affect its major revenue source. At the same time, the forestry industry also has strong lobby groups like the Solomon Islands Forest Industries Association (SIFIA). SIFIA members are mostly foreign logging companies and their local counterparts. It has a lot of influence on government at the political level; some parliamentarians and members of the provincial governments are licensees who sub-contract to foreign logging companies. This close relationship makes it relatively easy for logging companies and SIFIA to influence policy. As an example, in 1997, SIFIA lobbied the government to reduce the export duty from 35 percent of total log export value to 20 percent, which it did. Currently, the duty is being raised back to 35 percent.

Markets

Most forest products are exported in the form of round logs, extracted through conventional commercial logging using heavy machinery including crawler tractors, bulldozers and skidders. Table 2 shows log and sawn-timber exports from 1990 to 2003. Of all commodities exported from Solomon Islands, logs were the largest by value, which shows the importance of the forest industry to the economy. Although commercial logging is unsustainable, any sudden decline in current log production will have a significant impact on the economy.

Table 2 Volume and value of logs and sawn timber exports from 1990 to 2003

Year	Log Volume ('000 m³)	Log Value US$('000)	Sawn Timber Volume ('000 m³)	Sawn Timber Value US$('000)
1990	399.0	7,536.8	8.2	571.3
1991	291.8	6,594.0	6.1	546.9
1992	543.1	13,869.1	8.5	858.7
1993	591.1	29,563.2	11.0	1,332.1
1994	659.3	35,609.6	12.4	1,304.5
1995	748.5	35,948.9	12.4	1,778.1
1996	833.0	44,861.7	12.0	1,720.0
1997	690.3	37,094.1	9.5	1,662.4
1998	513.0	20,254.0	8.0	1,731.6
1999	611.2	33,421.1		
2000	536.1	29,922.9		
2001	533.6	25,394.3		
2002	550.4	33,886.5		
2003	740.5	48,094.1		

Note: No records are available for sawn timber exported from 1999 to 2003, which included some certified timber (Source: CBSI 2004).

No high-quality certified timber is sold locally in the domestic market. However, certified timber that does not meet quality standards is used to construct churches, aid posts, schools and petrol-sheds within communities. Producing good quality timber is a major problem for producers, despite being trained in timber production and grading. Most of the exported certified timber is used in joinery, furniture work, and all kinds of wood products for houses.

Solomon Islands imports wood products like veneers and plywood for house construction, hand tools with wooden handles, and some finished furniture. Most imported timber products come from Japan and Australia but there are no detailed records to show the actual value of the timber. Wood products account for 30 percent of GDP and the forestry sector employs 3,600 people, one-third of the total labor force in the formal employment sector.

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

Initial support for forest certification came from NGOs because of their experience at the community level. They witnessed firsthand the problems caused by unsustainable commercial logging, including conflict and land disputes among landowners, land degradation, and sedimentation and pollution of river systems, catchments, wetlands and marine environments. Unsustainable logging also undermines traditional economies and values, and adversely affects the livelihoods of people living adjacent to logging sites. Most of the companies involved in logging are foreign and some landowners and NGOs view them as having no regard for the unique environmental, social and cultural setting of Solomon Islands. Some landowners and NGOs are demanding that the government develop adequate environmental regulations and codes of conduct to control logging activities and put in place an adequate and effective monitoring system. With external funding they became proactive in addressing unsustainable logging.

National NGOs like Soltrust and Solomon Islands Development Trust (SIDT) were established in the early 1980s and assisted landowners to obtain information and make decisions regarding destructive logging practices. More NGOs came in the 1990s, including international NGOs like Greenpeace Pacific and World Wide Fund for Nature (WWF).

They joined in the concerted effort to inform citizens about the negative impacts of commercial logging and unsustainable resource development through a number of conservation and sustainable resource management programs that operated in selected vulnerable communities. These included (1) village-based eco-forestry involving selective harvesting and sawmilling; (2) marketing of processed forest products from sustainable sources; (3) support for other village-based and managed activities including eco-tourism and insect farming; and (4) environmental conservation and environmental awareness.

Despite this effort, commercial logging operations continued to increase and consistently spread to almost all island communities. The lure of small but fast cash

from logging royalty payments and promises of the provision of social services through schools, clinics, roads and water supplies convinced a number of landowners to grant timber rights to logging companies. A decade of village education and awareness-building by NGOs, notably SIDT, up to the early 1990s failed to make any significant impact on landowner and community perceptions of resource use. People did not put the NGOs' ideas and information into practice. The NGOs then realized that information alone, although undisputedly important, is insufficient. The requirement is to actually show landowners an alternative but sustainable way of using their own timber resources; in this case how to harvest their forests to get the maximum benefit from it. With continuous external funding, Soltrust and SIDT both set up eco-forestry divisions/units and taught landowners how to harvest their forests and sell the produce to earn more income than they could through logging companies.

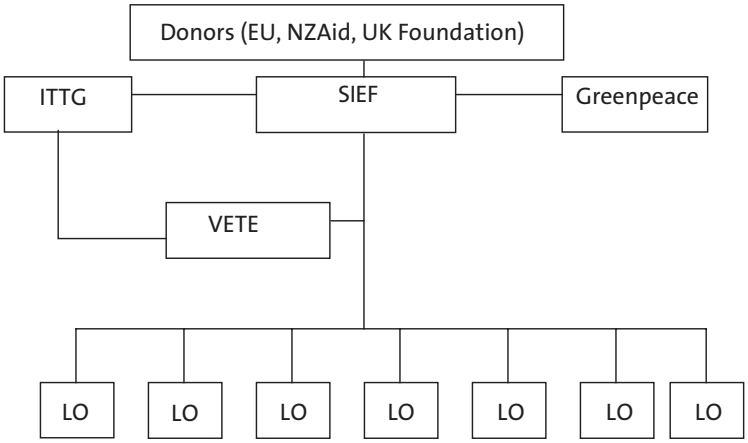
At the same time as NGOs were promoting sustainable timber milling with landowners, export markets for certified timber emerged. The NGO's openly adopted and promoted forest certification as an additional tool to achieve sustainable forest harvesting. The Isabel provincial government, through Isabel Sustainable Forestry Management Project (funded by the European Union (EU)), collaborated with SIDT eco-forestry program. Soltrust and Solomon Western Island Fair Trade (SWIFT) adopted FSC certification standards using the Group Certification process, which included all of FSC's principles and criteria. Both NGOs requested that they be assessed and certified as Group Managers and their individual community-managed forest projects be assessed and certified as Group Members. The group certification scheme was appropriate for Soltrust and SWIFT, because they were dealing with small forestland areas under individual tribes and communities, for which individual certification is not feasible and cost-efficient.

The SIDT Eco-forestry Unit, in collaboration with the Imported Tropical Timber Group (ITTG)—a consortium of timber merchants in New Zealand, and Greenpeace Pacific—started the Solomon Islands Eco-Forestry (SIEF) program in 1995. They jointly developed a standard called Eco-timber. The principles and criteria of the Eco-timber standard were, however, similar to FSC's. The parties to the Eco-timber standard recognized that FSC certification was very expensive and that it would take time for landowners to adopt and fully implement FSC standards. The Eco-timber standard is a private arrangement between ITTG, Greenpeace Pacific and SIDT, which uses second-party verification to start landowners on the path to eventual FSC certification. The SIEF's Eco-timber standard therefore complements rather than undermines FSC.

The market had a lot of influence on promotion of certification by NGOs. NGO eco-forestry programs would not have expanded or been readily accepted by landowners in the absence of secure, reliable markets and high prices for their timber. For example, timber produced by SWIFT before 1996 was exported to Netherlands, but the organization faced difficulties in finding markets with reasonable prices (Wilko 2004). Certification as a guarantee of 'good' forest management was seen as the key to establishing market outlets and higher prices for the timber.

NGOs tried to capitalize on this market by increasing sustainable timber production but landowners, being predominantly subsistence-based, were unable to maintain a consistent, regular supply to meet market demand. Landowners only produced timber when they needed money and this lack of regularity in supply is one of the major problems experienced by the certification program.

Figure 1 Diagram of the SI Ecoforestry Program operation showing links to donors, the market (ITTG), NGOs (Greenpeace, SIDT), Village Ecoforestry Timber Enterprises (VETE) and Landowners (LO)



The NGOs worked through the 1990s within their respective eco-certification programs to build capacity and enhance landowner's skills in SFM. The landowners are politically weak, however, and have been marginalized under current forest exploitation arrangements; moreover, there are no avenues for continuous dialogue between landowners and the government. Landowners are alienated from government, which is located many miles away in the capital of Honiara. Because of this, landowners have very little influence on policy at the national level. Some influential members and political representatives of landowners are bribed by logging companies to convince the rest of the tribe to grant timber rights for logging. They use their influential role in the system to meet their own needs rather than those of their tribes.

Institutional Design

There is no national body in place to coordinate and promote forest certification and no government involvement. An early attempt to set up a national standard body called Solcert also failed. Certification is being promoted by individual NGOs because they see it as a tool to achieve SFM and some landowners are participating in certification because they get greater monetary benefit through milling their timber compared to the 15 percent royalty they get from logging companies. The NGOs and other stakeholders directly involved in forest certification include Soltrust, SWIFT, SIDT, KFPL, and the Sawmill Owners Timber Producers Association (SOTPA).

Soltrust was registered as a national NGO in 1989 and established as an eco-forestry division in 1992. It provided training to landowners in the preparation of forest area management plans. Six out of the 48 landowners trained and assisted by Soltrust were assessed by Smartwood/Rainforest Alliance in 1998 and became FSC certified. (However, they were later decertified due to non-compliance and non-payment of certifiers' fees). With external funding, Soltrust provided continuous training, extension and support work, and monitoring of local timber producers. It later established a marketing arm called Umi Togeta Holding (UTH), which purchased milled timber from landowners and exported them to European markets. Despite this marketing initiative, Soltrust experienced technical and financial problems in its operations prior to the ethnic tension and ceased operation altogether in 2000 during the height of the troubles when its office was destroyed by militants.

The Integrated Human Development Program of the United Church of Solomon Islands set up SWIFT in 1994. Dutch foresters developed SWIFT's Forest Area Management Plan program (FAMP) and its standards, translating and transferring FSC requirements to Solomon Islands community forestry conditions. The first landowners, who experienced marketing problems in 1994, discovered that the market opened up when they were certified by SWIFT in 1996. SWIFT's forest certification program was funded by the International Organization for Development Cooperation (ICCO) based in Netherlands. Due to incompatibility between church and business affairs, and other management problems, SWIFT's program stopped in 2001 and no certified timber has been produced since.

SIDT was founded by Dr. John Roughan and Abraham Baeanisia in 1982. Both are educators and thus the focus of SIDT was on village education and awareness-building in improving village quality of life. SIDT started its SIEF operation in 1995, with external funding for different phases of the program coming from the European Union (regional funding under its tropical forest budget line), New Zealand High Commission in Solomon Islands, Pacific Conservation Development Trust (PDCT) in New Zealand, ITTG NZ, UK Foundation and Greenpeace International. SIEF's partners established a set of principles, criteria and indicators for good tree harvesting. To meet environmental, social and economic standards for responsible forestry management practices, these principles formed the cornerstone of SIEF's village level work. SIEF is currently working with 24 landowners and supplies eco-certified timber to ITTG in New Zealand and to some market outlets in Australia. The SIEF program depends on external funding to make it viable, but EU regional funding stopped in 2001. Although it received funding recently from Oxfam Australia, this money is only for training purposes. SIEF partners have submitted a new funding proposal to the EU under its bilateral mechanism and a decision is pending.

In mid-1997 SIDT set up a marketing body called Village Eco-Timber Enterprises (VETE) with membership from landowners participating in the SIEF program. VETE exports timber on behalf of the landowners. VETE is a not-for-profit organization and retains only 15 percent of the total export value to meet its operational and handling costs, which is not sustainable at the current low export volumes. According to the SIDT's 20th anniversary report (2002), VETE exported 715 m^3 to overseas markets

between August 1997 and April 2002, mainly to ITTG in New Zealand. The volume of timber exported was worth US$220,000 and the money went directly to landowners. If this volume was sold as logs domestically to logging companies, it would fetch only US$74,710 and landowners would only get US$8,030 as a royalty payment. During the same period, an additional amount equivalent to about half of the exported volume of eco-timbers was either sold domestically or used directly in the construction of timber/petrol sheds, furniture and housing for project members.

KFPL is a joint venture company between the SIG and the UK Commonwealth Development Corporation (CDC) and is managed by CDC. KFPL was the first forest plantation in the Pacific region to be certified under the FSC scheme in 1998. KFPL has maintained its FSC Certification with a 5-year certificate valid until 2004 for all plantation logs and timber. Woodmark, a program of the UK Soil Association, assessed KFPL's operations for FSC certification. It was the idea of greater market access and better prices that attracted KFPL to certification and the company has greatly expanded its sawn timber production and output in recent years. Their certified logs and timber kept them afloat during the period of ethnic tension and the consequent economic crisis. Apart from market benefits, KFPL adopted certification because certification is about long-term sustainability and its goal is to provide plantation-based timber and products that meet the highest international standards of sustainability whilst promoting economic and social development for the people of Solomon Islands. The company has under its stewardship 16,000 ha of planted tropical hardwoods, principally *Gmelina aborea* ("White Teak") and *Eucalyptus deglupta*, together with 20,000 ha of protected rainforest most of which is virgin, and 4,000 ha of unplanted areas, making a total 40,000 ha of FSC-certified forest management area. Current production is about 80,000 m^3 per annum at a value of around US$5 million (SB$35million).

The Sawmill Owners Timber Producers Association (SOTPA) was established in 2000 to address the problem of inconsistent and irregular timber production and supply by landowners. Landowners agreed that regardless of which eco-forestry program they registered with they must pool their sawn timber together to meet the market quota for Solomon Islands. Landowners under Soltrust's eco-forestry program initiated the formation of SOTPA and Soltrust supported the initiative by providing office space and technical advice to SOTPA's secretariat. SOTPA was to organize marketing on behalf of its members. Unfortunately due to closure of Soltrust in 2000, SOTPA was not able to function and suffered the same fate as Soltrust, leaving certified landowners confused and uncertain about future activities. Landowners are very keen to restart timber production but maintain that they require assistance of the kind that Soltrust provided in the past. This reflects the heavy reliance of landowners on NGO support.

Table 3 Entities producing certified timber for export

Management Organization	Marketing Arm	Period of Export	Volume of Export (m^3)	Value of Export (USD$)	Market
Soltrust [FSC-certified but revoked]	UTH	1998-2000	600 (approx.)		Europe
SIDT–SI Ecoforestry Program	VETE	1997-2002	715	$220,000	ITTG* NZ, Australia
United Church (SWIFT)	SWIFT	1996-2001	1,140		Netherlands
KFPL		1998-2004	80,000 (per year)	$4.7 m (per year)	Vietnam, China

Note: Soltrust and SI Ecoforestry Programme exports are not third party certified (Source: Personal Communication, Soltrust, SIDT and Wilko 2004);

*New Zealand Imported Tropical Timber Group.

Standards

NGO certification programs were designed to address illegal logging by commercial timber companies and to prevent more community forestland being granted as concessions through dubious logging agreements with landowners. The focus of NGOs was on encouraging landowners to get alternative benefits from forest use rather than granting timber rights to commercial loggers. In 1998 NGOs initiated a national standard called SolCert (Solomon Islands National Certification) with membership from SIDT-EFU, Soltrust, SI Government Forestry Department, SI National Union of Workers and SI Forest Industries Association. SolCert's purpose was to build awareness of forest certification, set national standards for forest certification, and be the contact office and umbrella body for certification in Solomon Islands. It was planned that SolCert would complement and support SOTPA to promote and market certified timber from Solomon Islands. SolCert failed to get off the ground, however, and individual NGOs thus continue to carry out their work independently. Soltrust and SWIFT adopted FSC standards and became FSC-certified, while SIDT uses the SIEF standard. As noted above, the SIEF standard is similar to FSC's and includes such issues as defining protected areas, forest use, forest management plans, the needs and rights of customary owners, method of harvest, and verification and monitoring.

In the standard-setting process, Soltrust developed FAMP in partnership with landowners and incorporated the FSC standards into the plan to meet local needs. The FAMP was developed on site during a three-month training program in forest resource planning. The plan contained all the standard practices in line with FSC's principles and criteria and landowners were assessed on their implementation of the FAMP. SWIFT's whole forest management system was set up by forestry experts from Netherlands, but it has also adopted Soltrust's approach in identifying landowners and

communities (Wilko 2004). SIEF has developed its own standards in collaboration with its partners. They translated FSC principles and criteria into simple practices and terms for ordinary people (tribes and communities) to understand. SIEF takes landowners step-by-step towards FSC standards; it is a first step towards FSC certification.

THE REACTION TO CERTIFICATION

Forest certification has been in evidence for 8 years and many village operations have been exposed to it. However, the general village person has not heard of it and there is limited knowledge among those in government. It is promoted and implemented by only a few NGOs through selected communities and has not had any impact on the forest industry. Therefore, the reaction to certification has been minimal.

Forest Policy Community and Stakeholders

SIG has no policy on forest certification but aims to reduce the current logging rate to sustainable levels and strengthen management capacity through its Medium Term Development Strategy (MTDS), which will ensure environmentally sound practices and growth in village incomes from forestry (SIG 2001). The strategies are to:

- Implement the Code of Logging Practice (COLP), using its provisions to prosecute offenders for non-compliance.
- Continue reforestation of logged sites. SIG is to establish an enabling environment to facilitate private sector investment in forestry plantations using land tenure security and appropriate taxation arrangements as instruments to foster development. Commercial industrial plantations are reaching maturity and will lift output from 120,000 m^3 currently to 200,000 m^3 by 2020.

While mandatory implementation of the COLP by logging companies may result in sound logging practices and a reduction in non-compliance, it does not directly address the issue of sustainable forest harvesting. Although SIG views forest certification as a complement to its strategy to reduce unsustainable forest harvesting, it has made no firm commitment to its implementation.

Landowners

Landowners found the requirements of certification challenging when it was first introduced. They maintained that it was too complicated to follow the standards and too much work was required through certification. They viewed field operations like blocking, inventory, tree marking and positioning, reporting, and detailed record keeping as involving too much work. Timber milling also involved a lot of manual work. Lessons learned here forced SIDT to develop less complex and stringent standard under SIEF. Another reason why SIDT did not adopt FSC's certification directly was its high cost. The SIDT-EFU team assisted landowners in these activities

under the SIEF eco-timber label in a step-wise process to build their capacity and skills towards FSC certification.

Landowners were already carrying out timber milling before forest certification emerged but their actions were unsustainable because they were not following any forest management plan. In the case of SWIFT, the number of participating landowners declined from 200 to 10 in the first year of certification. At the end of year 2000, SWIFT had 62 certified landowners (Wilko 2004). They were pleased about the higher prices for certified timber they received but disliked all the extra work involved in trying to comply with the standards. At the start of the eco-forestry programs by Soltrust, SWIFT, and SIEF, landowners' needs were not adequately assessed. Landowners argued that timber production involved a lot work and required more labor and thus interfered with their social lifestyle. For example, men spent more time in timber production and less time helping women with garden work. While it is true that landowners want higher monetary returns from their forest than they currently receive in royalties from logging companies, no assessment was made of the workload commitments they are willing to make to earn additional money. The quantity, quality and regularity of timber supply demanded by the certified market do not fit well with the needs of landowners. For example, some landowners said they only need extra cash two to three times a year for social events during Christmas and Easter and to pay for their children's school fees (Olivier and Siwatibau 1999). Some landowners refuse both commercial logging and sustainable (certified) forest harvesting and opt instead to do their own timber milling, which they see as generating a higher income than logging royalties while allowing them to operate on as-needs basis.

A major reaction to certification is anticipated if the current market for Solomon logs (mainly China) starts to demand certified timber. At the moment this is not happening and consequently there is little pressure on logging companies to adopt forest certification. Even SIG's Forestry Department, the authority in charge of forest policy and regulation, has very little knowledge about forest certification. Foreign logging companies have not reacted to certification because certification is as yet a non-issue.

Current Status of Forestland Certification

Soltrust and SWIFT stopped operating in 2000 and 2001 respectively and thus have no records to show the actual area of forestland certified. KFPL has 40,000 ha of plantation forest certified and SIDT gave an estimate of 16,000 ha. Details are shown in Table 4.
Landowners simply cannot meet the cost of certification. It is very expensive to be certified and thus NGOs work as group managers to certify group projects in order to share the cost. Even with that, certification would not be possible without funding support from donors. With the closure of the Soltrust and SWIFT programs, it is highly unlikely that the timber producers they supported for certification will re-certify in the future. SIDT uses the SIEF standard and is moving landowners towards FSC standards. KFPL has benefited from certification and will likely seek re-certification. Some people from SWIFT have reformed under the Natural Resources Development Foundation (NRDF), which is now using SIEF eco-certification. NRDF is made up of SWIFT former employees and is funded by ICCO.

Table 4 Number of timber producers and amount of forestland certified

Program	Number of land owners & timber producers certified	Area (ha)	Type of forestland	Forest operation
Soltrust [FSC-certified but revoked]	6	n/a	Primary Forest	Chainsaw-driven mill
SWIFT	62	n/a	Primary Forest	Portable saw milling
SIEF-Community Ecoforestry	24	16,000 Approx.	Primary Forest	Portable saw milling
KFPL	1	16,000 in production – 40,000 total	Plantation	Logging

Source: Personal Communication, Soltrust, SIDT and Wilko 2004

Current Status of the Certified Marketplace

Currently only KFPL products carry the FSC logo while SIEF has its own Eco-Certification logo. The ITTG of New Zealand and buyers in Australia desire at least 40 m3 per month from VETE but timber producers are not able to meet this demand due to inconsistent production. The market outlet is available but supply from certified landowners is low. This is a major concern for VETE, which aims to increase both the volume and consistency of production as well as to become FSC-certified. Current VETE production averages about 30 m^3 per month.

Logging companies are aware of certification but view it as an unnecessary business cost. Only if buyers/markets demand certified products or SIG makes it mandatory (which is most unlikely) will they change their position.

EFFECTS OF FOREST CERTIFICATION

While the effects of forest certification have been minimal in the Solomon Islands on mainstream industry and the government, there are some positive effects. For example, KFPL was kept afloat during the period of ethnic tension because it continued to sell its timber to the certified market while other logging operations were not able to.

Power

Certification has had very little effect on the provincial and national governments and within the forestry sector at large since it emerged in 1995. This is because only a small number of the stakeholders concerned were involved (three NGOs – Soltrust, SIDT,

SWIFT – ninety landowner groups and KFPL). They have very little influence on policy. The major and influential players in the forestry industry in Solomon Islands are the logging companies and SIG and neither of them was involved. It is commercial logging that is having significant negative effects on Bruntdland's three-legged stool – the environmental, social and economic aspects of sustainability – at the different scales of individual, community and national levels. Most commercial logging agreements have not worked in favor of the landowners.

Social

There have been some benefits at the individual and community levels especially among interested landowners who participated in the eco-forestry programs through the certification standard-setting process. These include capacity- and skill-building through certification assessor training, awareness, consultation and participation. Some communities managed to halt commercial logging in their forest areas through awareness training in certification standards. The structure of the tenure system and the subsistence economic environment are also important factors. Tribal members support each other through distribution of their resources or from what they earn from the sale of their resources; in this case, they share the earnings from the export of certified timber. This brings forth a sense of togetherness, equality and fairness between tribal members. Furthermore, this social network remains an important principle to ensure that while chiefs themselves assemble most of the resources, they must also redistribute those resources back to the people.

The only social concern among women in the communities was that men spent more time milling timber and less time in the garden to produce food. Food production at the household level is the most important occupation in the village.

Economic

Landowners are apparently able to get a much higher price from selling certified wood than from selling uncertified wood in the domestic market (three times as much). For example, they get US$100 per m^3 in the domestic market while they receive US$297 from VETE though SIEF for eco-timber. Marketing entities for all programs (SWIFT, UTH and VETE) experienced an increase in access to export markets when they started selling certified timber. Market demand, however, requires higher volume production and good quality timber, which few communities' production output can meet on a consistent basis.

The price premium is not always a sufficient incentive to encourage landowners to "invest" in eco-forestry management and in certification (i.e. to pay the costs today so that they will earn a greater return in the future). Only a portion of the certified wood that is produced on site is actually exported. Some timber is used for community projects like churches, school buildings, bridges, boats and residential homes while some is rejected from export and only sold on the domestic market. With all the hard work, only a portion of the total timber volume produced can fetch the premium price. This reduces the incentive to producers.

Environmental

Solomon Islands' forest resource situation now is at one extreme, unsustainable and subject to overexploitation. It will be exhausted by 2015 if there is no drastic change in policy and strategy to ensure environmentally sound and sustainable practices. The forest is under severe threat and at present forest certification in the country is far from having any significant effect. One of the environmental concerns over the certification of plantation forestry is that it may increase incentives for the deforestation of primary forests, which, in turn, would decrease biodiversity.

CONCLUSION

NGOs adopted forest certification as an additional tool to promote Sustainable Forest Management. The benefits from practicing SFM would stop landowners from granting further timber rights to companies to engage in large-scale, unsustainable logging. Some landowners succeeded in halting commercial logging and in getting direct monetary benefits. They rely heavily on NGO support through external funding support, however. When funding stopped and NGO programs were discontinued, landowners also stopped production. From the three NGOs that initially promoted certification two have halted certification activities. Large forestlands are still under large-scale, unsustainable commercial logging by companies exporting timber to environmentally insensitive markets in China, South Korea, and Japan. Unless these major market outlets for Solomon Islands timber start demanding certified timber, certification will continue to have little impact.

Forest certification themes relevant to Solomon Islands include (1) markets (strong international market demand for uncertified Solomon Islands round logs and timber products reduces pressure on domestic industry to become certified); (2) lack of government support; (3) strong role of NGOs and international donors in promoting certification; (4) value of certification during internal conflict; and (5) the requirement for a stepwise approach to meet the needs of small-scale producers (individual and community).

Roadblocks and Challenges

Major barriers to certification are: (1) markets (current international markets for Solomon Islands round logs or timber does not absolutely require certified wood, so one can still sell uncertified timber to current market outlets); (2) little government support for certification; 3) heavy reliance on external funding for NGOs or other stakeholders to aggressively promote sustainable forest harvesting; and 4) lack of landowner initiative to take up certification on their own. With 90 percent of forestland in the hands of landowners with 70 percent illiteracy, it will take a long time for certification to be widely accepted and practiced. There is limited awareness of forest certification among responsible authorities or decision makers and thus policy change towards forest certification at the national level and government support for its implementation at the community level will take a long time.

Funding assistance or donor support for certification is important. Without that, those promoting certification in the country would not be able to run certification programs. The high cost of certification (cost of meeting certifier's fees) is well beyond the capacity of the NGOs, let alone communities and tribal groups. The FSC standards are too technical and complicated for landowners and thus need to be translated into simple terms for ordinary people (tribal groups, communities and producers) to understand.

Commercial logging is depleting the natural forest at a very fast rate – 700,000 m^3 per year – while progress in forest certification is progressing at a slow pace. By the time a full-fledged program to set up certification is in place, most of the virgin forest will all be gone. Because logging is the major revenue earner for the country, the economic consequences of taking action to move in the direction of SFM could prove unpopular.

Future Developments/Scenarios

Three critical factors that are likely to be important for the development of certification in the short-to-medium term include: (1) enforcement of COLP; (2) increased importance of certification in Chinese market; and (3) increased pressure from multilateral and bilateral donor community and support for NGO programs on certification.

Effective enforcement and monitoring of COLP is important. The forestry department needs to be strengthened to carry out monitoring and enactment of the forest law (SIG 2004). The option to promote logging company certification on forest concessions depends on the market and revised government. Commitment from international and local NGOs, governmental agencies, donor funding and international markets for certified products are necessary requirements for certification. Most NGOs' work depends very much on external funding and now traditional aid donors are committed to economic recovery and development in the country. This came about as a result of the intervention by the Regional Assistance Mission and the subsequent restoration of order. This may help bring about improvements in forest management and certification arrangements. For example, the Natural Resources Development Foundation (NRDF), a local NGO, was recently formed and is now assisting a few communities to produce eco-timber under SIEF's eco-timber label for export to the ITTG market.

Future Research

Initially, NGO eco-forestry programs were targeted at halting un-controlled commercial logging, and when certification emerged they saw certification as a win-win situation whereby landowners could harvest their forests at a sustainable level while deriving maximum benefit from them. There is a need to conduct research on landowners' perceptions of traditional resource use and management. On the other hand, there is also a need to conduct market research on the end products that are and could be made from Solomon Islands timber and on consumer attitudes to illegal

and unsustainable logging in Solomon Islands. Through such research, and the application of the results, the market may eventually come to exert pressure for certified timber increasing the prospects for sustainable forest management in Solomon Islands.

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LIST OF ORGANIZATIONS CONSULTED

Organization	Date	Location
Solomon Islands Development Trust (SIDT)	14 January 2004	Honiara, Solomon Islands
Soltrust (former employees and directors)	14 January 2004	Honiara, Solomon Islands
Forestry Division, Department of Forest, Environment and Conservation	18 January 2004	Honiara, Solomon Islands
Environment and Conservation Division, Department of Forest, Environment and Conservation	18 January 2004	Honiara, Solomon Islands
Kolombangara Forest Products Limited	4 March 2004	Ringi Cove, Western Province, Solomon Islands
Natural Resources Development Foundation (NRDF)	4 February 2004	Munda, Western Province, Solomon Islands
Loupou Tribal Project	8 January 2004	Afio, Malaita Province, Solomon Islands
Kasera Community Project	22 January 2004	Nagolau Village, Isabel Province, Solomon Islands
Kolomola Village Project	11 January 2004	Kolomola Village, Isabel Province, Solomon Islands

ACRONYMS

CBSI	Central Bank of Solomon Islands
CDC	Commonwealth Development Corporation
COLP	Code of Logging Practice
CSN	Civil Society Network
FAMP	Forest Area Management Plan
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
ICCO	International Organization for Development Co-operation
IFM	Isatabu Freedom Movement
ITTG	Imported Tropical Timber Group
KFPL	Kolombangara Forest Products Limited
MEF	Malaita Eagle Force
MTDS	Medium Term Development Strategy
NGO	Non-Government Organization
NRDF	Natural Resources Development Foundation (NRDF)
RSIP	Royal Solomon Islands Police
PCDT	Pacific Conservation Development Trust
SI	Solomon Islands
SIAC	Solomon Islands Alliance for Change
SIG	Solomon Islands Government
SIDT	Solomon Islands Development Trust
SIDT-EFU	Solomon Islands Development Trust-Eco-Forestry Unit
SIEF	Solomon Islands Eco-forestry
SIFIA	Solomon Islands Forest Industries Association
SFM	Sustainable Forest Management
SOLCERT	Solomon Certification
SOLFRIS	Solomon Forest Inventory System
SOTPA	Sawmill Owners Timber Producers Association
SWIFT	Solomon Western Island Fair Trade
UTH	Umi Togeta Holding
VETE	Village Ecoforestry Timber Enterprises
WWF	World Wide Fund for Nature

REGIONAL OVERVIEW

Forest Certification in Eastern Europe and Russia

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INTRODUCTION

This section presents four case studies of forest certification in countries from the former "eastern block" – Estonia, Latvia, Poland, and Russia. These countries have many important similarities, the most obvious being their socialist histories and recent transition to market based economies. They have also adopted forest certification rather readily. Yet there are many striking differences among these countries that could turn out to be as important as their similarities.

SIMILARITIES

Since 1989, all of these countries have undertaken the transformation from centrally controlled socialist economies into capitalist ones. Although often called "countries in transition," they might more accurately be called "countries in convulsion." The process of economic transformation has been turbulent and difficult. After many decades of socialist rule, these countries have rapidly shifted their legal and political structures to facilitate market-based regulation, shaking long-standing arrangements in every area of social life.

Most of the former socialist countries have large – sometimes very large – forest reserves. For the most part, these forests are in good ecological condition, since socialist policy protected many natural areas and practiced relatively low harvest levels in many production areas. Their proximity to high-consumption European and Asian markets now makes these forests potentially vulnerable to rapid depletion, especially because the breakdown of the socialist system has made basic economic resources scarce in many rural areas. The desire for hard currency has placed considerable pressure on some of the region's forests. This pressure is particularly potent because domestic public opinion tends not to place heavy emphasis on environmental protection, and most government policies stress economic growth. Although Soviet-era policies were consistent with ideas such as valuing environmental services and protecting natural capital, these ideas presently are not very influential. The struggle for personal subsistence and the rise of consumerism have turned public attention away from environmental problems. Thus, there is little effective domestic demand for forest certification, which is still seen largely as a practice related to external export concerns.

At the same time, these societies have resources to help control destructive harvesting. Among the most important are the forest scientists and professionals who are a legacy of the socialist system's stress on technical expertise. A great many of the individuals who have become engaged in forest certification are well trained and highly knowledgeable about forests and forest policy. Some of them have long been involved in forest and other policies, usually through state bureaucracies. Although the case studies indicate that traditional management structures have sometimes been rigid and resistant to desirable change, this tendency has also given them at least a limited capacity to buffer the most destructive aspects of rapid marketization of forests. More importantly, however, new networks of experts have formed, partly due to forest cer-

tification and partly due to the larger restructuring processes that have occurred. These networks have demonstrated a considerable capacity to learn and to adapt. Their ability to achieve effective and responsive policy control, however, will only become clear in the coming years.

The countries discussed in this section can also draw on a long tradition of preservation-oriented forest policy. Although the Baltic and Polish forests were overutilized in the period around World War II, a preservationist paradigm then took root in those countries. Forest management was based on German theories of the normal forest and timber flow, enriched by Russian forest typology and large-scale biogeocenotic landscape concepts. Forestry was biologically rather than commercially oriented, with the result that harvest rates were limited to 20 to 40 percent of annual growth.

Although logging has increased significantly in all four countries since the demise of the Soviet Union, causing some of the problems discussed below, total harvest levels remain well below annual forest growth increments except in Estonia, where they are approximately equal. State forestry policies continue to impose many management restrictions in commercial forests, such as high minimum rotation ages and small allowable clear-cut areas. In addition, they devote a large and expanding share of forested area to non-commercial uses, some very strictly protected. Foresters in the state forest authorities generally remain quite preservation-oriented. This orientation has been reinforced by participation in international environmental initiatives, such as the 1992 United Nations Conference on Environment and Development process and the Ministerial Convention on the Protection of Forests in Europe.

Despite these strengths, forestry in Eastern Europe and Russia has suffered a worsening image both domestically and internationally. Some of this decline seems attributable to the projection of general assumptions onto forestry. Domestically, people generally distrust state authorities. They therefore tend to assume that increased logging involves excessive harvesting and forest destruction, even when the data may suggest otherwise. Abroad, many people have a very vague understanding of the actual situation in Eastern Europe and Russia, and often seem to assume that the forests have been ruined along with everything else in the collapse of socialism.

At the same time, some forests in the region face very real problems. The aggregate statistics on total forest harvest and growth noted above tend to obscure localized environmental problems and changes in forest quality. In Estonia, for example, much of the annual increment in forest growth is attributable to natural regeneration of harvested areas, meadows, and fields. Thus, self-started aspen-willow-hazel brushwood stands can replace harvested conifer stands in the aggregate statistics. Some privately owned lands, in particular, have suffered degradation. The rise of "wild capitalism" and illegal logging have caused the most serious problems in the Russian Far East, where widespread deforestation and other ecological damage have occurred at the hands of timber thieves and corrupt officials carrying out destructive harvests to feed Asian markets. Illegal logging is also a problem in western Russia, where it more often involves exceeding allowable limits and sale-oriented "thinning" rather than cutting without any permits at all, and in parts of the Baltic states, where

it more often involves violations of environmental laws, logging without permits, and tax fraud or money laundering. In Estonia, poor regulatory enforcement has led to serious over-harvesting and non-regeneration of a number of spruce and pine forests. The severity of forestry problems outside eastern Russia also remains subject to some disagreement among experts.

Whether the retained ordering capacity offered by professional structures and preservationist policies will prove sufficient to manage the above challenges in the face of rapid structural transformation and entry into the global market remains to be seen. As noted above, forest policies necessarily have had to change to adapt to market logic, and indeed have undergone almost constant change since the beginning of economic restructuring. Transnational environmental non-governmental organizations (NGOs) and their local affiliates saw this as a significant problem and responded with a sense of urgency. One of their primary strategies has been to promote forest certification as a counterforce to unregulated markets, governmental export promotion, and vulnerable state regulatory structures.

Overall, the countries described in the case studies adopted forest certification relatively quickly. Sometimes there was considerable initial opposition from the state agencies, but it generally turned into support rather quickly as well. Thus, in all four countries, forest certification – and in particular the Forest Stewardship Council (FSC) system – has made remarkable progress. This contrasts with most other cases in this book, where the FSC remains a niche program or has yet to realize its potential. Almost all of the certification in Eastern Europe and Russia to date has been in state-owned forests.

The adoption of forest certification also appears to be having visible effects in all of the case study countries. These effects are sometimes difficult to sort out, however, particularly in the case of environmental conditions. There are two main reasons. First, because traditional forest policy in the region was already relatively conservation-oriented, it probably had some capacity to improve environmental protection regardless of whether forest certification was adopted. Second, forest certification has occurred at the same time as many other processes of policy reassessment and reform, and it is often difficult to attribute changes entirely to certification. Still, it does seem clear that processes associated with forest certification have had some important effects in strengthening environmental protection in the region's forests. These sometimes work indirectly, for example, by introducing concepts such as "old growth forest" in Russia or developing new concepts such as the "spring truce" (cessation of logging during the spring breeding and rearing season) in Estonia. Moreover, the demonstration of successful models of certified forest management appears to ripple through the forest management community in many subtle ways.

The effects of forest certification on social practices and power structures appear somewhat easier to discern, although again, other processes occurred simultaneously. First, of course, the rise of forest certification is tied to the greatly expanded importance of external markets in local affairs throughout the region, and this change is in turn tied to a new presence of transnational environmental NGOs in local policy processes. Moreover, this change has supported the rise of local

environmentalist voices in forest policy-making in the region. Forest certification has not only inserted new actors into policy processes but is also playing an important role in changing general assumptions about how governance institutions can and should work. In each of the countries studied, although to varying degrees, the emphasis of forest certification on stakeholder deliberation and public participation seems to be catalyzing interest groups and local communities to advocate policies and assert rights in ways that would not have occurred under prior arrangements. It is creating and demonstrating models of broad public participation that appear to have the capacity to reshape general understandings of how policy should be made. Finally, forest certification seems to have helped improve working conditions in each of the countries studied.

DIFFERENCES

Although there are many striking similarities across the case studies in Eastern Europe and Russia, there are also many important differences. First, the countries vary enormously in geography and demography – from Estonia, with approximately 2.2 million hectares of forested area and 1.3 million people, to Russia, with approximately 1.2 billion hectares of forested area (almost 550 times as much) and approximately 150 million people. Thus Russia, with perhaps the world's greatest untapped conifer reserves, holds disproportionate significance for world timber markets.

The countries also carry quite different pre-socialist economic, cultural and political histories. The Baltic countries of Estonia and Latvia had long-standing and important relationships to the Nordic countries, whereas Poland was much more oriented to central Europe. Russia, by contrast, transacted with both Europe and Asia but operated more independently on a more global stage. Historical land ownership and tenure patterns in the four countries were also very different, running from the Tsarist feudal system of Russia to the much greater prevalence of small private land holdings in the Baltic countries and Poland.

Since the demise of the socialist system, the countries have again started to diverge in many ways. With respect to forest certification, several basic patterns are noteworthy.

First, Russia and Poland have much higher levels of publicly-owned forested land than do Latvia and Estonia. While all countries have made some movement toward privatizing forest land, that process has gone much farther in the Baltic states than in Poland or Russia. At present, wide-scale privatization appears unlikely in Poland, where nearly 80 percent of forests remain state-owned. In Russia, by contrast, all forest land remains state owned, but its future is more uncertain. Important decisions about privatization are expected in the forthcoming Forest Code. For now, all that can be said is that any privatization would not occur before 2010 and that only companies with demonstrated good forestry practices would be allowed to privatize. This is officially enunciated policy; it is impossible to predict with any confidence what will happen in practice.

Second, the state forestry agencies in the case study countries have followed rather different structural patterns. In Poland, the forestry agency has retained a structure that integrates policy making and management functions in a single powerful organization. Its struggle against forest land restitution may be an important reason for its comparatively early adoption of forest certification. The agency has used certification to communicate to Polish society that state forests are well managed, which might not have been the case if restitution had taken place. In Latvia and Estonia, state forestry agencies were radically restructured in 2000 by separating policy-making and management functions. The resultant forest management companies viewed certification primarily as a tool to strengthen their market position. Estonia's forestry sector became the most liberalized in the mid-1990s, thereby prompting the growth of comparatively strong NGOs that used certification as a means to combat forest exploitation and strengthen their own policy authority. The Russian administrative structure, while also seeing some separation of functions, has been in almost constant flux. Its lack of stability and power has been an underlying cause of problems in the Russian forestry sector.

Third, Estonia, Latvia, and Poland have joined the European Union. Their policy and social assumptions are therefore inflected to conform to western European assumptions to a greater degree than those of Russia. At the same time, Russian producers and policy makers seem to be very sensitive to European markets, and many decisions are made with an eye to how they will sell in Europe. Thus, whether differences between Russia and the other countries grow or diminish over time may depend on the degree to which the European market maintains effective pressures for conformity to the standards promoted by forest certification.

Fourth, the primary threats to the forests vary considerably. Illegal forestry activities are an important challenge in all four countries. The issue is least significant in Poland, while in Latvia and Estonia it mainly involves tax fraud, bribery, and occasional environmental violations, but does not appear to involve widespread destructive logging in ecologically valuable forests. In Russia, the problem varies enormously by region, being much more significant in the eastern than in the western part of the country, and near the borders rather than in the interior. More worrisome, however, is the fact that strong organizations are growing up around the illegal harvesting and sale of timber in Russia, and they may develop strong ties to similar organizations in other sectors and countries. Although destructive harvesting presently appears to be a significant problem only in eastern Russia and some parts of Estonia, the market is turbulent enough that problems could emerge elsewhere. On the other hand, given the forest age-class structure resulting from post-war regeneration in the Baltics and Poland, under-harvesting could also be a problem, leading to a large build up of trees in the next two decades and then possibly again a shortage in the longer term.

Many important questions regarding forest certification await answers in this region as its forest sector comes online in the global economy. At the level of certification programs, there is the question of whether the growing importance of private landholders will combine with the incorporation of the region into European

discussions to increase the importance of the program for the endorsement of the forest certification (PEFC) system. This is made more likely by the PEFC's purposeful linkage to the forest management criteria of the "Helsinki process" – the Ministerial Conference on the Protection of Forests in Europe.

Whether or not the PEFC develops an important role in the region, will forest certification make significant inroads into the world of private landholders, particularly smaller ones? It has not happened to date for many reasons, including that certification is relatively expensive for small landholders and they often have not been very sophisticated forest managers nor very good at forming cooperative associations. As the market consolidates, however, it will be interesting to see whether small landholders feel a need for certification, and in so doing organize themselves into a more significant voice in regional forestry policy.

IMPORTANT QUESTIONS FACING THE REGION

Some of the biggest questions concern the institutionalization of forest certification, – i.e., the degree to which it becomes embedded in the daily life of the region. It faces many challenges. The most immediate may be the problem of illegal logging. If certification is to become a defining practice, illegal logging will have to be effectively curbed and controlled. Whether this can be done is not clear, since many interests have come to depend on illegal logging, and the capacity to control it in many regions is low. The answer will depend on parallel developments outside of certification per se. First is the challenge of strengthening state regulatory and police institutions to the necessary degree, an open question in a region where some state agencies have been greatly weakened and where officials often depend on non-state sources of revenue. Second is the challenge of engaging local publics in protecting forests and controlling corruption. To date they generally seem to see new developments in forest management as a gift from the outside or from officials and not as indigenous to their lives. For certification to become institutionalized this will have to change. The third and related challenge is to expand public environmental awareness to the point where certification is no longer seen as a convenient response to external demands, but rather as a valuable improvement of local life. Finally, to meet these challenges, forest certification will have to demonstrate the ability to learn about and adapt to the particular circumstances and needs of the region. There are signs that this is happening, but there is still a long way to go.

Ultimately, then, the future of forest certification is tied to the future of the larger ensemble of management and governance institutions in the region. While there are grounds for believing that certification has contributed to their development and enrichment in the short term, its long-term prospects are also deeply dependent on their independent elaboration and strengthening.

Forest Certification in Estonia

Rein Ahas Hando Hain** Peep Mardiste****

ABSTRACT

This case study provides an overview of the process and effects of forest certification in Estonia. The discussion regarding forest certification was initiated in Estonia in the mid-1990s as environmental NGOs started to highlight the potential benefits of certification. The issue was discussed further in the working groups of the National Forest Development Program, bringing it to the attention of a broader range of institutions, officials and stakeholders. Since 1998 the work on forest certification has been more organized, due to the official establishment of the National Working Group on Forest Certification. Shortly after the establishment of the Working Group, it was decided that the national principles on sustainable forestry would be developed according to Forestry Stewardship Council (FSC) principles and criteria. The main areas of dispute in the Working Group were the requirement for forest management plans, the acceptability of forest drainage systems, and the question of whether chemicals, pesticides and exotic species can be used on forestland. A draft version of the national standard was approved in 2000. Since then, the National Working Group has also served as the official Estonian FSC Working Group. A major breakthrough was the certification of all state-owned forests in 2002, covering roughly one million ha, 20 percent of Estonia's total area and 40 percent of its forested land. Certification of state-owned forests has been an important factor contributing to gradual changes in Estonian forestry practices. Various interviewed stakeholders assert that its main effects have been the increased participation of stakeholders, increased social security and safety of forest workers, and forest management that is "closer to nature." Certification of such a significant forest area has also enabled chain-of-custody certification to begin.

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INTRODUCTION

This case study describes forest certification in Estonia. Its main focus is the Forest Stewardship Council's (FSC) forest certification program, under which the entire Estonian state forest system, comprising almost one million hectares, has been certified. This program has significantly impacted many aspects of Estonian forestry. The other certification scheme discussed is the Programme for the Endorsement of Forest Certification schemes (PEFC – formerly the Pan-European Forest Certification Programme). Since none of Estonia's forests or industries has yet been certified under the PEFC program, this study discusses only the emergence of the PEFC Working Group and its developments so far.

Since Estonia regained independence in 1991, FSC certification has proven to be one of the most successful measures for regulating the country's state forestry sector. Following the introduction of Estonia's neo-liberal policies, forestry regulation has been minimal (Estonian Forest Code 1998) and it is estimated that up to 50 percent of the volume of felled timber has been harvested illegally (Ahas *et al.* 2002; Hain 2003). At the same time, FSC certification of state forests, which cover approximately 40 percent of the country's forested area, has improved the quality and transparency of forest management (Eesti Keskkonnaühenduste Koda 2002). According to NGO claims and public opinion, FSC certification has helped to overcome the problem of poor forestry regulation that developed in the post-Soviet years. While the exact nature and results of FSC certification are arguable, certification in general has most certainly promoted environmental protection, worker safety, and sound sustainable resource management (Lillemets 2004). Furthermore, FSC certification has also helped to initiate discussions among interested groups within the forestry sector and has given rise to many new ideas.

For example, both the Estonian sustainable forestry standard and the draft national FSC standard have introduced a new concept – the "spring truce" – previously unknown in FSC criteria. It bans forest work during animals' breeding season (spring and early summer) to allow them to pup or nest undisturbed. This principle was brought to the Working Group by the Estonian Ornithological Society, the Estonian member of BirdLife International.

FSC has also brought up the need to reintroduce ethical issues such as what might be considered "good common practice" – ideas that had largely been forgotten by foresters during Estonia's years of wild capitalism. Indeed, the approach of the National Working Group on Forest Certification, which was based on FSC principles, was to re-establish an emphasis on forestry ethics, while the State Forest Management Center (RMK) was charged with implementing these ideas and other forest management practices through implementation of FSC certification.

This case study summarizes the development and impact of forest certification in Estonia. For this purpose, materials since 1995 have been analyzed and records of certification meetings studied. Questionnaires regarding the effects of forest certification were sent to 28 individuals who represent different stakeholder groups and institutions interested in forest certification. Eleven completed questionnaires were received.

To gather additional information and fill informational gaps, interviews were carried out with thirteen additional members of the Estonian forest policy community and other stakeholder representatives.[1]

Based on the feedback and information gathered, generalizations were made and conclusions drawn. Where information presented by different parties varied significantly, both opinions have been presented. Specific personal references have been provided where appropriate; statements without references reflect the opinion of a majority of our informants. In a very few cases, the person interviewed wished to remain anonymous. In those cases, the only reference listed is "interview."

[1] These included: Jaanus Aun, board member of the Private Forest Centre; Peter Feilberg, CEO of NEPCon Estonia; Kristjan Tõnisson, managing director of NEPCon Estonia; Ulvar Kaubi, marketing manager of State Forest Management Center (RMK); Tanel Renser, environmental manager of the State Forest Management Center (RMK); Rainer Kuuba, coordinator of the Estonian FSC working group; Olev Lillemets, environmental manager of State Forest Management Center (RMK); Ahto Oja, project coordinator of the Estonian Institute of Sustainable Development (SEIT); Kalle Põld, director of Private Forest Center and repesentative of the Estonian PEFC working group; Andres Talijärv, managing director of the Estonian Forest Industries Association (EMTL); Toomas Trapido, director of Estonian Fund for Nature; representatives of three timber industry companies.

BACKGROUND FACTORS

Historical Context

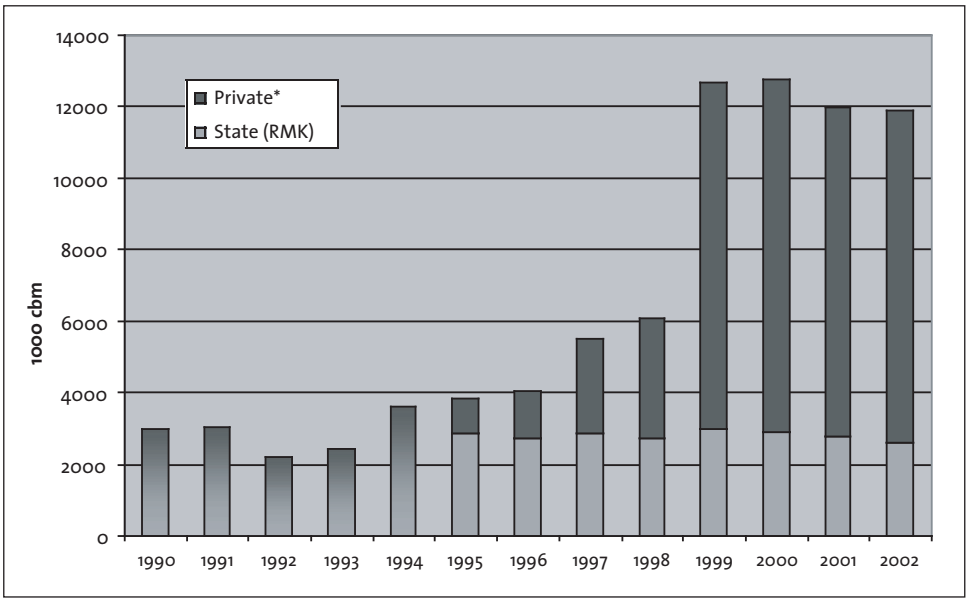
The Estonian political landscape has been rather one-sided since the country regained independence in 1991, as the electorate has consistently returned parties to power from the right of the political spectrum that have continually promoted neo-liberal policies. The government has helped to establish legislation regarding the political system, the economy, and private property. Unfortunately, it has paid little attention to environmental and natural resource issues (Tallinna Pedagoogikaülikool 2003). Political parties most active in the Ministry of Environment, which have been responsible for development of the forestry sector, have been criticized for not providing the kind of public leadership that would most effectively care for the forest and environment (Kultuur ja Elu 2004).

The parties that tend to be involved in today's governing political party coalition are Rahvaliit (People's Union), representing the rural population, and Reformierakond (Reform Party), representing big businesses. Since gaining power in the mid 1990s, Rahvaliit and Reformierakond have advocated for liberal forest regulations that would support economic growth during hard times in rural areas. This political stance has led to a reduction in regulation and generated major forestry problems, such as unplanned forest management, widespread illegal forestry, and unsustainable over-logging (Ahas 2003). After the 2003 elections, the Rahvaliit party reversed course and declared a need to limit forest use and destruction (Ministry of Environment 2003). Observers in NGOs maintain, however, that the steps taken by Rahvaliit have been insufficient to achieve proper use of forest resources (EGM 2004).

A number of fundamental changes occurred in the forestry sector after Estonia regained independence in 1991. Most significantly, forestlands that had been privately owned during the former Estonian Republic (1918-1940) were returned to descendants of their historical owners. With the establishment and increase of private forest property came the swift growth of the timber industry. Furthermore, the Soviet structure for forestry administration was no longer functional; the government and state forestry department could no longer control forestry effectively (Ahas 2003). Harvesting rates (Figure 1), illegal logging, and timber-related tax fraud increased precipitously during the mid 1990s (Hain 2003). The need for fundamental changes

in forestry administration and policy became ever more apparent. To solve these problems, the Ministry of Environment, with support from the Finnish government, launched a Forestry Development Programme (FDP) in 1995. This effort resulted in the parliamentary approval of the Estonian National Forest Policy on June 11, 1997 (FDP 1997; Kallas 2002). The FDP recognizes the importance of sustainable forest management and also sets development of forest certification as one of Estonia's goals. This was one of the three initial factors that helped FSC-based certification emerge in Estonia (Tonisson 2000).

Figure 1 Annual felling volumes in Estonia 1990-2002



* From 1999 to 2002 the felling volumes are given according to NFI data. The division of felling volume between the state and the private sector is not known before 1995.

Sources: Yearbook 2001; Yearbook 2002; EFSC 2001; EFSC 2003; RMK 2002; RMK 2003

Approval of the Forest Policy led to the 1998 Forest Act, which fundamentally restructured public forestry administration (Kallas 2002) and ultimately enabled forest certification to become a reality in Estonia in its present form. The Forest Act authorized establishment of the State Forest Management Center (RMK) in 1999, a government-owned corporation which went on to obtain an FSC forest management certificate for all of the Estonian state forests. Both policy documents clearly state that the policy-making functions regarding state forests should be separated from their practical management (FDP 1997; Forest Act 1998), resulting in the establishment of RMK.

Understanding RMK's functions and status is important because this organization is Estonia's only certified forest manager, aside from one private owner. RMK was the first (and so far only) government-owned profit-making organization in Estonia. Thus, RMK took on practical forest management and profit-making, while the

forestry department within the Ministry of Environment retained control over policy-making, supervision, and law enforcement. Since 1998 the Ministry of Environment's forestry department has had limited capacity (with fewer than 10 employees) and limited power. Its support for forest certification had more direct and indirect impact during the period of 1998-2000, when intensive changes in the political and institutional context of forestry were led by the Ministry of Environment, and support for achieving forest certification was directly written into the Forest Development Plan.

Forest certification's effects on the main problems in forestry (lack of planning, over harvesting, illegal forestry) cover only the 40 percent of Estonia's forests owned by the state and covered with a FSC certificate. In private forests, the effects of certification are virtually non-existent, since private owners oriented to short-term profits and often acting illegally (Hain 2003) are not interested in certification (ELF 2002). This situation is bolstered by the fact that as a practical matter an unlimited market exists for non-certified timber in Europe.

Regardless of the various forestry problems, it is the impression of auditors that the problems have resulted not from bad foresters, but rather from the fact that the Estonian forestry sector has traditionally been quite conservative, and accordingly, has not been able to adapt and react effectively to all of the post-Soviet changes (personal interviews). These changes have been further magnified by the market pressures, political preferences, and relatively large financial resources involved in forestry.

Forestry Problems

According to the 2002 National Forest Inventory, the total forestland in Estonia is approximately 2.2 million hectares, or 50.5 percent of the country's area. Of this, roughly 3 percent is continually regenerating or being felled and is not actually covered with forest (EFSC 2003). The state owns approximately 40 percent of total forestland and manages it via the aforementioned State Forest Management Organization (RMK). Another 36 percent of the forests are registered private forests. The remaining forests are not yet privatized or taken through restitution by descendents of historical owners, but will likely be privatized in the near future (Table 1). There are no official statistics about further divisions of private forest ownership, i.e. between industrial companies and small landowners. However, it is estimated that approximately 30-40 percent of private forests belong to forestry companies (Valgepea 2004). The total population of Estonia is less than 1.4 million people (SOE 2004).

Table 1 Forest area (ha) and ownership structure

	Total forest area	Commercial forest	Forests with additional management restrictions
State (RMK)	834,200	603,800	230,400
Private	795,570	1,109,900	261,700
Other*	576,030		
Total	**2,205,800**	**1,713,700**	**492,100**

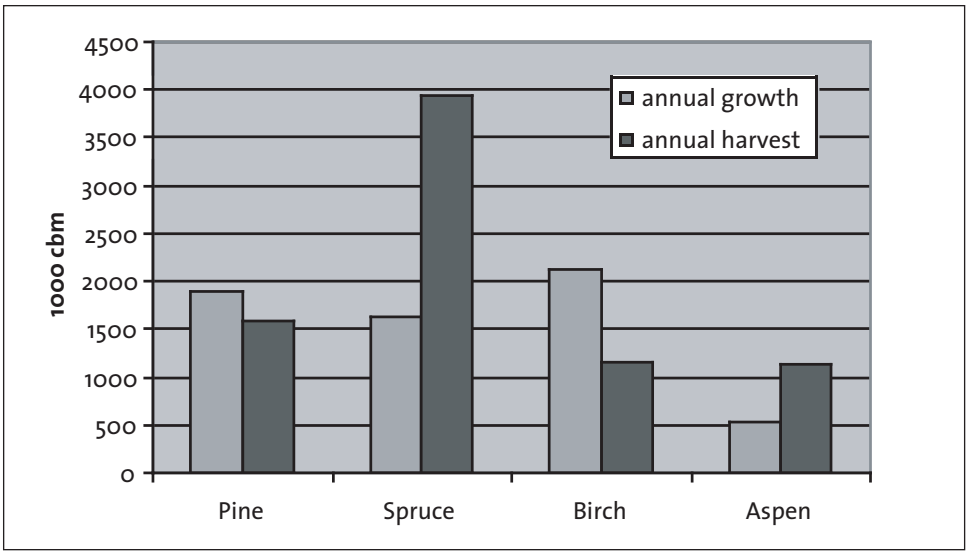
*The category represents forestlands that are planned to be restituted or privatized in near future. RMK is presently legally representing the owner of such areas.

Sources: EFSC 2003, Land Board 2004

A significant characteristic of private forest property in Estonia is the extreme fragmentation of forest ownership. Forests smaller than 10 ha compose 43 percent of the forest area registered by the Land Board and 80 percent of its total listings (Forest Yearbook 2001). The fact that average forest size is very small makes relative certification cost (price per hectare) high for private forest owners (Feilberg 2004). Furthermore, continuous forest management is not feasible on such small areas. These are some of the main reasons that forest certification has not been achieved by most private forest owners (Feilberg 2004).

Due to the country's current liberal policy, no system regulates the total amount of felling on private forestlands or its division among owners (Hain 2003). Therefore all forest owners can manage their forests freely, according to their own best judgment. This has led to unprecedented harvesting levels in private forests, where harvest levels greatly exceed annual growth for some species (Figure 2). The Forest Act, as decreed by the Ministry of Environment, is the legal framework that regulates harvesting. It provides minimum allowed thresholds for harvesting, based on stand features such as basal diameter and canopy cover. The liberal political framework is another underlying reason for the lack of certification in private forests, since fulfilling certification requirements would severely limit owners' ability to carry out felling beyond sustainable limits (Feilberg 2004). Most forest owners and businesses seek quick profits and short-term benefits to alleviate the high unemployment rates and extensive social problems in rural areas (Ahas 1999).

Figure 2 Estimated annual growth and harvest rate for selected species



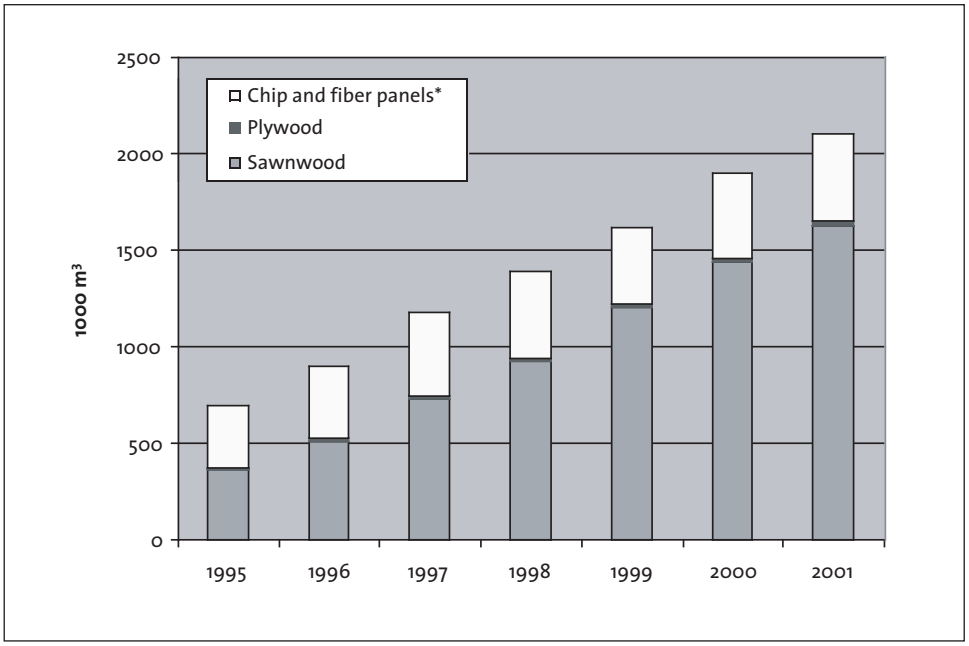
Source: EFSC 2003

Markets

One of the key players in the Estonian timber industry is the Estonian Forest Industries Association (EMTL), a very strong voice in national discussions of forestry and forest policy. EMTL's main interest is to promote the economic growth of the timber industry sector, and it therefore lobbies strongly for higher felling volumes. It has vigorously opposed some restrictions enforced in state forests resulting from FSC certification, such as establishing the "spring truce" (EMTL 2003). EMTL has also strongly influenced the development of forest certification in Estonia, especially regarding PEFC. Although EMTL's attitude towards forest certification is generally positive, it has most directly supported the PEFC program. EMTL has provided direct financial support to the PEFC Working Group and its representatives have been actively involved in developing PEFC standards (Talijärv 2004).

The timber industry is the second largest industry sector in Estonia after food production, and accounted for 14 percent of the manufacturing sector's total production in 2002 (SOE 2002). Along with increased harvesting and a growing industry in general, production volumes have risen steadily for all major timber product groups (Figure 2).

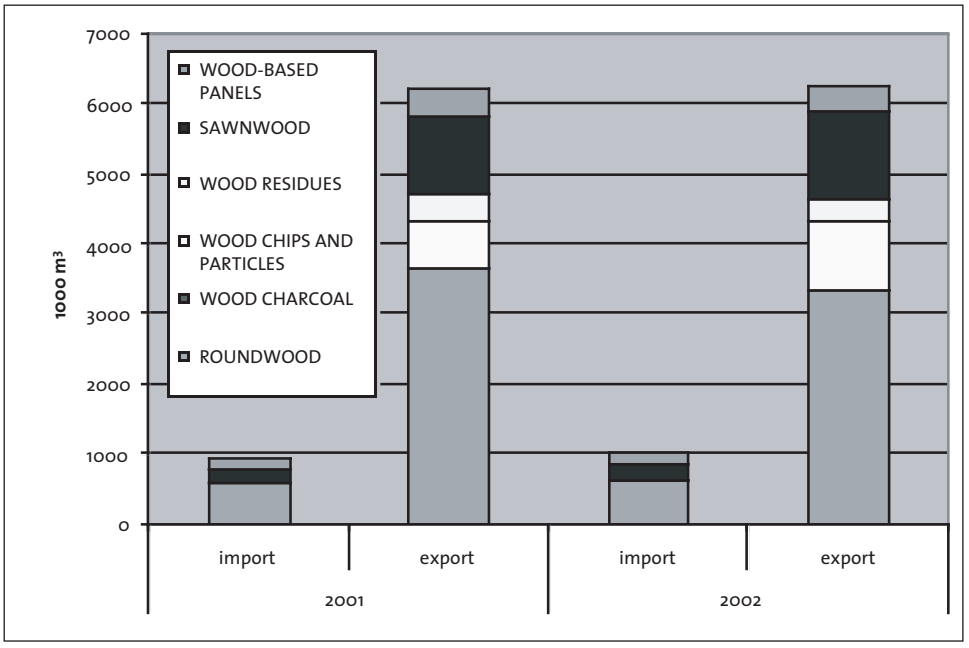
Figure 3 Manufacturing of principal wood products in 1995-2001



* Fiber products have been recalculated from m² to m³ by using average thickness of 15 mm per fiber plate.

Source: SOE database 2004

Figure 4 Structure of import and export of major timber product groups in 2001 and 2002



Source: SOE database 2004

Comparing Figures 3 and 4 provides a general picture of domestic timber processing and imports and exports. Although the share of domestic processing of roundwood has increased, the majority of exports still consists of roundwood. Roundwood exports consist almost entirely of pulpwood (Valgepea 2004), which is exported mainly to Scandinavian countries (SOE database 2004). The rapid increases in felling volumes during the past decade have been matched by the increased production capacity of local sawmills. However, since a major part of local raw material is exported as pulpwood, the sawmills do not have a sufficient domestic roundwood supply and are forced to import substantial quantities of logs from Russia (Table 2). This has led to increased roundwood prices and a deficiency of raw material for sawmills and secondary processors. These developments have negatively affected chain of custody certification, since it is difficult to assure consistent supplies of certified inputs (Feilberg 2004).

A major pulp mill opened in Kunda in 2006, which will increase logging and import of aspen wood as well as export of pulp. The pulpmill, Estonian Cell AS, was granted an FSC certificate in June 2006. It plans to use Ca 400,000 m^3 of Aspen annually, which is more than the total cost of Aspen in the Estonian State Forests. During the pulp mill's initial environmental impact assessment, national NGOs were able to force its developer to require that the aspen's origins be verified, and to ensure it had been legally cut. The company also agreed to ensure, within 3 years of opening the mill, that at least 50 percent of its annual inputs originated in FSC-certified forests (ELF 2003). These agreements will likely increase private forest owners motivation to certify their forests.

Table 2 Main Estonian trade partners for timber and timber products in 2002 (million EUR)

Country	Import	Export
Finland	18.3	99.2
Germany	8.0	62.0
Russia	57.4	7.0
Sweden	4.4	89.4
UK	0.2	71.4

Source: SOE database 2004

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

Our research indicates that the emergence and development of forest certification in Estonia were supported by the following key actors and events:

- active support of international environmental NGOs and their partners in Estonia;
- desire for alternative policies by the creators of national forest policy (Tonisson 2000);
- dissatisfaction amongst national environmental NGOs with the prevailing liberal forest policy, and their consequent search for non-state market mechanisms;
- ongoing certification discussions in neighboring countries (Oja 2001);
- emerging markets and demand for FSC products.

The idea for forest certification emerged in 1995 as the Estonian Green Movement–Friends of the Earth (ERL) began studying and promoting FSC certification (Oja 2002). NGOs began meeting to discuss certification issues in 1996 and 1997. ERL cooperated closely with the Taiga Rescue Network (TRN – a transnational network of organizations committed to protecting boreal forests), which had been active in FSC certification issues when TRN's coordinator Karin Lindahl was on the FSC Board. From 1997 on, another major environmental NGO, the Estonian Fund for Nature (ELF), became involved as well as other NGOs. In 1998, ERL became the first Estonian member of FSC International, widening its contacts and credibility. Several years later, ELF and Ahto Oja, as an individual member, also joined the FSC.

One of the indirect causes of NGO support for the FSC was the Ministry of Environment's stiff, undemocratic approach to forest policy development (Kultuur ja Elu 2004). NGOs became especially uncomfortable with the state's approach during the creation of the Estonian Forestry Development Program in 1996-1998 (Kallas 2002; FDP 1997). Their critique of the government's forest policies was very visible in the media in 1996-7, and made the Ministry of Environment less eager to cooperate with them. Their isolation from the Ministry caused NGOs to concentrate on developing independent regulations, including FSC regulations. International donors and environmental NGOs supported their efforts with both ideas and funds; indeed, Estonia's environmental NGOs have been funded primarily by foreign donors throughout the past dozen years. Only in 2004 did the Estonian government approve financing for an NGO-led project promoting FSC certification.

What emerged from the controversial Estonian Forestry Development Program in 1997 was a neo-liberal forest policy that emphasized production over scrutiny of forest practices, and ultimately, facilitated illegal forestry operations and related tax fraud. Specifically, the neo-liberal policy eliminated mandatory requirements that Forest Management Plans be developed and licenses obtained before logging

operations could occur. This lead to a situation some have described as "uncontrolled forestry" and a dramatic increase in felling. For five years, forest logging has exceeded annual growth (Ahas 1999; Ahas 2003; Ahas and Hain 2003). Some officials have sought alternatives to these policies, however. The Forestry Department at the Ministry of Environment started studying certification issues in 1998. In 1998 and 1999 the State Forestry Department financed studies of certification principles and analyses of the draft Estonian Sustainable Forestry Standard. In the following years both direct and indirect support grew among active officials who were looking for new policies and alternatives to traditional forest policy.

As compared to state officials and NGOs, the support for certification from forest workers and social groups was almost unnoticeable. Trade unions and similar organizations are relatively weak and unorganized in Estonia, and employers still have wide latitude to fire their workers. In RMK, for instance, many people have been laid off since 1998 due to large-scale consolidations. In several cases, foresters or workers lost their jobs after making critical comments about the organization (Kuuba 2004). This may be one reason that trade organizations do not use FSC certification to the fullest extent.

National Working Group on Forest Certification

The Estonian National Working Group on Forest Certification (NWGFC) was formed in November 1998 by thirty interested organizations and individuals whose goal was to create an Estonian sustainable forestry standard (Tonisson 2000). Mr. Ahto Oja, an environmentalist with a forestry background from the Stockholm Environment Institute Tallinn branch (SEI-T), was appointed as coordinator. NGOs played the primary role in initial bringing together interested parties and exchanging information. It was mainly members of the Estonian Green Movement who suggested Mr. Ahto Oja as a coordinator, and no objections were raised by any parties. In the spring of 1999, the Working Group decided to take FSC Principles and Criteria as the basis for their work. Many forestry experts took part in the discussions. A representative of the Danish FSC Working Group, Peter Feilberg, served as a foreign consultant, assessing the certification standard. In December 1999, the group approved a draft sustainable forestry standard; in the following year it discussed, field tested, and modified that standard.

The Estonian NWGFC was originally oriented to the FSC standard and system because of environmental NGOs' active participation and the momentum behind the FSC globally. In 2000, the idea of Pan-European Forest Certification (PEFC – now renamed the Programme for the Endorsement of Forest Certification) was introduced to NWGFC by some Working Group members and Finnish consultants. The Working Group spent much of that year debating the principles and strategies of FSC versus those of PEFC. These discussions remained fairly hypothetical, since no one in the Working Group had practical experience with FSC or PEFC. Eventually these discussions led to a split between members. FSC was supported primarily by NGOs and RMK, and PEFC by industries and forest scientists. NWGFC therefore divided into two separate groups, as described below.

Despite this division, NWGFC's sustainable forestry standard was approved in December 2000 by 23 organizations and individuals.[2] At this time, it was also decided that, while the NWGFC standard would remain as a basis, both FSC and PEFC could be developed further. A discussion ensued about whether FSC or PEFC standards could be lower than NWGFC's, but it was not fruitful.

[2] Estonian text: www.agenda21.ee/metsandus/esms12122000.html

Estonian FSC Working Group

Although the NWGFC was established in 1998 primarily to develop FSC certification in Estonia, the specific FSC Working Group was not launched until October 2000 by 11 groups and individuals (Table 3).

Table 3 Representatives in the Estonian FSC Working Group and their division by chambers. Five individuals joined after the group's first meeting on 10/27/00.

October 2000	February 2004
Environmental chamber	*Environmental chamber*
Estonian Green Movement-FoE – NGO* / R. Ahas/	Estonian Green Movement-FoE – NGO*/R. Ahas/
State Forest Management Centre – Gov. /O. Lillemets/	Estonian Fond For Nature – NGO*/R. Kuuba/
Mr. Rainer Kuuba	Mr. Ahto Oja*
Economic Chamber	*Economic Chamber*
Estonian Fond For Nature – NGO* / T. Trapido/	Baltic Connexions – Company /K. Vene
Baltic Connexions – Company /K. Vene/	Sirje – Company /
Mr. Lembit Maamets	Estonian Forest Survey Centre – Company /L. Maamets/
Mr. I. Tust	NEPCon#
Ms. E. Rebane	Metsaekspert – Company / P. Põntson/
	Mr Peep Põntson
	Mr Lembit Laks
	Mr. Peeter Muiste
	Mr Lembit Maamets
Social Chamber	*Social Chamber*
Mr Ahto Oja*	Tartu Student Nature Protection Circle – NGO /K. Podmoshenski/
Mr. Kristjan Tõnisson*	Võro Selts VKKF – NGO /
Mr. Toomas Krevald	Mr. Veiko Belials
	Mr. Indrek Tust
	Mrs. Heli Kiigemägi

* Member of FSC

NEPCon holds FSC membership as a Danish non-profit organisation (the headquarters of NEPCon is located in Denmark).

In September 2001 FSC International presented provisional conditions for accepting the National Working Group. Because of other pressing issues in forestry (new regulation, illegal logging) the progress of the Working Group in 2001-2003 was very slow, and the provisional conditions were not met. Lack of motivation and effective coordination also hindered the activities of the Working Group and slowed overall progress. In 2004 the activity level of the Working Group rose and the conditions were met. In May 2004 official confirmation was received from FSC headquarters that the Estonian National Working group had been approved and contract formulation had been initiated. As of May 2004 the FSC Working Group has 17 members in 3 chambers (Table 3).

The FSC's greatest success has been attained in certifying forests. The State Forest Management Centre (RMK), which manages 40 percent of all Estonian forest (20 percent of Estonia's land), initiated development of an internal environmental management system in 1998. By 2000 the system was ready for independent verification according to the ISO 14001 requirements. In response to suggestions by Estonia's largest NGOs, in particular the Estonian Fund for Nature, RMK began to consider the possibility of certifying the forest management system concurrently with the EMS certification under ISO. Both the director general of RMK at that time, Andres Onemar, and the governing board, were supportive of the idea of joint FSC-ISO 14001 certification, since it was perceived by RMK that an FSC certificate would garner additional recognition of the good level of forest management of Estonian State forests among the general public, trade partners, and forest managers in neighboring countries (Lillemets 2004). When a joint proposal was received from the certification organizations BVQI (ISO) and SmartWood (FSC), it was unanimously decided to go for both certificates (Lillemets 2004). At that time, no PEFC Working Group was active in Estonia, and no discussion of the merits of PEFC versus FSC was taking place (Lillemets 2004). FSC certification was carried out by NEPCon,[3] which is the regional representative of the FSC accredited certification body SmartWood in Eastern Europe, Russia and Scandinavia. In 2000 NEPCon certified the first forest in Baltic countries: about 300 ha of private forest. Certification of all Estonian state forests followed shortly in 2002 (Tonisson 2004). These were the initial steps in the development of FSC certification in the Baltic region.

[3] NEPCon (Nature, Ecology and People Consult) is a non-profit company that has been actively involved in FSC certification in the Baltics since 1999, when a contract was made with a FSC-accredited certifier, SmartWood (Feilberg 2004).

Development of chain of c ustody certification, however, has been slow in Estonia. The reasons for this should probably be sought in the somewhat conservative business mentality of Estonian companies as well as lack of certified raw material for secondary processors. As of mid-2004, a total of two FSC forestry certificates and ten active FSC chain of custody certificates (CoC) had been issued in Estonia. Two CoC certificates were voluntarily stopped in 2004 due to a shortage of certified raw material (see explanation for this below in "Current Status of the Certified Marketplace"), and two CoC certificates were suspended due to violations of CoC requirements (Tonisson 2004). For comparison, in Latvia 69 CoC certificates had been issued as of March 2004 (FSC 2004).

Estonian PEFC Working Group

The concept and idea of PEFC certification was initially introduced in Estonia in 1999 by a subgroup of representatives from forest industries, Finnish consultants, and the Forest Owners Association. Although since then the timber industry has developed an interest in PEFC certification (Talijärv 2004), development of a national scheme has been hindered by lack of financial resources as well as lack of cooperation among the stakeholders. In 2002 a discussion about acquiring PEFC certification for the state forests was initiated by selected individuals; however, the idea has not yet been commonly accepted as a goal for RMK (Kaubi 2004). Those interested in developing the PEFC have contended that it is important to have different certification schemes present in the NWGFC and in the marketplace. Beginning in 2002, the PEFC Working Group has also attracted members of the Estonian Forest Industries Association and forestry engineers from the Estonian Agricultural University. As of April 2004 the Estonian PEFC Working Group had nearly finished elaborating the documentation for the local Estonian PEFC certification scheme, including the forest management standard, chain of custody standard, and a few additional documents. The scheme, however, has not yet been approved by the PEFC Council; thus certification according to PEFC rules is not yet possible in Estonia (Põld 2004). Activities of the Estonian PEFC initiative and Working Group have been financially supported by multiple sources, including Finish timber companies, the Estonian Forest Industries Association (EMTL), the Estonian Ministry of Agriculture, and other voluntary supporters (Põld 2004).

Institutional Design

Both the National Working Group on Forest Certification (NWGFC) and the FSC Working Group have been structured according to the FSC scheme, with environmental, economic and social chambers. Decision-making has mainly consisted of consensus in the NWGFC, while in a few cases a majority vote has been used. Although most problematic issues, such as protection versus management, or the spring truce, were discussed earnestly in the NWGFC, consensus was eventually reached (Oja and Aitsam 2001).

The Estonian FSC Working Group had 17 members as of February 2004, and in its discussions a typical FSC system of environmental, economic and social chamber is used. For voting, each chamber has equal share of voting power and similar rules used by the international FSC are applied to ensure balance between economic, social and environmental interests. As explained above, voting has only been used in rare cases when consensus has not been achieved. Voting by chambers has been used in cases of elections, approval of reports, and a few organizational issues. The Estonian PEFC Working Group consists of 18 members. Votes are decided by a simple majority, although for the majority of decisions consensus is achieved.

Discussion within certification working groups has enhanced the development of democratic procedures and practices in Estonia. Most importantly, procedures for joint action have been established. Formerly, different stakeholders had confronted

each other instead of having open discussions. There has been strong push for cooperation in order to achieve joint goals and reach consensus in certification working groups. It has taken lot of effort to establish respectful procedures for meaningful communication. Through the discussions, the need to balance different interests has become evident to all participants.

Standards

In the first stage of the certification discussions the FSC Principles and Criteria were taken as a basis by the Estonian National Working Group on Forest Certification (NWGFC) standard (Oja 2001). NWGFC developed the standard over several years with very intensive discussions. The main discussion themes were: whether to require forest management plans, the concept of spring truce, usage or renovation of forest drainage systems (primarily the draining of wetlands), introduced exotic species, fertilizers and pesticides/herbicides (Oja 2002; Tonisson 2000). The question of non-clear-cut forestry was raised by some environmental NGOs, suggesting that non-clearcut methods introduce less disturbance in most forest ecosystems and are more ecologically appropriate. However, the discussions were not successful because even "green foresters" did not want to discuss it. Estonian forestry is quite committed to clear-cut management (personal comment of R. Ahas).

Once the NWGFC standard was approved in December 2000, the FSC Working Group started to develop its own national FSC standard, while the PEFC Working Group was not active for several years. The FSC standard followed the FSC principles exactly. Work was much easier because very intensive and important discussions had already been held in the NWGFC. Discussions were also more congenial because part of the opposition did not join the FSC Working Group.

However, the FSC certification that began in 1999 utilized SmartWood's so-called Interim Standard for Estonia. Since the Estonian National Standard had not been approved by FSC International, NEPCon was required by SmartWood to review the standard according to FSC general principles and criteria. The standard used for certification was formulated based on the NWGFC standard with few modifications and additional points to make the standard more easily auditable (Feilberg 2004). In 2003, FSC challenged usage of the Estonian interim standard during an accreditation audit in Estonia, since the principles were not following exactly FSC's principles (instead of Principle 3, which was considered not applicable, the principle about forest regeneration was used). Due to FSC requirements, the SmartWood Interim Forest Management Standards for the Baltic Region has been used in Estonia since then, which are based largely on the previous Estonian interim standard as well as on SW generic guidelines (Feilberg 2004). For FSC chain of custody certification mainly the SmartWood standard is used (based on FSC CoC requirements) since the majority of CoC certifications have been carried out by the SmartWood representative NEPCon (Feilberg 2004). For establishing the PEFC standard in Estonia, a national sustainable forestry standard was abandoned while the international documentation of PEFC was used instead.

Forestry Problems

The National Working Group on Forest Certification (NWGFC) and FSC Working Group have been attempting to address the key problems of forestry in Estonia — over harvesting, illegal logging, unplanned forestry, and weak habitat protection. As noted above, many blame neo-liberal government forestry policies developed during the period of economic transition for causing these problems. To be sure, there is little doubt that political, legal and economic reforms, as well as ownership and land reform issues that began after Estonia regained its independence in 1991, have directly influenced the current state of Estonian forests. Likewise, certification has been viewed by critics of neo-liberal policies, including environmental NGOs (ENGOs) and selected landholders, as a solution to ameliorating forest deterioration. Environmental NGOs also wanted to ensure better oversight and transparency in the forestry sector. For producers, the need to acquire chain of custody certification has been driven primarily by specific requirements of foreign customers for the purchase of certified products (Tonisson 2004). Thus for CoC customers certification has been a means for securing continuous sales of certain products to European markets with high environmental consumer awareness (the UK and other Western European countries).

Much attention was devoted to the requirements of the forest management plan in the certification standard. Such an approach was consistent with the need to supplement too-lenient state legislation and to fight illegal forestry. At the same time an effort was made to increase the importance of nature conservation in forest management plans and to stop extensive drainage of wet forest ecosystems in the forests (Oja 2001).

Special attention was given to the "spring truce" concept. The fundamental idea is to achieve seasonal harmonization of forest management. This approach was orchestrated by environmental NGOs, led by the Estonian Ornithological Society. The aim of the restriction is to protect forest fauna during the nesting period and forest soils during the fragile spring season (Hain 2002; RMK 2003). The spring truce is a strategy that emerged as a counterbalance to industrial (Scandinavian) style forestry that has become increasingly common in Estonia. In traditional and farming societies, people do not have the time or need to carry out logging during the spring, as the soil is fragile, wood is soft, and it is time for agricultural work. Environmental NGOs proposed a halt in forest management operations for the period of April to July. This proposal met with strong resistance among forest companies and was the primary topic of discussion within the NWGFC for many months.

The spring truce concept was successfully applied by the RMK during its FSC certification process (Lillemets 2004). The first draft of the RMK springtime felling strategy was prepared in November 2001, barely a month before the FSC certification audit was conducted. The main aim of the strategy was to drastically reduce (almost halt) felling activities in state forests during the sensitive spring season. A revised strategy was prepared in February 2002 and discussed publicly with stakeholders (Hain 2002). A test implementation of the strategy took place in the same year, and in 2003 the strategy was officially implemented for the first time. Although by 2004

the practice had been accepted among state forest institutions and most stakeholders, it still provokes negative feedback from timber industries (EMTL 2003). Estonian ENGOs supported the application of the spring truce strategy in RMK by sending out several press releases (Eesti Keskkonnaühenduste Koda 2002) and by nominating RMK as a recipient of the most environment-friendly activity award in 2003.

Another topic that caused active discussions in the NWGFC was the drainage of forests. During the Soviet period an extensive drainage network had been established, and almost all damp or wet forest areas had been affected. To preserve the ecologically valuable wetlands and wet forest site types, environmentalists took the position that too much drainage had already been done in Estonian forests, and that no drainage systems should be allowed to be established in certified forests. Many older foresters, who had been involved in the work of drainage system development during the Soviet era, could not accommodate themselves to this approach and opposed it (Oja 2001), claiming that drainage is an essential part of forest management. In addition, people working on drainage feared losing their jobs and were an active lobby group. Many scientists and foresters were also very positive about the effects of forest drainage. Because establishing large forest drainage systems had been a national priority in the years of Soviet control, many specialists had a longstanding involvement and commitment to it (Schults 2004). On the other hand, many experts say that because of Estonia's low relief, long growing cycles, and highly active beaver population constantly damming and choking drainage systems, forest drainage can be only carried out if subsidized (Marvet 2004). Ecologists and environmentalist also argue that amelioration is affecting basic forest ecology and biodiversity, and is bad for ecosystems in natural water bodies (Kuuba 2004; Laanetu 2004).

The main and most extensive problem of Estonian forestry — illegal logging and illegal forestry (Hain and Ahas 2005; Ahas and Hain 2003; Ahas *et al.* 2002) — has remained largely unsolved by certification. Illegal activities mainly take place in private forests (Hain 2003), where certification has not been adopted. According to interviews with private forest owners, the implementation of certification would require too many changes and would place large restrictions on the existing latitude of forest management decisions (ELF 2002). For example, preparation of management plans and payment of taxes are elementary prerequisites for forest certification; yet in private forests illegal activities and tax deception are widespread and management plans are used only in very rare cases (Hain and Ahas 2005). Illegal forestry (except for small-scale forest theft and theft intermediate storage areas) is not considered a problem in the FSC-certified state forest (RMK), since the organization has control over resources and certification has made the forest management practices and decisions transparent.

Table 4 presents the main discussion topics regarding certification as reported by Tonisson (2000). The interest of forest producers in being informed grew out of the rise in demand for FSC products in the marketplace. It was also their interest to unite against environmental NGO initiatives for regulating the forestry sector and logging. There were no major conflicts in the process of drafting the PEFC standard in Estonia, as all participating parties shared similar interests.

Table 4 Main discussion topics in Estonian NWGFC (after Tonisson 2000 and Kuuba 2004).

Issue	Arguments Pro	Arguments Con
Spring truce – ban logging in breeding season (spring-summer)	– no disturbance to nesting birds; – protection of forest soil and undergrowth, mosses, berries; – avoidance of severe damage to roots and mycorrhiza; – reduced erosion; – reduced spread of disease and pests; – higher quality of timber.	– difficult for forest industry as it represents significant share of total felling; – reduced income of forest owners and foresters.
Ban on amelioration of wetland forests	– wetlands have high conservation value; – amelioration systems affect natural functioning of forest ecosystems; – amelioration systems affect ecosystems in natural water bodies; – economic effect is negative since growing cycle of trees is too long in Estonia.	– many private forests are located on less productive wetlands which could be more productive after land improvement.
Limiting clear cut management	– ecological and sustainable management is free of clear cuts.	– clear cutting is economically more beneficial; – Estonian forest unit and clear-cut site is very small.
No introduced species, herbicides, pesticides	– sustainable forestry has to be managed without them.	– there is need for introduced species because of forestry traditions and landscaping; – pesticides and herbicides can be used to prevent huge damage.

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

None of the certification schemes had direct opponents. Work on the national sustainable forestry standard was begun jointly, and this cooperation helped to ease later conflicts as teams developing FSC and PEFC certification schemes worked separately. Supporters and skeptics of FSC and PEFC certification schemes had conflicting opinions. While environmental NGOs supported the FSC and were skeptical of the PEFC, the majority of forest owners and the timber industry were skeptical of the FSC and backed the PEFC. Most of the timber industry companies that have FSC CoC certificates have pursued it due to direct requirements of customers (Feilberg 2004).

Various forest companies have tried to support both certification schemes in order to keep up with developments and remain competitive (Talijärv 2004). Among some forest companies, however, resistance to the spring truce is still visible.

Our research for this study indicates that forestry and environmental officials and state representatives have relatively neutral or skeptical positions on certification issues today. They refer very often to additional expenditures and see no significant benefits of certification. Many local foresters and inhabitants are also critical of certification, as they consider investing in environmental protection and safety unnecessary and a waste of limited resources in forestry and rural areas. Although the basic position of RMK on certification is positive, many officials and specialists within the organization are also critical of the FSC, as it has created many new procedures and additional bureaucracy.

Forest Owners

A clear distinction can be made between private forest owners and RMK, the state forest manager. RMK, as the largest forest owner in Estonia, has well educated staff and has generally an FSC-friendly approach. In contrast, small private forest owners from the countryside are typically not interested in any type of certification or other regulations. Still a third perspective is held by an active faction of forest owners who live in cities. They often belong to a forest owners association and tend to support the PEFC, in part because financial or institutional support is promised through that system. In interviews for this study, the landowners and representatives of forest owners associations said that their organizations support cooperation and certification of small owners with funds from the state budget, or possibly international funds. This is an important tool to keep owners interested in cooperation and certification. The FSC system, in contrast, has no organizational support from forest owner organizations today. Big companies owning forests are generally skeptical towards certification. Their current management standard involves high harvest rates and no management plans, making certification difficult. (Hain and Ahas 2004).

Current Status of Forestland Certification

Two FSC forest management certificates had been issued in Estonia as of April 2004. No forests have been certified according to PEFC. The entire Estonian State Forest Management Centre (RMK) has an FSC certificate, which covers in total 1,063,000 ha of forestlands (less than 900,000 ha is actually covered with forests). The second certificate has been issued to a private forest owner, Mr. Lembit Laks, and covers 517 ha.

Apart from problems with illegal forestry discussed above, certification among private forest owners is severely inhibited due to the very small size of many forest properties (80 percent below 10 ha: Forest Yearbook 2002) and the low level of organization and cooperation among private forest owners. Cooperation for group certification is particularly lacking because of the low interest among forest owners from rural areas.

Estonian forest companies and intermediaries held 10 chain-of-custody certificates as of April 2004 (see next section). Four of these were suspended during 2004 due to economic problems or violations of FSC and/or certifiers' rules (Tonisson 2004).

Current Status of the Certified Marketplace

Since there are no domestic PEFC certified sources available in Estonia, the following section considers almost exclusively FSC-certified material (Table 5).

Table 5 Valid FSC certificates in Estonia as of 1 of February 2004 and approximate sales of certified timber in 2003.

Type of company	Number of FSC certificates	Certified annual sales in m^3
Forest manager	2	2,700,000
Primary manufacturer	7	900*
Secondary manufacturer	4	700*
Brokers	1	-

Sources: SW database 2004; FSC 2004; Kaubi 2004; interviews.

*Since most of the companies did not want to provide specific data, the figures are rough estimates based on interviews.

Although the state forest sells almost 3 million cubic meters of certified round wood each year, the Estonian certified marketplace still has a serious shortage of certified roundwood, which in turn hinders the availability of certified lumber and the progress of certification among secondary processors (Feilberg 2004; interviews). Since the timber industry's production capacity is very high in Estonia due to rapid expansion in the late 1990s based on over harvesting (Ahas 2003), there is currently a general lack of round wood on the market. RMK sells certified roundwood through open tenders and smaller certified processing companies are not able to compete with high roundwood prices offered by large corporations (interviews).

RMK, as the primary supplier of FSC-certified raw material, sold approximately 2.7 million cubic meters of FSC-certified timber in 2003, and similar volumes have been maintained since. Additionally small quantities of certified timber are sold each year by a certified private forest owner managing 500 ha of forests. The share of roundwood sold directly by RMK for export is insignificant (below 500 cubic meters in 2003 (Kaubi 2004)), but the real volume of certified roundwood that is exported is much higher. Exact figures are not known since timber is bought by intermediate local companies or local representatives of foreign companies and resold further from the intermediate storage yards. The authors estimate, however, that the share of exported roundwood could be close to half of the total certified sales. Today both RMK and producers with FSC chain of custody certification face a situation in which a large market for FSC products has not been found, and only in rare cases is there willingness to pay extra for certified products. In such conditions it is difficult to

stand firm about need for certification, and other companies see little reason to follow (Tonisson 2004). As our interviews revealed, it is also the case that Estonian timber industries have more demand for non-certified wood products than they can meet; therefore the number of companies willing to spend time and money for certification is limited.

Unfortunately less than 0.1 percent of certified roundwood is processed as certified by primary and secondary manufacturers. The main types of certified products presently manufactured in Estonia are "do it yourself" garden products and small quantities of lumber (Feilberg 2004). (More background information on this situation and the main bottlenecks is provided in the section on Roadblocks and Challenges.)

EFFECTS OF FOREST CERTIFICATION

This section focuses on the Estonian state forests, which are virtually the only certified forests in the country. It is also worth noting that because RMK's land is certified by both FSC and ISO 14001, the effects discussed here cannot be attributed solely to FSC certification. Furthermore it should be noted that forest management practices in general have changed considerably since the Soviet era. On one hand, a general transition from Soviet-era low intensity forestry to modern high intensity forestry model has occurred. On the other hand, this has resulted in increased public attention and thus increased stress on environmental considerations in state forests. In the authors' opinion it is not possible to fully distinguish the effects of forest certification from those of the post-Soviet transition period and reforms.

Power

The most important change brought to Estonia through certification is increased discussion among the various stakeholders. Discussions started in 1998 in the NWGFC involved the participation of more than 40 organizations and representatives. The group of people supporting certification has grown through the certification of the State Forest Management Centre (RMK), as more forestry officials and entrepreneurs have come on board. Our interviews revealed that the number of RMK senior staff members interested in certification issues has been growing as a result of the continuous auditing and other changes implemented in RMK largely as a result of FSC and ISO certification. Our interviews also indicate that certification has caused changes in the very thinking and attitudes of many people in the Estonian forestry sector. In general, more attention is given to environmental and social issues in discussions and decision-making throughout the sector. Nevertheless, the understanding of certification and its impacts varies considerably. Based on our interviews, we can distinguish three major groups of FSC stakeholders with clearly different understandings.

The first group consists of environmentalists, specialists in RMK, and people involved in working on the national sustainable forestry standard. This group values

the essence of certification and assesses its outcome as positive. There are still some environmentalists, however, who are skeptical about certification and its effects. The second group is made up of typical forestry entrepreneurs and many state foresters who have a skeptical attitude toward certification. This group views certification as an unnecessary additional obligation that does not result in significant benefits. Members of this group claim that certification decreases the volume of available timber and increases bureaucratic paperwork. A third, rather isolated group is private forest owners. This group doesn't have a direct link to or interest in certification.

In light of the large amount of illegal forestry and the unsustainable rate of overlogging, the reputation of Estonian forestry has typically been low both among the local population and abroad. FSC certification of almost half of the forest lands (state forests) has helped to improve the state's reputation among some local and international interest groups as a good forest manager and owner. RMK presently has broad support among environmental NGOs and the Estonian forest sector's reputation has also been improving.

According to the interview responses of various RMK officials, RMK has mostly benefited from FSC certification through its enhanced reputation, better developed management system, and new contacts. Certification made RMK's management more transparent and understandable, a process also furthered by RMK's ISO 14001 certification, which occurred at the same time. During the joint certification many management processes were changed and new ones initiated. RMK's accomplishments have been confirmed by internationally recognized certifiers. At the same time, some NGO and company representatives have noted that the information flow from RMK has become more formalized; now only certain staff members have permission to talk with the public or journalists. This has caused some to wonder whether RMK has in fact become more secretive and closed to outside parties. Many stakeholders are beginning to ask whether RMK feels the need to hide information, as the company communicates less often and more carefully.

Environmental NGOs also appear to have gained increased influence or power through certification process by virtue of gaining more opportunities to spread their message and to directly monitor activities in the forestry sector (Trapido 2004). Many ideas proposed by environmentalists (such as biodiversity trees, protected areas, spring truce, and landscape ecology in management plans) have made it into the daily practice of RMK though certification. However, NGOs are still rather weak in financial and human capacity terms and thus have been unable to fully utilize their potential during certifier audits of RMK. The third group that has received more rights and influence through certification are forestry workers, who now have more formalized means of protecting their rights and a high work safety standard required by RMK.

One important finding of our research is that worker safety and security issues are now addressed much more frequently in RMK than was the case before. This gives more rights and power to workers and contractors working with RMK, and alters the typical situation of Estonian workers, which is to work as required and not to discuss things. Still, it appears that the trade unions and local organizations did not realize the full range of their opportunities during the certification process.

Social

Certification of RMK has changed the training, security and health care of its staff. RMK was required to reorganize its measures for labor security and health care and to start monitoring their implementation. Quite strict policies were established to address concerns that were previously neglected in Estonia due to prevailing liberal policies. Nonetheless, such expenditures are still seen by most companies as an unnecessary and pointless requirement. Taking care of one's health remains a low priority in the Estonian population, where average life expectancy is just 65 years for men and 77 years for women (SOE 2003).

Many entrepreneurs and forestry officials claim that access to timber as a resource has been constrained by certification, and that felling volumes are falling as a result. They also argue that certification has increased unemployment in the countryside, first because people without special training have lost the opportunity to work for RMK and second because the spring truce has reduced production levels. On the other hand, the proportion of illegal forestry has decreased, since RMK can now cooperate only with legal entities. The fact that less timber from state owned forests can enter the illegal market means that more taxes are collected, which in turn should increase peoples' sense of social security.

Very few respondents saw positive effects of certification for local inhabitants and businesses. Local groups and individuals were generally not able to participate in certification discussions due to their physical isolation and the demands of everyday work. Serious communication problems remain between the national initiatives in Tallinn and local interests. Overall, then, there is little evidence that certification has served to empower or engage rural citizens in Estonia.

Economic

Our research shows that certification has changed activities and markets for those companies that were able to find markets for specialized products, or whose clients demanded FSC certification. Considering the number of certified companies, however, the share of such companies is very small, constituting only a few percent of the total timber industry companies in the market. Secondary processors are in very few cases also receiving better revenues and profits for certified products (interviews). Nevertheless the chain of custody certificate (CoC) creates a competitive advantage for its holders, or helps to maintain certain foreign clients who demand FSC certification (mostly in UK and other Western European countries). As a rule, however, most members of the forest sector have not witnessed any price premiums (personal interviews). Generally, forest companies have noticed that certification has slightly changed business contacts and practices, and that new spheres and topics of discussion have emerged, such as new buyers from local or/and international small furniture companies or environmentally friendly construction companies. New markets and competition opened up for certain products, such as garden and various "do-it-yourself" products sold on UK markets, for example. Stability in forestry also assists the local tourism industry and those dealing with gathering and selling forest fruits and mushrooms, as their investments are more secure.

Stakeholder meetings during the establishment of the FSC national working group showed that people involved in tourism and supplying forest berries and mushrooms are worried about decreasing forest coverage. Tourism promoters dislike big clear cuts because tourists value more natural landscapes and forests. Lack of suitable forests for picking forest berries and mushrooms is especially visible in agricultural regions with fewer forests. In such areas with fertile soils, the forest is more valuable and therefore there is pressure to use it more intensively. Tourism and catering of forest berries and mushrooms are one of the very few and seasonally variable sources of income in Estonia's poorest remote regions.

Overall, most forest companies are doubtful and somewhat worried about future markets and profits. They are prepared to invest in certification as a backup option in case the market situation changes. Some of our respondents believe that governments of certain countries, or alternatively the EU, may start to demand some sort of certification or legality verification of products imported from tropical and central and eastern European countries. However, there are various opinions and strong debate ongoing regarding whether or not such restrictions would be possible to implement within WTO rules, especially considering the General Agreement on Tariffs and Trade (GATT).

Certification entails additional production and management costs, which were highlighted by all forest officials, owners and producers contacted for this study. The exact amount of such additional expenses, however, either is not known or is proprietary information. Such costs are not easy to estimate, since they involve both direct costs as well as indirect costs of training, safety, technology, and environmental protection. Respondents highlighted increased staff costs as salaries became more linked with technical qualifications. Although not a result of certification, it should also be noted that the general price of roundwood has risen in Estonia due to a shortage of raw material, which in turn has resulted from over-capacity of Estonian saw mills and earlier over-logging. Owners of chain of custody certificates often express concerns about the requirement for separate storage facilities for FSC-certified products. Expanding storage areas is a big problem for some companies because of the shortage or high price of land.

Skeptical forest owners and companies see no direct benefit from FSC certification. Only a few products (mostly secondary products such as furniture and garden products) can be sold for a price premium (interviews). Many entrepreneurs, forest owners and officials claim that demand is strong enough in Estonia so that it is easy to sell forest products without certification. And they say that even if Europe were to close its market to non-certified products, they would still have a large demand from the Middle East, Russia and Asia. This group thinks that less timber is allowed to be felled in sustainably managed and certified forests, and that total felling volumes will start to decrease as a result, leading to lower incomes. They also claim that logging decreases in certified forests will be balanced by increased logging in other forests.

Environmental

The most direct benefits of FSC certification have been environmental. Protection of the environment has gained more importance, environmental NGOs have been able to act effectively, the reputation of certified companies has grown, and the Estonian State as a large forest owner has gained a better image. In the following paragraphs the environmental benefits that have occurred are illustrated mostly with the example of RMK.

If asked to estimate the environmental impacts of certification, most respondents stress that in companies that voluntarily did certification, the senior management became much more environmentally educated and aware. Extensive training exercises have been held, numerous manuals prepared, and educational campaigns conducted. These initiatives have in turn changed behavior in everyday forest management and resulted in more close-to-nature forest management practices (e.g., leaving more down woody debris, snags, etc., in the forests).

Logging rules and methods that were virtually absent previously have been widely implemented and companies now regularly consider environmental factors in conducting their operations. As a direct result of conditions raised by certifiers, guidelines and implementation procedures for certain activities (such as forwarding, drainage system renovation, etc.) were established or improved in order to minimize negative impacts on ecosystems and soils (Trapido 2004; Feilberg 2004). In addition to strict guidelines, the broader framework for good forest management was worked out and has been followed quite well. RMK has started to draft measures for taking the particularities of landscapes into account while managing the forests. However, despite pressure from environmentalists during certification, the share of clearcut-free management in RMK has not risen. Estonian foresters and forestry scientists often cannot accept forestry without clear cuts.

Our respondents described many concrete environmental impacts of certification:

(a) RMK is keeping records and systematically planning measures to protect endangered species and biodiversity values. The same goes for sites of historical heritage and value. Previously only environmental agencies produced such data and plans.

(b) A methodology for preservation of biological diversity has been created and implemented. Conservation of key biotopes, interesting natural sights, dead wood and biodiversity trees is being implemented, although this approach is strange for older foresters. There have been some problems with dead wood and biodiversity trees because some local residents secretly enter felling units to collect firewood from leftover material and do not understand why it is not allowed. There are still foresters for whom a good forest is a cleared and organized one.

(c) Many discussions have ensued from the inclusion of the spring truce concept in the national sustainable forestry standard. In the RMK

certification, the SmartWood Baltic Standard was used and RMK established a special strategy for forest management during spring and summer. RMK has voluntarily cancelled most forest operations for the period of April 15 to June 30 to minimize disturbances to breeding animals and birds. RMK uses this period for vacations, maintenance of machinery, and planting of forests. According to environmentalists and the general public, the spring truce has improved the state of the environment and created a positive image for RMK. Thus the spring truce is among the very few examples of activities caused by certification that have broad public support, appearing as headlines in prominent newspapers (Eesti Päevaleht 2004; Schank 2004).

(d) Some success has been achieved in stopping establishment of new amelioration networks in forests (Kuuba 2004). For renovation of existing drainage systems and establishment of new forest roads, at the very least, environmental assessment and respective planning is being carried out prior to such projects (Schults 2004).

(e) Work has begun to limit the use of chemical substances and exotic species. Our research also revealed, though, that some forest officials are dissatisfied with this development. They are certain that chemicals help to save trees from pests, and planting exotic species is a long-standing tradition in Estonia.

(f) Although some activities at RMK allegedly still take place spontaneously, key activities are planned in a more strategic way and their implementation is more carefully controlled.

Skeptical forest officials and entrepreneurs resent strict environmental measures because they limit their decisional latitude in forest management. Much resistance and misunderstanding is caused by the call to leave dead and biodiversity trees in the forest, as it is seen as a waste of resources and esthetically ugly and disturbing. There are also concerns that too many areas have been designated for conservation purposes, further limiting the possibilities for forest management. Many people are quite critical of the spring truce. The period is seen as too long and the entire approach of a ban as too radical.

There are also some skeptical environmentalists who find that certification looks nice only on paper, while forest management practices remain largely unchanged and destruction of landscapes and soils continues, as does the use of chemicals. They say that certification was a tactical step taken by RMK to fool environmental NGOs and the international audience. Other experts contend that although it may have improved management of the state lands, the certification of RMK has, indirectly, led to the over-logging of private forests.

CONCLUSION

Certification has introduced a new paradigm to the Estonian forestry sector. Its most important achievement has been initiating discussions among different stakeholders in the Estonian National Working Group on Forest Certification since 1998. New ideas have emerged among foresters and NGOs, and an entire generation has become aware of sustainable forestry. All of The State Forest Management Center (RMK)'s holdings, representing forty percent of Estonian forests, have been FSC certified. This has improved both environmental quality and the country's forestry reputation. RMK has established rules for managing its forests while saving the environment, and has also worked hard to implement those rules. Efforts have been made to increase social security for forest laborers.

Certification has not yet reached private forest owners. Most of their forest holdings are smaller than ten hectares. Furthermore, organization and cooperation among private forest owners is minimal, making it difficult to exchange information, promote certification, and communicate effectively. Cooperation of landowners is also slow in Estonia because, after 50 years of the centrally-controlled Soviet system, forest owners want to be masters of their land. Thus, certification has not solved the main forestry problems such as unsustainable over-logging and illegal forestry, which are widespread in private forests but were never very serious in the State forests. If certification is to increase its influence in achieving better forest management in the future, it will have to include and involve private forest owners. This goal could be reached if certified products were valued more highly in markets so that private forest owners would be in a position to make financial gains following support for forest certification.

No major obstacles were encountered during the development of standards and certification processes. Both the FSC and PEFC initiatives faced the problem of low interest among stakeholders and experts. Estonia is a small country and the number of people dealing with forestry and certification issues is quite limited. Those involved are already overloaded with work and it is difficult to book additional time for participation in new initiatives or discussions. It seems that a similar problem is appearing across the whole region of Central and Eastern Europe.

In the authors' opinion, finding and promoting markets for certified timber is vital to facilitate further development of forest certification. Closer cooperation among forest owners and the promotion of group certification to reduce the costs of certification are essential steps to facilitate certification among private forest owners. To maintain and support further development of the certified marketplace, an effort should be made by NGOs to promote and support the companies that have achieved CoC certification and to introduce the idea of certification among forest and timber industry on a larger scale.

More detailed and evidence-based evaluation of the specific environmental, social and economical effects of forest certification is one of the most important research topics in coming years. A set of qualitative and quantitative methods and indicators should be developed to achieve accurate results, which ought to elucidate challenges as well as further knowledge of the range of results and benefits, which, seen in their entirety, may help increase support for certification.

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ACRONYMS

BVQI	Bureau Veritas Quality International
CoC	Chain of Custody
EGM	Estonian Green Movement
ELF	Estonian Fund for Nature
EFSC	Estonian Forest Survey Centre
EMTL	Estonian Forest Industries Association
FoE	Friends of the Earth
FSC	Forest Stewardship Council
ISO	International Organization for Standardization
NGO	Non-Governmental Organization
NWGFC	The Estonian National Working Group on Forest Certification
PEFC	Programme for the Endorsement of Forest Certification (formerly the Pan-European Forest Certification Programme)
RMK	State Forest Management Center
SEI-T	Stockholm Environment Institute, Tallinn Branch
SOE	Statistical Office of Estonia
TRN	Taiga Rescue Network

Forest Certification in Latvia

Ansis Actiņš and Mara Kore***

ABSTRACT

Latvia has a considerable amount of forested land — 2.85 million hectares, constituting 44 percent of its total area. Approximately half is owned by the state and most of the remainder is distributed among 150,000 private owners. Latvia's economy is highly dependent on timber as its primary natural resource and main export product. These factors make Latvia an interesting case in which to follow the development of the forest certification process. The two certification programs currently operating in Latvia are FSC and PEFC. In 2003 Latvia's state forests (the State Joint Stock Company charged with management of about one half of Latvia's forestland) completed certification of its forests under FSC. In addition, the Riga municipal forests are certified (primarily under FSC), and a growing number of hectares of private forested land are coming under group certification through both FSC and PEFC (although there is still relatively little private land certified under either scheme). At this point all indications point toward FSC as the leading certification scheme in Latvia. Although it is too early to tell what the full economic and ecological implications of certification will be, one significant effect of the certification process so far has been to improve communication among all members of the forest sector.

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INTRODUCTION

The Republic of Latvia regained independence in 1991 after having been occupied by the Soviet Union since World War II. The population of Latvia is 2.35 million people, and its size is 64,600 square kilometers. There are 2.9 million hectares of forestland in Latvia (or about 44 percent of the total land area), of which approximately one half is owned by the State. In addition, Latvia has over 150,000 private landowners. Together they own 1.2 million hectares of forestland, with an average parcel size of 8 ha. With forest products comprising roughly 40 percent of the total export economy, it is said that Latvia is the country most dependent on forestry in all of Europe.

The forest certification movement began in Latvia in 1995 with the formation of the Latvian Forest Certification Council. By 1997, work on the certification process had moved into the offices of the World Wide Fund for Nature's Latvian Programme Office (WWF Latvia). This initiative began to focus on certification under the Forest Stewardship Council (FSC). It is from this working group that Latvia's National FSC Standard ultimately emerged in 2003. The draft Standard is currently under review by the FSC secretariat. According to the FSC International website (www.fsc-info.org), as of late 2005 there were 1,687,996 ha of state, municipal, and private forest lands certified under FSC.

A parallel certification process was begun in 1999 by the Forest Owners' Association. This organization focused on developing group certification, primarily for small private forest owners, based on Programme for the Endorsement of Certification (PEFC) standards. As of late 2005, 37,860 ha of private forestland has been registered under the PEFC group certificate in Latvia.

While both pressure and assistance from domestic NGOs helped to initiate the certification process (FSC), the continued expansion of certification has also been driven by the desire to tap into and secure export markets, since Latvia's economy is heavily dependent on forest-sector exports to European countries with certification-demanding consumers. The recent forest sector reforms, as well as the tradition of strict standards and practices, have helped Latvian forestry adopt certification standards in many cases with relative ease and efficiency.

One of the most significant developments in the certification process in Latvia has been the certification of all state-owned forests. This process was completed in January 2003 by Latvia's new government institution for forest management – the State Joint Stock Company Latvia's State Forests – or LVM as it is known locally.

At this point it appears that FSC is the more widespread standard in use in Latvia today. FSC certification is available to and used by a wider array of forest managers and industries – by individuals, corporations, groups, municipalities (in particular Riga city forests) and the state forest management agency, LVM. Our research[1] indicates that, despite differences between the two standards, supporters of both FSC and PEFC agree that the certification process in Latvia has helped bridge gaps and improve communication and cooperation among all stakeholders in the forest sector. Perhaps because of the various resources available to the LVM management, certification has been able to proceed at a much more rapid pace on government lands, while private owners continue to struggle economically.

[1] The research for this case study was collected primarily by Ansis Actiņš. Research techniques included analysis of forest certification primary documents and periodical literature, interviews with key individuals and representatives of various forest sector organizations, and personal observation.

It is important to note the fragmented nature of private forest ownership in Latvia. This fragmentation is evident both geographically (the average parcel size for private forest owners is only 8 hectares) and politically (private forest owners are not well organized). Thus the preconditions for implementing certification are not as favorable on private lands. Until certification has been proven to pay for itself at a small scale, there may not be a compelling reason for many landowners to become certified. At this point, certification is seen primarily as an economic tool for gaining access to European forest product markets, and this incentive does not apply to many private owners. From the environmental perspective, many see Latvian forestry laws as already setting high standards for forest stewardship and others do not see advantages in paying for certification. As the forest sector continues to develop in Latvia, however, there is reason to believe that the trend toward forest certification seen in LVM will spread to the private sector as well.

BACKGROUND FACTORS

Historical Context

Forestry Problems

Illegal logging cannot be considered a major problem in Latvian forestry today. Approximately 100,000 m^3 of wood is thought to be generated through illegal logging annually, of which 10,000 m^3 comes from state forests and 90,000 m^3 from private forests (SFS 2004). This comprised 0.7 percent of the total timber harvest volume for 2003. A WWF study reports that illegal logging *per se* accounts for two percent of the total timber harvest in Latvia (WWF Latvia 2003). In fact, the number of incidents of illegal logging appears to be small and getting smaller. According to the State Forest Service (SFS 2005), the number of incidents of illegal logging during the first six months of 2005, as compared to the first six months of 2004, declined by 51 percent on state lands, by 61 percent on other lands, and by 59 percent in Latvia's forests overall. During the same time period, the volume of illegally harvested timber declined from 39,200 m^3 to 15,100 m^3 (3,800 m^3 on state lands, and 11,400 m^3 on other lands).

Nevertheless, certification is seen by some as a necessary tool to combat illegal logging and to increase transparency. In a 2003 presentation to a group of Baltic Sea forest sector representatives, WWF Latvia stressed certification as one of the major ways to combat illegal logging, particularly among private forest owners (WWF Latvia 2003). In a 2001 interview, the WWF Latvia staff explained: "Rural businesses need to understand that [certification] can help them organize their business so that they can follow the trail of money and goods. Small rural sawmills have a high proportion of illegal timber, but even these businesses are beginning to think about supply chain certification" (Timbare 2001a).

Other aspects of the illegal timber trade, such as tax evasion, money laundering, and other more complex problems associated with transitional economies and governments overall, are both more important contributors to the illegal economy, and

more difficult to address at the level on which certification operates. Forest certification (including Chain of Custody, or CoC) is not an instrument that can be used in Latvia to discourage illegal logging, because those forest owners who have received certification, as well as those who are not certified but who operate legally, are harmed either directly or indirectly by illegal logging.

Although illegal logging may not be the most critical issue in Latvian forestry, proponents of certification nonetheless believe that certification can help improve the forestry process and overall climate in other ways. WWF Latvia, one of the earliest and most vocal proponents of certification, lists the following goals for the forest certification process:

1. Socially responsible, environmentally friendly and economically viable forest management;
2. Protection of biological diversity in managed areas and high-value forests;
3. Openness of forest management and timber trade;
4. Resolution of social problems associated with forest resource exploitation;
5. Guarantees of environmentally friendly forest management for timber industries, consumers, and other interested parties.

Overall, the discussions of certification in Latvia tend to focus on access to markets and other economic considerations as the main problems that certification can help address. Although certification proponents are usually quick to warn that certified timber does not guarantee increased profitability, there does seem to be a general agreement that certification will help secure a niche in the competitive timber market, particularly in the European countries that are so important for Latvia's timber export. As an article in 2001 in Latvia's largest newspaper, *Diena*, begins: "Latvia's forest sector exporters, in particular furniture producers, are waiting for the appearance of certified timber on the market, because their foreign partners are increasingly urgently demanding products with the 'green' certificate's stamp of approval" (Drīliņš 2001).

Although forest management and environmental protection are popular topics in the Latvian press and public, the Latvian certification movement does not seem to focus on sustainable forestry as a major goal. "Even now," complains Jānis Rozītis of WWF Latvia, "the prevalent view is that certification is only a market instrument. Very few forest sector representatives see the global context – the creation of a model for environmentally friendly [timber] supply and demand chain in the international market." Even LVM, thinks Rozītis, tends to see certification as an end in itself, rather than as a means to improve forest management overall.

Why so little emphasis on the environmental aspects of certification? One possible reason is that Latvian forestry laws and traditional practices are already seen as stringent and environmentally responsible. Perhaps the widespread forest sector reform of recent years has assuaged fears of environmental mismanagement in Latvia's forests. An alternate theory might be that proponents of certification simply want to appeal

to forest owners' self-interest by stressing the potential economic gains and improved reputation that come with certification, rather than any burdens or responsibilities that may result from an increased level of environmental protection in certified forests.

Although both forest owners and the general public have increased access to forest certification (through various publications and booklets, sponsored largely by WWF Latvia), the understanding of the general public and forestry professionals of the goals of certification and sustainable forestry remains low. In a recent survey (Latvijas Fakti 2003: 39), 1035 individuals directly related to the forest sector (forest owners, State Forest Service (SFS) and Latvia's State Forests (LVM) employees, timber industry leaders, forestry students and instructors, researchers and environmental organization representatives) were asked: "How do you understand the term 'sustainable forest management?'" to which only 2.7 percent chose the response, "the union of economic, social, and ecological functions of the forest."

In summary, the Latvian forest sector does not appear to be facing many urgent ecological problems. Sustainable forestry does not play a big role in certification in Latvia, first, because existing laws already incorporate many aspects of sustainable forest management, and second, because improving the environmental quality of their forest management is not the primary motivation for many forest managers to become certified. While it is also intended to help combat illegal logging, this is currently not a major problem in Latvia, or one that certification is able to address at this point. Certification has the most potential to help expand and secure stable markets for certified forest products.

Policy Responses

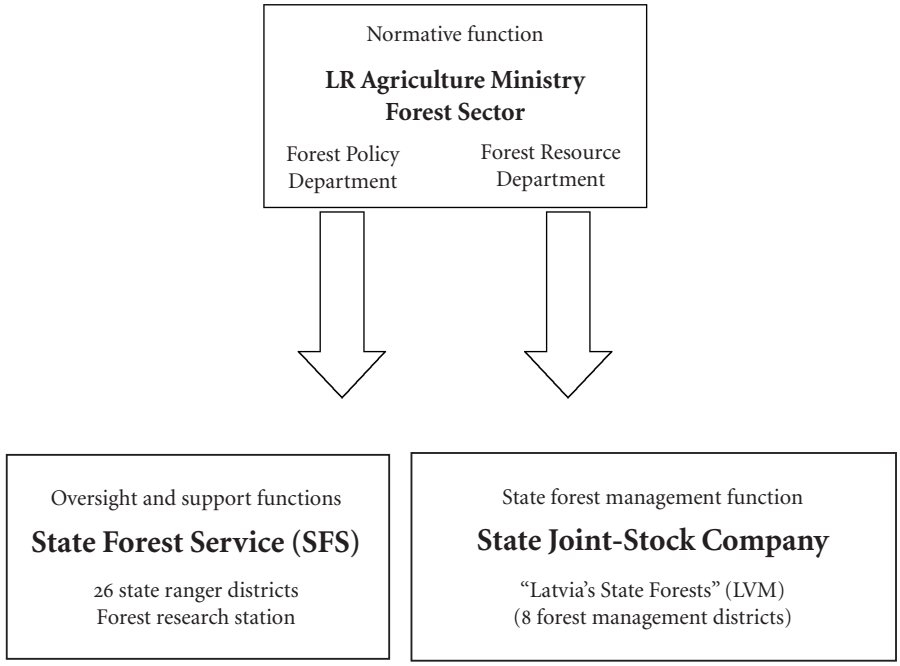
Between 1940 and 1991, under the German and Soviet occupations, Latvia's forest governance structure was changed 12 times. None of these restructurings separated the forest sector's main functions: forest management, supervision, and legislative functions. Even after regaining independence and the founding of the State Forest Service in 1993, these functions were still not separated. This situation created internal conflicts of interest, and did not facilitate the further development of the forest sector. In late 1999 and early 2000 the forest sector was radically reformed. Three independent governmental institutions were established (Figure 1):

The Agriculture Ministry's Forest Sector, comprised of two Departments, has a normative function, coordinates international efforts, and informs the public about trends and developments in the forest sector.

The State Forest Service (SFS) oversees forest management on state-owned and private lands.

The State Joint-Stock Company "Latvia's State Forests" (LVM) conducts forest management on state lands.

Figure 1 Structure of Latvian forest governance



Source: Ministry of Agriculture 2003

Structure of LVM

The mission of LVM is "to ensure to the forest owner and the public the maximum benefit that can be achieved by sustainably managing the forest property entrusted to it. LVM contributes to creating a harmonized natural, social and business environment" (LVM 1999).

As Latvia's main forest management agency, LVM is divided into three departments: 1) Forest; 2) Seeds and Plants; and 3) Roundwood Deliveries. The Forest department is responsible for mineral rights management, hunting and recreation services, as well as forest management. The Seeds and Plants department, as the name implies, conducts tree and plant nursery functions. The Roundwood Deliveries department is responsible for the production and sale of round timber products. All three departments also provide consultation services. LVM manages 260 km of logging roads. Forest management work on LVM lands is done by outside contractors. Contracts are awarded through a competitive bidding process.

Table 1 The forest management cycle in Latvia

Stand Age	Forest Management Activity	Current Stage of LVM forests
0-3 years	Reforestation	11,000 ha (including 3,500 ha in natural regneration)
2-20 years	Precommercial thinning	27,000 ha
30-65 years	Commercial thinning	18,000 ha
80-120 years	Final felling	11,000 ha

Source: Ministry of Agriculture 2003

Structural Features

Ownership and Tenure

The current land tenure regime in Latvia was established after the country gained independence from the Soviet Union in 1991. One of the priorities of the new Republic was to restore pre-1945 property rights by returning land to its previous owners or their next of kin. The purpose of land restitution was to restructure the legal, social and economic aspects of land use and property in the Latvian countryside, in order to renew the traditional Latvian rural lifestyle. This large-scale process created 164,232 private landowners with an average parcel size of eight hectares (Pelane 2000). Together, private landowners own just less than one-half of Latvia's forestland.

This highly fragmented land ownership structure might turn out to have important implications with respect to forest certification on private lands. Because of the small average parcel size, many forest owners do not receive significant regular income from their forest holdings, and the certification process requires a significant financial investment. In addition, there is no market demand for certified wood within Latvia. There is approximately twice as much timber processing capacity (i.e. sawmills) in Latvia, as there is supply of raw lumber. Therefore, the small forest owner who might harvest some wood for supplemental income generally has no difficulty finding a local timber buyer who does not demand certification.

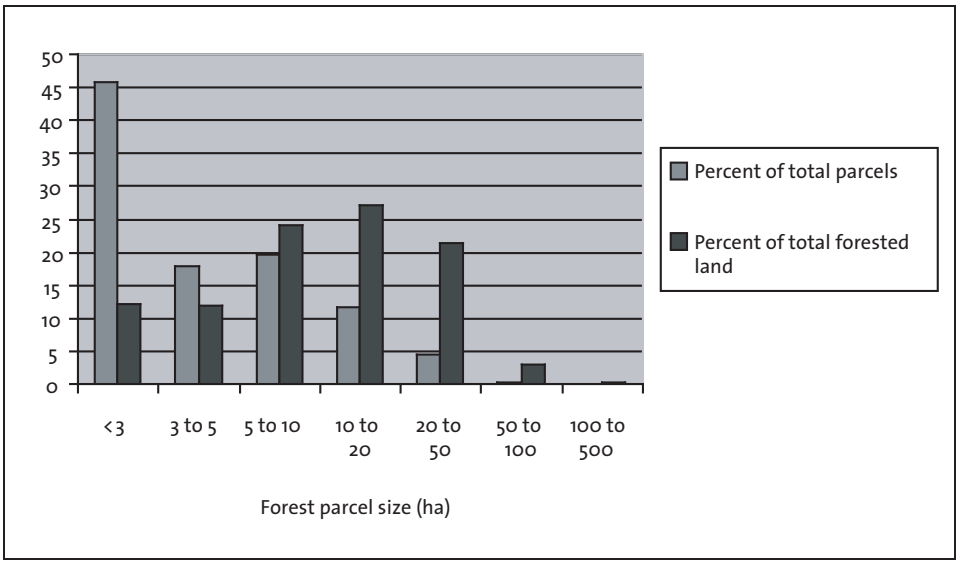
The forest sector in Latvia is poorly organized. According to the Latvian Forest Certification Council (LFCC 2001), not more than five percent of forest sector enterprises are members of trade associations. Similarly, not more than five percent of private forest owners are members of the Forest Owners' Association – Latvia's only such organization. There is only one forest sector trade union, which has 5,000 members, out of an estimated total of 50,000 employees in forest-related jobs in Latvia (WWF Latvia 2003).

Table 2 Forestland ownership

Owner	Size (hectares)	Percent of Total
State (total)	1,430,000	50
– Latvia's State Forests (LVM)	1,370,000	47
– Scientific	10,000	1
– Environment Ministry	50,000	2
Private	1,200,000	42
Other	220,000	8
TOTAL	2,850,000	100

Source: Ministry of Agriculture 2003

Figure 2 Individual land ownership structure



Source: Ministry of Agriculture 2003

Forest Licenses

Licenses for timber cutting are granted to private forest owners upon completion of a forest inventory and management plan, usually completed with the assistance of the local State Forest Service (SFS) ranger. Latvian forestry law prescribes minimum ages for felling of each tree species, as well as maximum sizes for clearcuts and other environmental restrictions. Forest owners or legal managers can remove up to 10 m^3 of firewood annually without a cutting permit.

Markets

Forest production in Latvia consists mostly of Scots pine (29 percent), birch (28 percent), and Norway spruce (23 percent), with some aspen (10 percent), white alder (8 percent) and other species (2 percent). Latvia has a strong export-oriented forest and wood processing industry, producing sawn timber, plywood, veneer, fiberboard and particleboard, glue laminated articles and furniture. Wood processing and logging operations are fully privatized. The main export markets for Latvia are in Europe, UK being a leading market for sawn timber, plywood and wood based panels. According to government statistics, 80 percent of Latvia's timber production is exported, with 48 percent of total exports going to the European Union. This accounts for 40 percent of the national export economy. The majority of forest exports consist of sawn wood, furniture, firewood and roundwood. The forestry import volume comprises 1.3 percent of Latvia's total imports. The majority of forestry imports consist of cellulose, paper products and furniture.

Table 3 Forest sector export and import comparison

Product	Export		Import			
	1000 (units)		1000 USD	1000 (units)		1000 USD
Sawn wood	3253	(m^3)	524,381	460	(m^3)	54,515
Conifer	2621	(m^3)	437,245	380	(m^3)	51,712
Hardwood	632	(m^3)	87,136	80	(m^3)	2803
Roundwood	3922	(m^3)	131,417	459	(m^3)	25919
Conifer	1765	(m^3)	61,838	279	(m^3)	12,756
Hardwood	2158	(m^3)	69,579	180	(m^3)	13,163
Furniture			116,016			42,470
Fuelwood	2171	(t)	89,181	6	(t)	285
Wood chips	1307	(t)	47,599	1	(t)	47
Plywood	147	(m^3)	85,735	7	(m^3)	2,057
Joinery manufacture	90	(t)	79,175	4	(t)	7,759
Veneer	14	(m^3)	17,575	1	(m^3)	1,554
Chipboard	130	(m^3)	16,263	50	(m^3)	12,893
Hardboard	30	(m^2)	65	3582	(m^2)	10,087

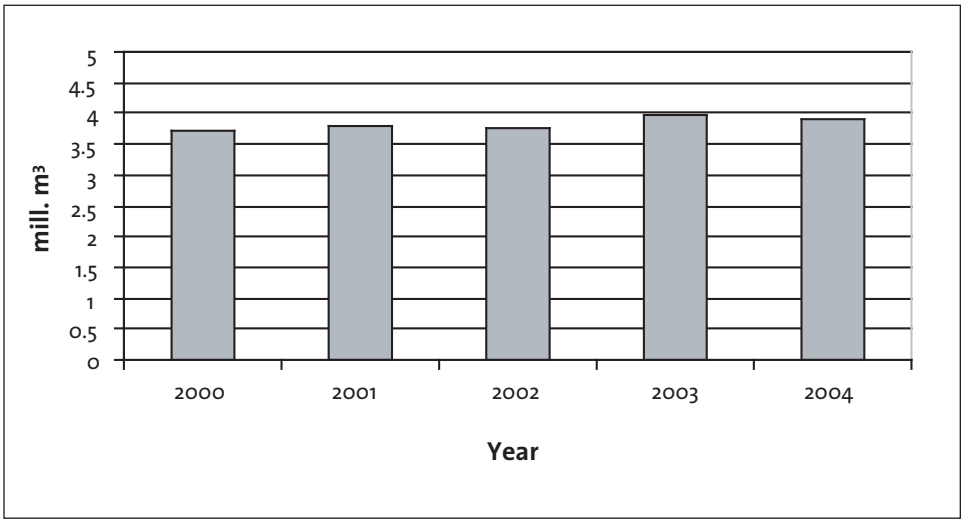
Source: www.zm.gov.lv

Table 4 Domestic forest sector

Type of Production	Number of Businesses
Forestry and forest management (excludes ~150,000 small private forest owners)	~ 4000
Timber product manufacturing	~ 1400
Furniture and related products	~ 1800

Source: Lursoft database 2004

Figure 3 Dynamics of logging volume



Source: Dynamics of Logging volume 2000-2003 - www.vmd.gov.lv

Subsistence vs. Commercial Forestry

Although official statistics on subsistence forestry are not available, a State Forest Service survey (SFS 2001) of forest owners provides some valuable insights on uses of privately owned forests. Although many respondents considered the forest to be the most important part of their land holding, only 3 percent indicated they got regular income from forest management; moreover, these owners all had holdings of 30 ha or more. The majority of owners (60 percent) had not received any income from their forests, while the remaining 37 percent reported receiving occasional income. Interestingly, in an evaluation of forest values, income from forestry received the lowest rating. The highest rating was assigned to the forest "as an object to be inherited by successors and for creating an awareness of ownership." Owners also gave a high rating to the forest as a source of firewood.

These data indicate that subsistence uses of the forest, uses of non-timber forest products, and entirely non-material uses are more important to many forest owners

than commercial forestry. As mentioned earlier, the fact that so many forest owners have small parcels, and do not use their forests primarily as a source of income from logging, may mean that interest in certification will continue to develop quite slowly among private forest owners.

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

Timeline of main events:

1. Forestry Certification Bureau established – 1995.
2. WWF Latvia establishes FSC Certification Initiative Group (IG) – 1997.
3. Latvian PEFC Council founded by Forest Owners' Association – 1999.
4. Latvia's State Forests (LVM) declares intent to certify state forests – 2000.
5. Latvian PEFC Certification Standard accepted; PEFC certification begins – Jan. 2001.
6. Latvian Forest Certification Standard submitted to FSC for accreditation – July 2001.
7. LVM completes certification of state forests – 2003.

Main Supporters of the Initial Certification Movement

Although the initial Forestry Certification Bureau was established within the forest administration of the Agriculture Ministry, the first real ground swell of support for certification emerged within the WWF Latvia Working Group and its later incarnation as the non-governmental group "Latvian Forest Certification Council" (LFCC). Participants came from the environmental, social and economic sectors. Environmental support came from WWF, the Latvian Fund for Nature, the Latvian Ornithologists' Society, and the Latvian Forest Institute Silava. The social sector was represented by the Latvian Forest Workers' Union. Economic concerns were represented by the Latvian Foresters' Society, The State Joint Stock Company Latvia's State Forests (LVM), the Riga City Council Forest Administration, and the forestry companies Latvijas Finieris and Silva (Rozītis interview 2004).

History of FSC Certification

Discussion of forest certification began in 1995 with the formation of the Forestry Certification Bureau – the first working group dedicated to drafting certification standards for Latvia. This group was run and financed through the State Forest Service. The group's goal at this early stage was not to create a standard based on any particular certification program, but simply to gather information about the forest certification process, as well as to clarify the interests of Latvia's forest sector stake-

holders. The Bureau, however, was dissolved after only two years due to lack of resources. In the wake of the Bureau an NGO emerged called the Green Certificate for Latvian Forestry. Like its predecessor, this organization was also unable to get certification off the ground. Apparently, the forestry community was not yet responsive or committed to the possibility of forest certification taking hold in Latvia (Lagūns 2004).

There was no official national government (Parliament- or Cabinet-level) support of certification, only institutional support and consulting provided by the Forest Service. The concept of sustainable forest management had only begun to be popularized through the NGO community.

In 1997 the WWF Latvian Program Office began working to continue the certification process. Mobilizing representatives of the forest sector that had formed its "Forest Club," WWF Latvia formed its own working group in May 1997. The Initiative Group for Development of a Certification Standard for Latvian Forestry (IG) was founded by eleven Latvian organizations representing a range of interest groups, and was based on the following principles:

- consensus-based decision-making;
- openness to all interest groups;
- declaration of support signed by members to back group decisions and actions;
- dispute resolution;
- development of a national standard based on FSC principles, criteria and guidelines.

The Initiative Group formed three subcommittees (environmental, social, and economic), as well as the dispute resolution committee, and later, a technical subcommittee for writing the certification standard itself. Between June 16, 1997, and April 5, 2000, the group held a total of 31 meetings, of which the majority were environmental subcommittee meetings (Lagūns 2004). During this time, the IG also held various seminars and publicity events. The first seminar dealt with forestry certification, and featured participation by representatives of the WWF UK's Buyers Group 95+. The second seminar focused on supply chains, and introduced participants to the supply chain tracking systems used by two prominent Latvian forest products companies – Silva and VikaWood.

In April 1999 the Group approved its first Draft Standard, and in September 1999 the UK Forestry Company SGS Forestry performed a field assessment of the standard.

In October 2000, the WWF Working Group decided that the best way to continue the certification process in Latvia would be through the formation of a separate, independent NGO. To that end, in June 2001 a new organization, the Latvian Forest Certification Council (LFCC), was founded. This organization was responsible for drafting the FSC Latvian Certification Standard in 2003, which is currently under review by the FSC Secretariat.

History of PEFC Certification

Meanwhile, in 1999 a parallel PEFC organization, the PEFC Latvian Council, was founded by the Forest Owners' Association. This organization's stated goals were:

- promoting sustainable forest management by implementing the PEFC Forest Certification process in Latvia's forestlands;
- leading the PEFC movement in Latvia;
- coordinating the certification process, working groups, experts, etc.;
- preparing and distributing information about the PEFC system in Latvia;
- cooperating with the PEFC council and other European structures as the PEFC system's official representative in Latvia.

The Latvian PEFC system was designed primarily to promote certification of Latvia's small private forests (10 — 100 ha). The intent was to conduct group certification of private forest holdings under an umbrella organization — the Forest Owners' Association.

The PEFC Latvian Council consists of 21 members: 18 from the economic sector, two in the social sector, and one in the ecological sector. The low representation of the environmental sector, as specified by the PEFC structure, is considered to be one of the main reasons why the PEFC Council did not receive the initial support of Latvia's environmental NGO community. In addition, as discussed in the "Roadblocks" section to follow, there may have been personal politics at work in discouraging participation of environmental NGOs in the initial PEFC process. In January 2001 Latvia's PEFC Forest Certification Standard was accepted and PEFC certification began in Latvia (PEFC Statutes 1999).

History of FSC certification of LVM

In May 2000 LVM announced its intention to obtain FSC certification for the forests under its management. This goal was one of the first major priorities expressed by the newly founded LVM agency.

Table 5 Timeline of FSC certification

May 2000	LVM declares intent to certify state forests
Sept. 2001	First LVM forest is certified in Eastern Vidzeme
April 2002	50 percent of LVM forests are certified
Jan. 2003	LVM completes certification of state forests

Source: LVM 2003a

LVM gives the following reasons for choosing FSC certification (LVM 2003b): FSC is a credible forestry certification scheme — objective, independent and transparent. The forest management principles and criteria set by FSC match well with the forest management philosophy of LVM. FSC is accepted in Latvia's Main Export Market — the United Kingdom.

By July 2001 the first audit of an LVM forest was carried out by the FSC-accredited certification company SGS Qualifor. The first forest management district was awarded an FSC certificate in September 2001, and by the following April, one-half of LVM forests were certified. The first supervisory visits and audits were conducted then as well, with the remaining audits completed in November 2002, again by SGS Qualifor, as well as by SmartWood. In January 2003 LVM announced that 100 percent of its forests had been certified under FSC. These certificates are valid for 5 years, during which supervision visits will be carried out by the certification company once or twice a year.

Institutional Design

Latvian Forest Legislation

Latvian legislation regulates all aspects of forest management, including management and documentation; forest management itself (timber felling permits, logging regulations based on type of logging activity, stand size, tree age and diameter, and environmental considerations; forest regeneration species and timelines); social rights and guarantees (professional competence, worker safety, forest access and non-timber forest products); and environmental protection (protected area designation, environmental impact assessments during management planning and execution).

Forest legislation has been in a continuous process of evolution and reform since Latvia's restoration of independence, and as a result the entire forest sector has been in a dynamic and constant state of flux. In 1992 the Forestry Department and Cabinet developed an initial Forestry Development Program to assess the development potential of the forest sector in Latvia. Then in 1995 the State Forest Service, with the assistance of the Swedish consulting firm "Swedforest International AB" drafted the "Latvian Forest and Timber Industry Development Program."

The purpose of this document was to provide direction for the development of the forest industry. Although the Program did not develop specific activities or sources of funding in order to implement the recommended developments, some of the document's recommendations have already been implemented. These achievements include an inventory of sawmill production, introduction of the certification process, and plans for a pulp mill. There is no official government support or endorsement of forest certification per se.

In 1996 the government began work on a national forest policy. Input for this document was solicited from governmental agencies, non-governmental agencies, and various interest groups. In 1998 the Forest Policy was ratified, and this policy has since served as the foundation for major legislation and overall development within the forest sector. The major pieces of legislation developed as a result include:

The Law on the State Forest Service (1999)
The Law on Forests (2000)
The Law on Environmental Impact Assessments (1998)

Currently the government is working to expand the forest policy to include the entire array of forest sector interests, as shown in Figure 4 (www.zm.gov.lv).

Figure 4 Forestry and forest products

The new National Policy on Forestry and Related Sectors is being developed as a strategic planning document for the time period of 2004-2013. The emphasis of this document is on sustainable forest management and integrated development of the forest sector. The main goals for this document are as follows:

- Sustainable management of forests and forest land
- Expansion of the Latvian market for forestry and related industries
- Increase in domestic consumption of renewable forest resources
- Integration of education and science in the forest sector
- Integrated development of forest product exploitation and energy sector
- Promotion of timber use in construction
- Transportation improvements in the forest sector
- Legislative reform to comply with international forestry standards
- Development of information technology and networks for forestry and related fields
- Involvement of forestry sector in sustainable rural development and efficient land use
- Forest sector compliance with international obligations

Certification Standards

The FSC standards were developed in a working group headed by WWF Latvia, while the PEFC standards were initiated by the Forest Owners' Association. Both processes

were designed to include stakeholder participation. Participants in the FSC development process included representatives from 27 organizations, including:

LVM
Latvian Foresters' Association
WWF Latvia
Latvian Forestry Institute Silava
Latvijas Finieris (a forestry company)
Forest Department of the Agriculture Ministry
Latvian Ornithological Society
State Forest Service
Latvian Forest Workers' Union
Latvian Forest Product Exporters' Association

Members of the PEFC Latvia council included representatives from the following eight sectors (PEFC Latvia Council 2001):

Forest Owners' Organizations (10 seats)
Forestry Operators and Wood Processing Groups (6 seats)
Wood Trade Companies (2 seats)
Nature Protection and Regional Development Organizations (3 seats)
Trade Union Organizations (1 seat)
Farmers Organizations (1 seat)
State and Local Government Forests (2 seats)
Science and Education Institutions (3 seats)

Standards

Currently forest owners and forest product manufacturers in Latvia can choose to receive forest management or supply chain certification either through FSC or PEFC standards. The State Forests and several larger forestry companies use FSC, while many smaller forest owners use PEFC.

FSC

The overall goal of the Latvian FSC standard is "to implement in forest management internationally recognized environment-friendly, economically viable, and socially beneficial methods, adapted to the Latvian conditions and providing for the conservation and further enhancement of the forest's multiple values" (LFCC 2003). The Latvian FSC standard is based on the international FSC Principles and Criteria. A comparison of the economic, environmental and social requirements of the FSC and PEFC standards is presented below in Table 6.

PEFC

The stated goal for the Latvian PEFC standards is "to develop sustainable forestry with a balance among production, environment and cultural environment

protection, and social interests." In addition to compliance with the Latvian Forest Law and related regulations, the PEFC standards prescribe a set of guidelines that are based on the Helsinki Criteria of Sustainable Forest Management, the Pan-European Indicators for Sustainable Forest Management, and the Pan-European Recommendations for Sustainable Forest Management. (PEFC Latvia Council 2001). The PEFC standards are divided into three main categories – Forestry; Social Interests; and Environment and Cultural Values.

Table 6 Comparison of FSC and PEFC standards

Latvian FSC Standard	Latvian PEFC Standard
Economic Requirements	
Gathering and analysis of information about forest management ecological indicators	
Evaluation of planned activities' relevance to stated management goals, and written documentation and explanation of unforeseen activities	
Assessment of economic activities' impact on other forest resource utilization	
Calculation of sustainable yields of all forest products to be harvested	
Use of most appropriate technology for each planned forest management activity	
Plan for minimizing or eliminating illegal activities in forest management	
Ecological Requirements	
Management and reforestation of coniferous stands to preserve at least 10 percent deciduous trees during final felling, if permitted by growing conditions	Mosaic-style grouping of various tree species promoted during precommercial thinning
Protocol for identifying rare, threatened or endangered species in the management area	Wastewater compost used only on low-productivity, sandy soil, reclaimed quarries, plantations and reforestation of abandoned agricultural lands
Protocol and schedule for inventory and documentation of forest biotopes	Minimization of risk of contamination by fuels and oils (e.g. cleaning of machinery away from groundwater recharge or porous soil areas)
During final felling, an average of 10 living trees preserved per ha (as compared to 5 as stated in Latvian forest legislation)	
Natural regeneration used in areas where it ensures timely, economically justifiable and high-quality forest regeneration	

At least 7 percent of the total forest area in a management territory set aside for protection	
Soil preparation without use of chemicals	
Fertilization with wood ash only	
Storage of fuels and oils to minimize damage to human health and environment	
Protocol for collection, storage and disposal of industrial wastes	
Social Requirements	
Priority given to employment of qualified local residents	Stand management to preserve landscapes for recreation and culture, e.g.: size and shape of clearcuts that maintain natural stand boundaries
Plan for workplace quality control, including job safety measures	Asymmetrical plantings along roadsides
Outreach to local community about forest management and its social effects, and identifying employees to serve as consultants	Collection of logging wastes along roadsides
Written documentation of all conflicts and resolution processes involving forest managers and local community	

Source: FSC/PEFC standard comparison – www.wwf.lv

Of all the many laws and regulations governing the forest sector in Latvia, the Forest Law of 2000 is perhaps most comparable to the certification standards. The stated goal of the Forest Law is "to regulate the sustainable management of all of Latvia's forests, to guarantee equal rights, protection of property rights, economic freedom, and equal responsibilities for all forest owners or legal custodians." Regulations for various categories of protected areas are delineated in a separate document – "Regulations for Nature Protection in Forest Management" (Ministru kabineta noteikumi nr. 189, 2001). The Forest Law (Republic of Latvia 2000) contains the following sections:

Access to the Forest
Cutting of Trees
Non-Timber Forest Products
Forest Reproductive Material
Forest Regeneration and Reforestation
Forest Protection
Information about the Forest and Forest Management Plans
Nature Protection in the Forest
Issuing of Forest Permits
Transformation of Forest Land
Government Oversight of Forests

Scientific Research Forests
Violation of Forest Laws

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

The attitude expressed by both WWF Latvia and the Latvian Forest Certification Council (LFCC) is that the initial reaction to certification by the forest sector was neutral at best, but that over time, the overall attitude toward certification has improved. Within the Latvian government, the attitude toward certification has progressed significantly. Whereas in 1995 there was not sufficient momentum to sustain a working group on certification, less than a decade later, fully 100 percent of state forests in Latvia have been certified. This focus on FSC has not come without a cost: as Skaidrīte Albertiņa of the Forest Owners' Association claims, the government has continually ignored the efforts of the PEFC movement. However, Baiba Rotberga of the State Forest Service asserts (2004) that this agency has maintained a neutral position toward both certification organizations.

Both PEFC and FSC advocates agree that public awareness of forest certification remains low. Rozītis acknowledges, "If I were to ask 100 people on the street in Riga whether it is important to manage forests more environmentally, and if FSC certification might be used toward this goal, then I think responses would be entirely positive. Until now very little attention has been paid to educating the public about the meaning of certification. This has begun to change within the past year." In other words, most people would say they are in favor of better forest management, and would therefore be in favor of certification if they were told that this would lead to better forest management, but ultimately the average person is not well-informed about what certification actually means or what it accomplishes.

According to Albertiņa, certification is more of a "professional question," while the general public is concerned on a more basic level with issues of logging, or what she terms "forest robbery" — that is, perceived excessive logging. She suggests that the public sees trees being cut down as negative, but does not connect that with the economic realities of forestry.

A timber industry representative (anonymous interview 2004) complains that while the demand for certified timber has increased, the consumer still does not really know what exactly he or she is demanding.

Guntars Lagūns of the LFCC (Lagūns 2004) offers the explanation that the public's attitudes and thinking are changing gradually, in parallel with improvements in the standard of living. He sees increasing affluence and overall development of the country as positive steps toward the expansion of certification, as well. In general, the Latvian environmental NGO community remains strongly supportive of FSC certification.

Forest Owners

There seems to be a general consensus that forest owners are beginning to realize the potential benefits of certification, but that few have yet reaped any actual benefits. Certification is generally seen as something that definitely can't hurt, and that may indeed prove essential for the future of the forest sector economy. The fact that the state forests have been certified may lend credibility to the process, but many private owners are not yet willing or able to spend their own money on certification, without any guarantee of its profitability.

Current Status of Forestland Certification

As of 2005, 100 percent of Latvia's State Forests (under the management of LVM) were certified under FSC. State lands make up the vast majority of the 1,687,996 ha certified under FSC, but municipal and private lands may also receive certification. FSC certification can be obtained as through 15 accredited FSC organizations for direct certification. Most certification in Latvia is carried out by SGS Qualifor and SmartWood:

- 9 forest management certificates (1,687,996 ha);
- 80 Chain of Custody certificates through 2 certification groups (Forest Owners Consulting Center 2004);
- 14 members with a combined area of 6128 ha.

Currently, the PEFC group in Latvia has 190 members, with a combined certified area of 37,860 hectares. PEFC certification can be obtained through one certification organization (SO Vides kvalitāte) accredited in Latvia for direct certification:

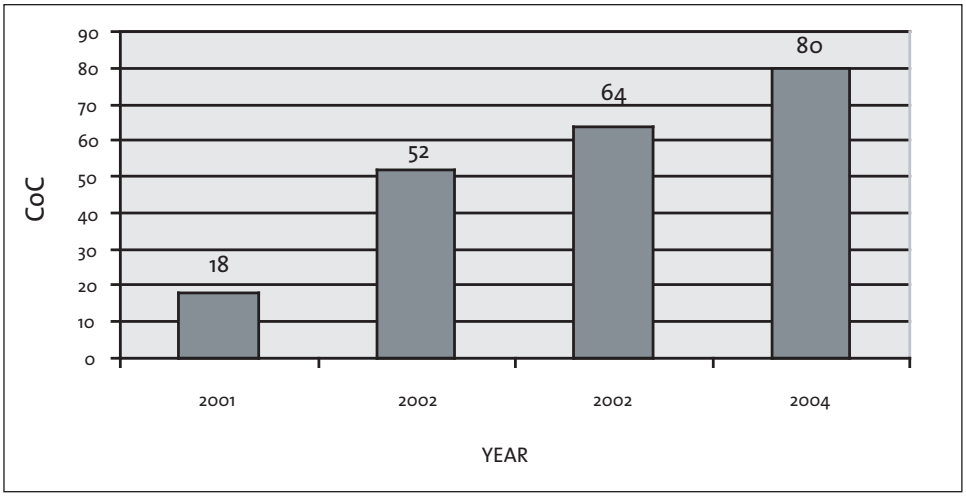
- 2 forest management certificates (7,150 ha);
- 13 Chain of Custody certificates through one regional certification group;
- 190 members with a combined area of 37,860 ha.

The Riga municipal forests are split into industrial forests (56,000 ha), which are certified under FSC, and city forests (primarily for recreation, no logging – 4,000 ha), which are certified under PEFC.

Current Status of the Certified Marketplace

There has been steady growth in the certified wood market in Latvia. In 2003 1.64 million m^3 of FSC-certified timber were produced to meet the demands of the certified market. In addition, the appearance of consulting firms such as Forest 2000 indicates that there is a market for services related to the certification process.

Figure 5 Growth of the certified timber supply chain



Source: Growth of the certified timber CoC — www.fsc.org and www.pefc.org

It is estimated that 1.7 million m^3 of certified wood were processed or sold in the Latvian market in 2003. Of that amount, approximately 10 percent reached consumers outside Latvia as finished products (mostly as sawn wood, furniture, plywood and joinery manufacture). At this time, there is practically no consumer demand for certified timber or wood products in Latvia.

It is difficult to estimate the volume of certified timber within the market, because none of the forest management or chain of custody (CoC) certificates follows certified wood from the forest through the finished product on the international market. Instead, wood can be traced by the quantity of certificates granted by accredited certification organizations, or by calculating the amount of certified timber products available to the consumer and then tracing back through the chain of custody. This system does not allow comprehensive analysis of the flow of timber through various countries and under various certification schemes. In addition, different certification schemes have different accounting systems, and there is no information available on the actual amount of certified timber sold to consumers and manufacturers.

Effects of Certification

Because of the recent completion of the certification process in state forests, and the low level of certification in private forests, it appears to be too early to judge the effects of certification in terms of actual changes in forest management, environmental or social conditions, or the timber trade and other economic aspects. Nonetheless, the certification standard-setting process itself has so far produced some interesting effects within the Latvian forest sector.

LVM lists the following expected benefits from forest certification (LVM 2003b):

- continued improvement of standards and quality of forest management;
- internationally and nationally accepted evidence that forests are well managed;
- improved competitiveness and stable timber sales in the future;
- elimination of the flow of illegal timber.

Despite these lofty goals, it is our opinion that forest certification in Latvia is best seen as a system for evaluating forest management practices against national and international standards, rather than as an instrument for solving any specific forest sector problem. Because of the existing structures and traditions within Latvia's forest sector, those forest owners who receive certification have likely been managing their forests according to strict standards in the first place.

It is difficult, if not impossible, to distinguish the effects of certification from the implementation of Latvian forestry standards on the functioning of LVM. Because of the relatively recent changes in the Latvian forest sector following independence, forest sector reforms and the establishment of LVM have taken place alongside the emergence of forest certification. In fact, one of the founding mandates of LVM was to ensure that Latvian forestry practices would reach international standards through certification. Training of LVM employees and partners, as well as its internal record-keeping structure, were set up to be in accordance both with FSC certification standards and with LVM's own internal goals for improvement and sustainable forestry. Thus, because the Latvian forest sector was essentially being reconstructed "from scratch" during the 1990s, many certification requirements could, in effect, be incorporated into the fundamental structures and functions of LVM.

Power

It appears that certification grants certain powers to the certified organizations. For example, Skaidrīte Albertiņa of the Forest Owners' Association explains, "Forest certification is not mandatory, but rather a voluntary process. If someone doesn't want to, he can choose not to certify his forest. We (FOA) will simply exclude this forest owner from our circle, because we believe that he is not willing to work within the sustainable forestry system" (Jaunbelzere and Ivans 2000). Thus, the Forest Owners' Association can use certification as a de facto requirement for acceptance in the cooperative, thereby asserting the importance it places on the management standards set by certification.

Environmental groups have undoubtedly benefited from the certification process, as it has provided a formal, structured medium in which to pursue their agendas. According to Jānis Rozītis of WWF Latvia, "Certification standards have become an instrument for environmental and social interest groups to use in influencing the quality of forest management. There is no doubt that they have succeeded in doing so."

Social

The social ramifications of certification might well be the most significant effects to be seen so far. Essentially, the certification process has opened the doors for collaboration among the various forest sector groups.

As reported by both WWF representative Jānis Rozītis and FOA/PEFC representatives Skaidrīte Albertiņa and Ēriks Zaķis, the process of developing certification standards has been helpful in improving cooperation and communication among forest sector groups. Rozītis (2004) reflects, "Thanks to the process of developing FSC standards, the ability of various interest groups to communicate with one another has improved. . . . People simply sat around the table and calmly debated their ideas. At the end of the standard design process, there wasn't a single point that disrupted the flow of the meeting due to an inability to reach consensus."

Similarly, Albertiņa (2004) believes that "gradually interest groups are beginning to understand that diversity is good, even in [the certification] field, and there is no longer as much infighting." Even a timber industry representative (anonymous interview 2004) commented that certification has helped foster dialogue and mutual understanding among forest sector interest groups.

Forest Owners' Association director Ēriks Zaķis suggests that certification allows forest owners to participate in forest policy more directly than they are able to within the governmental structure. In an August 2001 interview (Timbare 2001c) he recalled that the Forest Owners' Association participated in drafting the government's Agricultural Assistance Program, but that nothing much came of it. Consequently, the Forest Owners' Association experts had begun drafting their own "forest program," of which one of the most important tasks – forest certification – was already being implemented.

An improvement in job safety was noted by Forest Certification Council representative Guntars Lagūns (2004), who commented, "Without certification it would have been a long time before we'd see any helmets being used in the forest."

The experience of certification within LVM was used as a tool to help educate its employees and partners about the benefits of sustainable forest management. In particular, it became clear that when interacting with forest workers, demanding that things be done in one or another way would often not achieve the desired management goal, whereas educating people about the interconnectedness of forest management processes would allow them to make the proper decisions on their own — a much more effective form of management.

Finally, the sentiments of a timber industry representative (anonymous interview 2004) indicate that certification provides a means for institutionalizing transparency. Since certification is a voluntary process, he comments, it demonstrates the forest manager's willingness to work legitimately, above and beyond the extent to which forestry legislation is enforced. Certification has also helped improve the credibility of government management, by providing public access to all of LVM's forest management plans.

Economic

There appears to be a general sense that certification has not yet produced any tangible economic gains for most forest owners. Forest owners do not seem to have made up the losses incurred through certification expenses by receiving higher prices when selling certified timber. The costs of forest certification in Latvia, depending on the size of the territory and the type of certification, range from US$.03/ha (in state forests) to approximately US$6.00/ha (in private forests).

Timber manufacturers may have begun seeing some benefit from certification. According to Baiba Rotberga of the SFS (2004), as well as an anonymous timber industry representative (2004), some timber producers have benefited from certifying their forests to the extent that they can find and secure a niche in the certified timber market.

Environmental

According to WWF representative Jānis Rozītis (2004), the major environmental effect of certification so far seems to be that Latvian forest legislation is beginning to incorporate some of the environmental requirements of the FSC standard: "I think that today's best knowledge of forestry is incorporated into the Latvian standard — of course, to the extent that compromises with the business sector have been reached. If there haven't been specific results, then at least there have been trends. Some major priorities, like landscape ecological planning, have not been incorporated into the standard, but indirect pressure and discussions during the standard development process have forced LVM to begin work on developing landscape ecological planning."

For her part, Baiba Rotberga of the SFS (2004) finds that certification provides a touchstone for SFS employees to refer to, when bringing up issues of environmental protection with forest owners. Certification has in a sense legitimized environmental concerns in forest management. Similarly, she adds, certification has also provided environmentalists with a medium in which to bring environmental issues to the public's attention.

CONCLUSION

Summary

At this point, FSC certification is clearly the most widespread standard in Latvia. Reasons cited for the preference of FSC over PEFC seem to stress not so much the standards themselves as the institutional design processes through which they were created. In particular, criticism has emerged about the structures and decision-making processes of the PEFC system. In its "Statement on PEFC," WWF Latvia (2004) alleges that PEFC does not grant full voting rights to its non-industrial members (such as social and environmental NGOs and consumer groups). The WWF statement goes on to challenge PEFC for limiting public access to certain

documents. Similarly, a timber industry representative (anonymous interview 2004) claims, "the PEFC certification process is pretty closed and secretive." Finally, although her agency is officially neutral, Baiba Rotberga (2004) of the SFS expressed her personal opinion that PEFC is driven largely by certain stakeholders and business interests, whereas FSC is more socially acceptable.

Regardless of their affiliations, everyone whose opinion has been expressed in this case study seems to agree that for the time being, although few are yet to see any real economic gains from certification, the forest sector as a whole has benefited from the improved communication and collaboration that has emerged during the certification process. On the environmental front, it seems that certification has served to legitimize environmental concerns within forest management, and might be helping to raise the bar for forest management in all of Latvia's forests.

It remains to be seen to what extent the comprehensive certification of the State Forests will carry over into private lands. Geographical fragmentation, lack of an adequate social infrastructure, and economic hardship all pose obstacles to a smooth continuation of the certification process in Latvia's remaining forests. On the other hand, the precedent for certification has been set, existing forestry laws are comparable to certification standards, and markets for certified forest products will only continue to grow. It will be interesting to follow the developments and interactions of these many factors.

Roadblocks and Challenges

Since all of Latvia's State Forests have been certified, it is perhaps most appropriate to discuss challenges primarily in terms of certification of privately owned forests. In its application for endorsement to the FSC Board in 2001, the Latvian Forest Certification Council (LFCC) provides a fairly comprehensive picture of the climate in which certification has been developing in Latvia. These conditions provide insight into the challenges that the certification movement faces; they are summarized as follows (LFCC 2001):

- The dramatic changes in legislation, ownership structure, industry, and society during the past created a situation in which issues of sustainable development, environmental protection, etc. were not social priorities.
- There were no traditions of cooperation between NGOs, industry and government organizations in Latvia prior to independence; currently social organizations remain small, and they lack experience, funds, and clearly defined goals.
- The average citizen of Latvia (including foresters) believed strongly that Latvian forests are managed in a good manner; that there are enough protected areas; and that forests are in good condition and all necessary improvements can be implemented through legislation.
- There was no local demand for certified forest products in Latvia.

- There was no knowledge about certification, forest certification, FSC and similar issues in Latvia.
- There were a lot of poorly organized private forest owners in Latvia who knew nearly nothing about the forests and had no ideas for what to do with their forests.

The overall uncertainty that accompanied the transition of the Latvian economy placed long-term concerns such as sustainable forestry on the national back burner. Within the government as well, early efforts were directed toward more basic priorities, such as formulating a national forest policy. Thus the government perhaps could not invest the energy, support or finances into certification that might have helped certification develop even more strongly.

Of course, a major obstacle for private forest owners was and continues to be the cost of certification. While LVM was able to pay for the cost of certifying the state forests under its authority, there has been no government funding or subsidies available for private forest owners. In addition, no domestic market for certified wood has yet developed in Latvia. Thus, small forest owners who may lack the capacity or need for exporting timber products may not be encountering any economic pressure for their wood to be certified.

Forest owners and other interest groups continue to be poorly organized and often lack clear goals, let alone the means to reach them. SGS Forestry assessment in 1999 found insufficient identification and inclusion of interest groups, including the State Forest Service, municipal officials and NGOs, in the certification process (Lagūns 2004: 58).

Further, there is a general consensus that legislation and traditions in Latvia were sufficient to protect the country's forest resources. For many, certification may seem like yet another hoop of international bureaucracy to jump through on the way for Latvia to join the European Union. This letter to the editor, published in a major newspaper in 2001 reflects a common skepticism and attitude about forestry (Timbare 2001b):

> In the Jan. 12 issue of 'Neatkarīgā' the article 'Private Forests are being Certified' reads more like an advertisement for certification than information for forest owners. The essence of forest certification is not clear. Will an FSC certificate ensure that my forest will grow and develop more successfully? What does the FSC certificate mean? What does it give the forest and the forest owner, and how much does it cost? 'The Latvian FSC standard is currently still in the development phase,' writes [journalist] Ilze Timbare. Yet it turns out that [an FSC] certificate can already be obtained. Is this some kind of 'half-baked' certificate? And what if I don't want to sell my forest to Great Britain or Sweden, but simply leave it for my grandchildren?

While certification activists may not say it in so many words, one final source of frustration within the certification process might be conflicts of personality between FSC and PEFC supporters, or even within supporters of one standard. The Latvian forest

sector is small; people know each other and many alliances are made and broken on the basis of personal relationships. Several people interviewed for this study acknowledged that one of the major accomplishments of the certification process, for both FSC and PEFC, was the reduction of infighting between interest groups; this suggests that the level of infighting when the process began was probably quite significant. Overall, many of the obstacles mentioned with respect to certification are social in nature, and stem from pre-existing cultural conditions in Latvia.

Future Developments

The future not only of certification, but of Latvian forestry as a whole, will be influenced strongly by the emergence of the private forest sector. In particular, the forest sector would benefit greatly from the development of a strong forest owners' association or cooperative. Such an organization could counterbalance the influence of timber buyers and other "middlemen" who are currently over-represented in the Latvian market. In addition, the implementation of group certification schemes would improve the efficiency of forest management, while lowering costs. A further benefit would be to upgrade the quality of forest management planning, which is currently at a low level due to the fact that so many private forest owners gain little or no income from their small parcels.

Future Research

Forest certification is increasingly functioning as a market instrument. The fact that two separate certification schemes are currently operating in Latvian forestry causes problems from a market perspective. Manufacturers of timber products receive conflicting demands from the consumer ends of the two certification schemes, while timber producers and forest managers might be increasingly burdened with the expense of receiving both certificates. An important research direction, therefore, would be to explore the possibility of a certification scheme with combined FSC and PEFC labelling. This could be accomplished in one of two ways:

1. Developing a forest certification standard that would be accepted by both FSC and PEFC.
2. Promoting the accreditation of certification organizations with FSC and PEFC simultaneously, so that they are qualified to certify forests and chain of custody under both standards at once, thereby minimizing costs.

As we have seen, the future of certification in Latvia hinges largely on two factors: the actions of private forest owners, and the interactions between the two certification schemes. If the financial, logistical, and social obstacles to certification can be minimized, then the potential benefits of certification will begin to emerge more clearly.

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Anonymous [representative from a large lumber and wood processing company]. June 2004. Telephone interview by Ansis Actiņš.

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Rotberga, Baiba [State Forest Service Asst. General Director]. June 2004. Telephone interview by Ansis Actiņš.

Rozītis, Jānis. May 2004 [WWF Latvia Forest Program coordinator]. Email interviews by Mara Schwartz.

LISTS OF ORGANISATIONS CONSULTED

Organization	Date	Location
Latvian Forest Certification Council	14 May 2004	Email correspondence
PEFC Latvia Council	6,10,12,20 May 2004	Email correspondence
State Forest Service	1 June 2004	Riga, Latvia
WWF Latvia	5,6,27 May/ 7,9 June 2004	Email correspondence
SIA Silva (largest forestry business in Latvia)	3 June 2004	Email correspondence

ACRONYMS

FOA	Forest Owners' Association
FSC	Forest Stewardship Council
IG	Initiative Group for Development of a Certification Standard for Latvian Forestry (a WWF Working Group)
LFCC	Latvian Forest Certification Council
LVM	*Latvijas valsts meži* (State Joint Stock Company "Latvia's State Forests")
PEFC	Pan-European Forest Council/Programme for Endorsement of Forest Certification
SFS	State Forest Service
WWF	Worldwide Fund for Nature

Forest Certification in Poland

*Piotr Paschalis-Jakubowicz**

ABSTRACT

The forest management certification process in Poland was initiated in 1996 by the Regional Directorates of State Forests. The intent was to obtain confirmation of the high level of forest management in Poland and to satisfy the requests of timber products exporters, for whom having a certificate was a necessary requirement demanded by buyers (and later served as a marketing tool). Currently, nearly 85 percent of forest areas managed by State Forests are Forest Stewardship Council (FSC) certified. Estimates indicate that some 80 percent of lumber in Poland is FSC-certified, particularly timber for further processing, mainly into wooden construction fittings, pulp and paper, and furniture, and all special grade timber for processing into veneer and plywood. The present market situation of certified timber is driven by customer demand.

The greatest achievement of forest certification in Poland is its common use by State Forests, resulting from the documented compliance of the certification rules with Polish forest management rules. In some cases, associating the final effects of certification in Poland with the pressure of different interest groups was perceived as a negative feature of the applied certification methods. It was decided in 2003 to join the Programme for Endorsement of Forest Certification (PEFC) and to start building a certification system based on the PEFC rules, requiring development of a national standard consisting of principles, criteria and indicators for carrying out forest management.

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INTRODUCTION

The problem of certification in forest management is controversial for many reasons, including its cost and benefits, trade and voluntary certification, labeling, transparency of rules, national sovereignty, domestic regulations, the scientific basis for defining and measuring sustainable forest management, the roles of governments, and injured professional pride on the part of foresters who are suddenly criticized and forced to test their professional and practical knowledge of the trade (Ozinga 2001, Thornber 1999).

At the same time, upward trends regarding threats to the natural environment, including forests, can be observed. The blame for this has been placed partly on forest management methods. So it became urgent to find a way out of the situation and several solutions to the problem have been considered. Certification adopted, as a rule, the development of an evaluation system based on appropriate indicators and criteria that would enable objective determination of the impact of the conducted business activities in forestry and its impact on the surrounding natural environment and elimination of incorrect solutions.

The decision to pursue such a system, supported with the guarantee of independence of the certifier, made it possible for the process to begin in Poland. It was believed that confirmation of the high level of forest management in the case of the dominant state forest property would be one of the essential arguments in favour of such a forestry model. Certification is a particular challenge for European and Polish forestry, where most forest areas are under uniform, strictly defined and centrally verified management. At the same time Poland was one of the first European countries that decided to carry out forest certification. Forest certification and Chain of Custody (C-of-C) of wood were introduced to Polish forestry by decision of the General Director of State Forests in 1995 as a sort of external, independent audit of forest management carried out by State Forests. Currently, nearly 85 percent of forest areas managed by State Forests are FSC (Forest Stewardship Council) certified (Certyfikacja 2000).

The whole process of forest certification was based on the Principles and Criteria for Natural Forest Management, a document consisting of 10 Principles and 52 Criteria (Qualifor Programme 1999a). These principles and criteria were described and explained carefully in a number of papers. The essential legal documents, directives and rules of forest management were reviewed and a detailed review was carried out in compliance with the rules in a randomly chosen Forest District. The practical verification of the principles and the system of task accomplishment was conducted following the QUALIFOR program, considering both environmental and socio-economic aspects (Qualifor Programme 1999b).

The principles of forest management carried out by State Forests fully meet all the FSC requirements; this is confirmed by the reports produced after the completion of certification. Simultaneously, in many sectors of Polish forestry and in specific directives for carrying out individual forest operations, sets of instructions and rules of proceeding, as well as in the timber raw material records, Polish forest management standards significantly exceed the level of requirements set by FSC.

This was the beginning of the socialization of the decision-making process in Polish forestry, which was done by voluntary and government organizations that were not professionally associated with forestry. It is thought to be one of the most important trends in the future development of multifunctional forestry.

BACKGROUND FACTORS

Historical Context

Forestry Problems

The contemporary concept of sustainable and balanced development of forests is referenced first of all to utilization of forest resources intended ". . . to manage and use forests and forest areas in a manner and at a rate ensuring the preservation of their regenerative potential in a long run" (Paschalis-Jakubowicz 1998). The implementation of the principles of this concept entails formulation and fulfillment of the following requirements:

- the guarantee that the socialization of the decision-making process in forestry will proceed;
- the assumption that the whole forest ecosystem should be the object of forest management;
- the assurance that the man-nature relationship is safe for the environment.

Conducting forest management requires not only professional knowledge of forest issues by a forest owner or manager, but also the implementation and verification in practice of the documented, described and transparent rules which, for the rest of the community, must be convincing proof of sustainable forest management. In the case of some practice areas (e.g., forest conservation, silviculture and forest management) we already have a lengthy history of their application and improvement.

Accession to the European Union with its documented, systematized, as well as science- and practice-proven rules and principles of proceeding, which are subject to thorough monitoring and mandatory implementation, is especially important for the current and future development of Polish forestry. Already having such a fully transparent system, the State Forests and the entire Polish forestry sector were convinced that those were satisfactory documents and should be fully acknowledged and approved by all interested parties, both professionals and the public.

The need for further development of theoretical work dealing with these issues seems apparent. Forest utilization, being an integral part of forest resources management, is closely related in time and space to other areas of forestry. Silviculture, forest management, and forest protection programs should be implemented according to a hierarchy of objectives that govern multifunctional forestry — meaning forestry that serves a broad set of social and environmental, as well as industrial, functions. Sustainable forest utilization should be a guiding principle in deriving direct and indirect benefits from all forest functions. In terms of

individual and societal development, forest utilization should encourage enhancement of the natural environment and impose restrictions on its excessive use (Simula *et al.* 2001, Rametsteiner *et al.* 2001).

Forest utilization, perceived in this way, encompasses the area of forest science and practice starting with the production process, technological preparation, raw material transport, characterization of wood and non-wood products and their practical use, as well as relationships between forest utilization and ongoing changes in forest environments including changes in the functions that forests serve.

The change in intensity of utilization of a given function served by a forest has a direct effect on other forest functions. Particularly important is the role of the production function in shaping indirect economic effects, which include:

- biomass production and energy accumulation, including wood and non-wood production (i.e., game, forest mushrooms, forest fruits from herbaceous cover, resin, herbs, bark, ornamental and Christmas trees, etc.);
- property protection and income provision;
- workplace welfare;
- land reclamation;
- various public services (water and air quality, aesthetic value, etc);
- social and recreational services.

The above-mentioned concerns are taken into consideration in formulating new principles of forest certification in Poland. There is no doubt that the importance of the protective and social functions of forests will increase as a result of changing societal preferences. The consequence will be an increase in production costs related to many products supplied by forests. But first of all it will substantially affect production and wood and non-wood harvest costs.

The primary requirements that have to be taken into consideration when formulating criteria for sustainable development of multifunctional forests are:

- a statement that forest utilization is a function of natural resources utilization;
- a statement that no conflict exists between the assumptions of the concept of forest sustainability and forest utilization;
- a cost calculation for sustainable and balanced utilization of multifunctional forests;
- defining principles for the development of forest work techniques and technologies that are safe for the environment;
- finding necessary solutions for an optimal utilization structure:
- adoption of methods for verification and monitoring of changes in utilized forest ecosystems within the framework of adopted and verified procedures including forest certification.

In practice, sustainable forestry, evaluated in accordance with the criteria and indicators of sustainable development, is evolving toward individual management of a single forest unit. This situation may entail limitations in making globally important decisions (for example, those concerning climatic changes) at a national or continental scale. Logically, the assessment of the degree of compliance for carrying out the management of a forest sub-district with the criteria and indicators of sustainable development should be the sum of all assessments on a local level (Dubois *et al.* 1996).

Furthermore, the popular concept of "joint management," which was developed during the last decade of the twentieth century, also lacked a strong theoretical foundation. This concept promised "shared benefits" from joint forest management; however, as it quickly turned out, these "shared benefits" were understood differently by different groups and individuals and were not always able to satisfy general expectations.

Joint Forest Management is an attempt to put into practice one of the theses of forest utilization concerning greater public participation in decision-making processes in forestry. It seems that this concept implies that the direct inclusion of local communities in the full decision-making and program implementation process should be readily welcomed. This issue was of paramount importance for the successful introduction of the certification process in Poland. Another criticism of the commonly used criteria in sustainable forest utilization is that the present generation will not be able to fulfill their obligations towards future generations as defined by forest practices.

In practical forestry, forest management cannot guarantee that forests will fulfill all their functions or balance the intensification of these functions in a given time and space. Therefore, we need to rely even more on the proven criteria and guiding principles in forest management and forestry, which should be constantly monitored and re-evaluated.

Additional criticism against sustainable forest utilization is that it is difficult to anticipate future generations' expectations regarding the condition, appearance and diversity of future forests. How should one make a judgment call on whether an individual tree or portion of a forest deemed beautiful by us will be considered equally beautiful in 150 years? Our present sense of beauty and use of forest or trees may not be the same as that of our ancestors or descendants. Unverifiable and arbitrary judgments should be hence excluded from certification systems.

Recent years have brought to light new data on the impact of forest utilization technology on forest environments. This has allowed for the construction of new models of forest machinery and tools and the development of new work technology. These new solutions brought a new term to common use: "environment-friendly technologies". Such approaches force us to make a full economic and operational analysis of the timber procurement process, where the requirements of ergonomics and work safety take priority over other considerations. Hence, we are dealing with an a priori assumption that a hierarchy of criteria must be maintained, and that is why the certification system should be flexible.

Traditional/Existing Policy Responses

The contemporary concept of multifunctional forestry incorporating sustainable use of forest resources has a strong tradition in Polish forestry. The evolving approach to forest utilization, to start with the utilization of simple raw material through the maintenance of sustainable wood production and sustainability of forest utilization, has finally resulted in an understanding that the development of all functional aspects of forests is necessary.

This basic problem with the understanding of the nature of forest utilization stems from the sense of having an unlimited forest resource base in Europe, including Poland. Moreover, it was based on a belief that conditions guaranteeing continuous forest growth were met. Forest utilization was strongly encouraged by forestry science. The Brundtland Commission Report of 1986 undoubtedly contributed to making the necessary shift in thinking about forest utilization. Work by the Forest Commission in Strasburg in 1990 has furthered the new understanding of forest utilization, while placing special emphasis on forestry (Paschalis-Jakubowicz 1995).

Entries made to the Agenda 21 and Forest Rules during the UN Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, which formulated basic principles for the continuous and sustainable development of forestry, were of great importance to forest users. Unfortunately, some of the issues regarding the objectives and scope of forest utilization were left unresolved. It is worth noting that the points of debate concerning the scientific grounds for certification were the weakest components of the Earth Summit conclusions.

The mid-1990s in Poland were characterized, on the one hand, by intensive restructuring from a centralized to a market economy and, on the other, by maintenance of the consolidated structure of the State Forests, which was deemed capable of securing basic environmental safety for the entire country.

The Forest Act of 1991 determined the three basic functions of forests — productive, ecological and social — and made them equal in significance. Amendments to the law in 1997 recognized that not only the forest stand, but also the whole forest ecosystem, should be the object of forest management; further development will be oriented towards strengthening the ecological and social functions of forests (Szujecki and Paschalis-Jakubowicz 1997).

Moreover, Poland's anticipated accession to the EU, the implementation of state forest policy, the ratification of the Climate Convention, the fulfillment of obligations under the Biodiversity Convention, MaB, and others had broad implications for the timber industry and forestry, with significant, environmental impact on Polish Forest Policy.

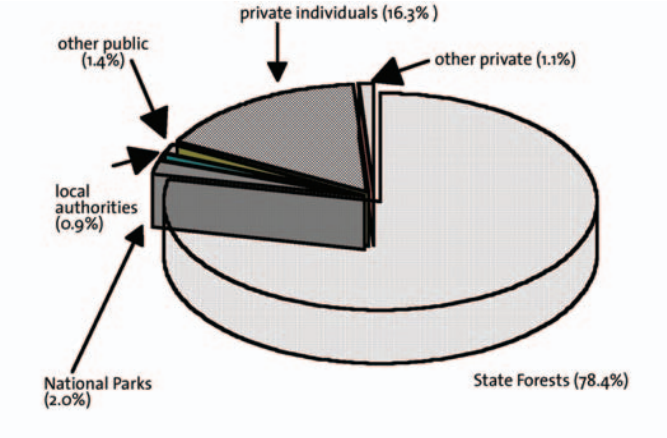
Also important to understanding the consequences of using the adopted methods of timber and non-timber forest products harvesting are legal regulations in Poland that relate to both ergonomic and economic issues and forest utilization in the broad sense of the term.

Structural Features

Ownership and Tenure

Approximately nine million hectares of Poland is forested; this is slightly under 30 percent of its total land area (FAO). Publicly owned forests predominate, accounting for 82.6 percent of the total forested area. Within this, 78.4 percent is under the management of the State Forests. The remaining state-owned forests are components of National Parks and local administrations (Figure 1).

Figure 1 Forest ownership structure in Poland

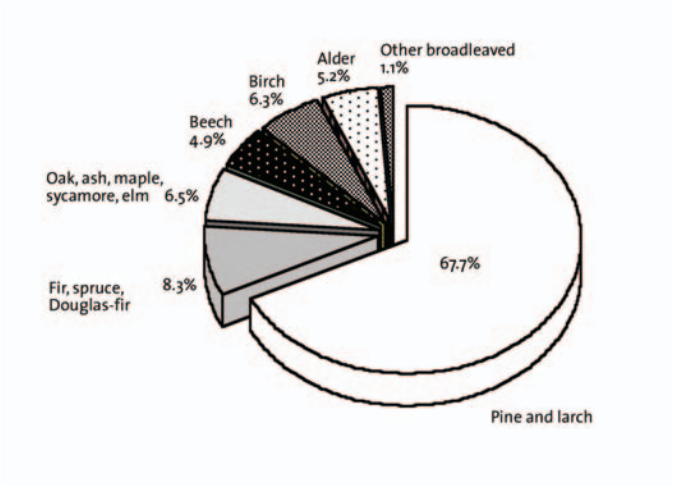


Source: State Forests Report 2002

Privately owned forests in Poland account for approximately 1.5 million ha and are managed by nearly 1.5 million owners (Forest Community 1999). The actual ownership structure of forests, with the prevalence of State-owned forests and more than 1.5 million of small-scale forest holdings (with an average size of a holding of approximately 1 ha) was at one time considered undesirable by some groups of politicians and citizens. They argued for a change in forest ownership structure, pointing to the experiences of neighbouring countries in which the privatisation and restitution of forests had begun. But this position has not prevailed.

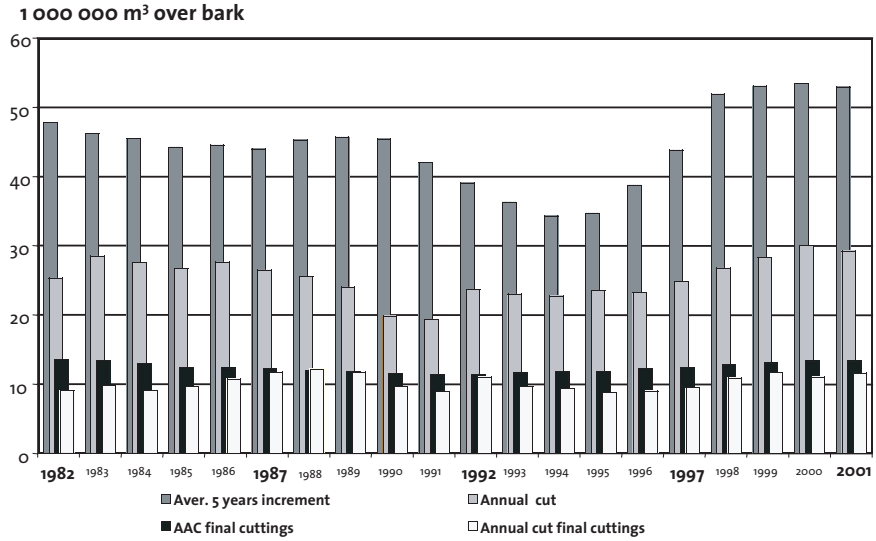
Conifer species dominate in Poland, accounting for 77 percent of its forest area. Overall, coniferous forests comprise 66.6 percent of Poland's forest area, broadleaved forests 15.4 percent and mixed forests 18 percent (Figure 2).

Figure 2 Dominant tree species



The timber resources of the State Forests continue to increase. They reached 1.6 billion m^3 of merchantable timber over bark in 2003. Including the resources in private or local authority hands, the overall reserve (standing volume) in Poland's forests is an estimated 1.9 billion m^3 of merchantable timber over bark. The amount of timber harvested in relation to the increase in volume in forests is still very low, amounting to approximately 50 percent of annual volume increment growth of the standing timber resources (Figure 3).

Figure 3 Increment, allowable annual cut, and annual cut in State-owned forests in Poland, 1982-2001



Source: State Forests Report 2002

Unlike in many European countries, forestry in Poland is characterized by greater harvest of dead trees with a simultaneous marked contribution of the highest quality assortments of wood: veneer, plywood, resonant-wood and construction-wood. In addition, the accumulated impacts of industrial pollution and the long-lasting drought in Polish forests have led to the intensive self-thinning of trees. Thus a large amount of timber is harvested from standing dead trees.

Markets

The free market situation in Poland required the transformation of the timber industry, which largely lacked the capital investment. The timber industry had to undergo a difficult adaptation period, dearly paid for with many bankruptcies and a general financial collapse. The timber industry and the recipients of raw materials and semi-finished and finished wood products experienced great payment difficulties. Another difficulty was an unstable relationship between forestry and the timber industry. The timber industry, having to accept tough free market economy laws and having neither the capital nor economic backup, looked to the National Forestry Agency for capital, which it could not provide at the time.

Most high-grade Polish timber, both in the form of veneer and ply sheets, is exported to the EU countries, while raw wood and unbarked wood goes to the EEC countries. Imports of raw wood and barked wood are highest from the EEC countries, while veneer and ply sheet imports are highest from the EU countries. The main importers of Polish raw and barked wood are Austria, Czech Republic, and Germany; sawn wood of a lower quality class goes to Germany, Italy and the Netherlands. Veneer and ply sheets and high-grade sawn wood are sold mainly to Germany and Sweden, while other wood profiles are sold to Germany, France and Spain. Imports of raw barked and unbarked wood come from Lithuania, Slovakia and Ukraine, while sawn wood comes from Ukraine, Germany and Russia. Veneer and ply sheets are imported from Germany, Finland and Sweden, other wood profiles from Sweden, Germany and Estonia.

The share of non-wood products both in exports and imports is inconsiderable and amounts to several million USD. These include forest fruits, venison, forest mushrooms, and Christmas trees. The major importers of non-wood products from Poland are Germany, England and Italy. Poland imports from Ukraine, Belarus and Russia annual imports of round wood of up to 750,000 m^3, and exports approximately 350,000 m^3. Annual harvest of forest mushrooms (data from 1996) was 940 tons, and of forest fruits was ca 5,683 tons.

In Poland, the timber industry uses 27-29 million m^3 of wood per year. Forty-six percent of wood is used in production of sawn wood, 27 percent in production of wood-based panels and 20 percent in pulp and paper manufacturing. In 2002 the wood industry, furniture industry and pulp and paper industry accounted for 2 percent of the national GDP; the forestry sector accounted for 0.23 percent. In 2002 about 275,000 people were employed in the Polish wood sector and about 60,000 people in the forestry sector.

However, the Polish wood market is shaped by exports on a large scale, especially by furniture exports. The share of exports in relation to production is the following (Figure 4):

Figure 4 Share of exports and imports in the production

	Exports	Imports
Sawnwood	24%	15%
Wood-based panels	30%	18%
Wood pulp	3%	37%
Paper and paperboard	49%	66%
Furniture (in value)	87%	13%

Source: Central Statistical Office 2003

In 2002, the value of wood products exports (including furniture, pulp, and paper) was 5.5 billion USD and it constituted 14 percent of Poland's total exports. The proportion of imports was 25 percent. Foreign markets receive 49 percent of wood products, and furniture is the third group of goods of the highest value of all Polish exports (about 7 percent).

Lack of a firm strategy as to the appropriate size of a wood company or the direction of wood processing (e.g., towards a larger number of sawmills, or a larger number of OSB or MDF board factories) had a crucial impact on the timber market strategy adopted by State Forests. Uncertainty about the volume and trends in the demand for timber raw materials called for actions aimed at the elimination of risks on the timber market, both for forestry and the wood industry. Other actions, such as a new marketing strategy, agreements between forestry and timber sectors, promotion of timber, also stimulated support for the broadest possible introduction of certification.

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

At the end of 1995 a proposal was submitted to the State Forest Agency by firms importing wood from the State Forests to carry out certification of those forests at their expense. The offer provided that the certification process would include review of the basic legal documents, directives and principles governing forest management and production and also verification of the degree of their practical accomplishment. This offer found support among Polish wood buyers producing various products for export, who claimed that their products would have some advantage over competing products in the wood market if they were certified and labelled as coming from properly managed forests. SGS-QUALIFOR soon visited Poland to assess existing forest operations against the Forest Stewardship Council Principles and Criteria (FSC 2003, Certyfikacja 2000). In this way, Poland became the first European country whose state-owned forests were subjected to FSC certification. The process was carried out

by SGS QUALIFOR, a certifier based in England, in compliance with procedures of the Quality Forest Management Programme of SGS Forestry. Initial FSC certificates were issued in 1996.

In undertaking certification, it was assumed that an independent organization was entitled to determine, on the basis of a verifiable procedure, that forest management complies with sustainable forest management rules and acts in favor of the community and forestry. It was also assumed that such an organization could be the main instrument of improvement of forest resource management principles. These assumptions can be disputed, yet they stem first of all from the mounting expectations of forest product users regarding assurance of forest conservation. The preparations and consultations concerning certification principles in forestry took several years. They were conducted in close cooperation with scientists, politicians, various groups of NGOs, and forest practitioners. The main premise on which the entire undertaking was based referred to the necessity to support legal activities in favour of environmental protection, including both business activities in forestry and in the regulations concerning use of raw materials, semi-products and the products directly harvested from forests and subject to further use or processing. At the same time it was acknowledged that it was relatively easy to perform evaluation and certification of operations in forest conservation or silvicultural areas. The biggest controversy concerned the rules and procedures pertaining to the methods of evaluation and control of forest utilisation, specifically of raw material harvesting.

The adoption of certification also had roots in changing public opinion. A segment of the public and certain community groups in Poland began perceiving forests and forestry as areas whose management should be more open to public scrutiny. At the same time, it was believed that certain forestry actions should be made subject to verification by external agencies. These factors are as follows:

- The effect of an accumulation of industrial pollutants and their impact on forests was reflected in the form of defoliation and dieback of trees.
- A notable increase in timber harvest in the form of sanitary cuts to 5 million m^3 was observed in the 1990s, of which 66 percent was deadwood. This fact was used in campaigns conducted by various groups as an example of the errors committed by forestry. Certification was therefore an argument for countering such opinions.
- The growing pressure of society and non-governmental organizations (NGOs) demanding more rigorous protection measures and stopping activities and forest projects which, in their opinion, are not in compliance with the principles of sustainable development of forests. Pressure from non-governmental groups was exerted in an indirect way, most frequently by placing materials undermining the forest administration's activity in the press, radio and television, or indirectly, by organizing street protests, happenings and distribution of leaflets, pamphlets, open letters, etc. At present, some hundred non-governmental organizations, including international ones, are registered in Poland.

To understand the whole complexity of the issues associated with the introduction of forest certification in Poland, the historical context is required. Bearing in mind that the system was applied to the forests belonging to the State Treasury, the analyses of the reasons that led to it can be helpful in popularising the certification rules.

As a result of the controversy aroused by the FSC system, particularly among private forest owners in Europe, and due to the lack of reference in the FSC system to the national standards of carrying out forest management in Poland, it was decided in 2003 to join the PEFC (Programme for the Endorsement of Certification Schemes) organization and start work on building a certification system based on the PEFC rules, requiring development of a national standard of principles, criteria and indicators for carrying out forest management.

Institutional Design

The legal basis for forest management activity lies in the Forests Acts of September 28th 1991 (Official Journal of Laws of 2000, No. 56, Item 679), the Regulation of the Council of Ministers of the Republic of Poland of 6 December 1994 concerning detailed principles of financial management in the State Forests (Dz. U. No. 91, Item 444), as well as other regulations and orders issued on the basis of the Forests Acts by the Minister responsible for the supervision of the State Forests, the Minister of the Environment.

The State Forests manage forests that are the property of the State Treasury (with the exception of National Parks, Treasury-owned agricultural property resources, and resources that are the subject of perpetual leases). Within this framework it engages in forestry, as well as the management of land and other fixed and mobile assets connected with it. Organizational systems and management of forest resources, based on principles of sustainable development and handled centrally by State Forests, might appear hermetic to an outside observer.

The main task of the State Forests is the pursuit of sustainable forest management in accordance with the forest management plan, a document drawn up individually for each Forest District in reference to ten year cycles of production, in which the objectives for each fragment of forest are detailed, along with the means by which these are to be achieved. A further element is a nature conservation programme setting out methods by which forests, genetic resources and landscape features are to be protected and the needs of science are to be met. Rational management should in turn assure the protection of soils and land particularly prone to degradation or damage, or of special public significance, as well as surface and underground waters. A further important aspect of forest management is the production of timber and forest by-products. Specifically, the State Forests engage in forest management in accordance with the principles of the universal protection of forests, the assured persistence of forests, the continuous and sustainable utilisation of all forest functions, and the enhancement and augmentation of the forest resource (Rykowski 2003).

Privately owned forests in Poland present special management problems. Apart from a few forest communities (no more than five), the remaining 1.4 million forest owners conduct forest management largely on their own, although technically under

supervision by state agencies. Key factors inhibiting the efficiency of forest management on privately owned lands include extensive (on the European scale) forest fragmentation, lack of full information on the volume of resources, and unplanned timber harvests or low economic activity of forest owners. State Forests therefore indirectly supervise private forests using the same regulations, rules and instructions as apply in the State Forests. These focus primarily on balanced forest development, considering the criteria and indicators adopted during the Helsinki Conference. Although ten year Forest Management Plans are being developed for all State Forest areas, about 30 percent of other ownership forests do not have such plans.

Standards

When the State Forests were certified, the FSC was the only program offering services consistent with Polish policy. FSC procedures require compliance of forest management activities with widely accepted forestry guidelines, applicable laws, property ownership structures, and local community rights. Chain of custody verification and labeling also has been carried out separately. Certification is essentially a procedural affair. But the choice of standards – and of who should be certifying whom – has become politically contentious. In fact, however, the certification standards refer to the realization of state forest policy and to protecting the interests of all the groups with forestry and the timber industry. These concerns are at the heart of most arguments concerning certification. (WWW Guide 1996) Standards are based on documented agreements, covering technical specifications/criteria, made to ensure that processes (such as forest management), products or services are fit for their intended purpose and developed by stakeholder participation.

All standards, criteria and indices used by FSC were in compliance with the requirements set forth by the applicable Polish regulations for the management of a sustainable, multi-functional forest. No problems with definition interpretation or lack of definition clarity existed, and no criteria or indices were absent during site inspections. On the contrary, FSC certification guidelines for forest management seem to be clear and simple when compared with some of the more "sophisticated" methods in use. This assessment is applicable to all the guidelines with no exception. Several examples are pertinent:

> *Local Community Rights*. The general law of the Polish Republic, including forest law, grants each Polish citizen equal rights. However, certain historic provisions of the Royal Law are still in force, although they apply only to certain individuals. Some individuals retain special rights to fish within the territory of National Forests because they were granted those rights by Royal charter in the 17th century. Polish law also guarantees general access to forests of all kinds of ownership, and the collection of mushrooms, berries and forest fruits for personal needs is free of charge.
>
> *Development Planning*. Forest planning schemes for some forested areas have a documented continuity spanning 280 years. The number of criteria and indices for such schemes exceeds FSC requirements.

Plantations. In the climate conditions of Poland, forest tree plantations have never been promoted on a large scale. Plantation forestry is also seen as inconsistent with long standing European forestry traditions and with the development of multifunctional forestry. On the other hand, it is extremely difficult for many European countries including Poland to accept the idea that 10 percent of its forest area must be excluded from utilisation and left as a virgin fragment of forest. The necessity of maintaining biological diversity of forests and protecting natural resources may be sufficient justification for this requirement.

Maintaining Natural Forests. Europe has an exceptionally small area of natural forest. Poland is seen as one of a few European countries that can boast of having close to natural forests. Principles applied to protect this type of forests are drawn up and their implementation continuously monitored.

After the first forest certification in Poland, successive certifications were implemented on a still greater scale. Moreover, positive appraisals of early certifications created a more favourable atmosphere for later ones, despite costing the National Forests ever-higher fees. In the years since 1996, almost all of the forest areas in Poland administered by State Forests have received FSC certificates.

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

The following discussion is based on eight years of experience with FSC certification in Poland. It should be clearly understood that reactions to certification concern only the results obtained during audits in the State Forests. This did not in any way stifle the heated discussions and polemics regarding other certification systems waged in various communities and professional groups, including researchers, journalists, foresters and state administrations of various levels, with one reservation: they all related exclusively to the State Forests. No position on this question has been voiced by other forest owners.

In practice, there have been no significant formal or organizational obstacles to carrying out certification. Credit for this goes to solid preparation for each phase preceding the on-site audits. This involved production and distribution of background information, pre-start consultations at all decision-making levels, and an in-depth analysis of specific rules and methods to be used in the certification process. A very important element in securing acceptance of certification results was the presence of forestry professionals on the audit team.

With all these preparatory actions, and following extensive debates in the trade press, foresters became comfortable with certification rules and procedures. When the preliminary audit results were announced, the forestry community of Poland fully embraced the idea of certification as an additional documented tool for monitoring the state of forest management. It also understood that submitting to

"external control" legitimises the approach to forest management in Poland, since the audit applied to the real time activities of routine forest operations. The fact that the final conclusions of the certification process contained no recommendations for changes in forestry administration and management in Poland added to the positive reception.

The most frequently voiced reservations to certification conducted according to FSC rules concerned the following issues:

- Why is certification conducted on the level of small forest management units and its results not automatically applied to larger units (Regional Directorate of State Forests) administered in an identical manner? The problem boiled down to a very logical train of thought: since every square meter of state forests in all of Poland is subject to the very same administrative procedures and forest management rules, why is a certificate earned in any forest segment in Poland not tantamount to a certificate awarded to all administrative units of the State Forests?
- No satisfactory explanation was received regarding the disagreement that occurred during certification of Białowieża Forest woodlands. In both Polish and general European public perception, these woodlands are associated with the commanding stature and beauty of historic primeval forests and woodlands covering the breadth of Europe in early medieval times. The group certifying the woods of Białowieża Forest administration districts did not recommend awarding a certificate for these woodlands. Foresters considered this as blatant overstepping of the certification rules and procedures under the sway of certain ecology groups and political pressures. In reality this had no importance whatsoever, both for the future of Białowieża Forest and the manner of managing its forest resources, nor did it improve relations between the "eco-minded" groups and the forestry community. The only consequence was a tarnished reputation for major international organisations and associations, but it had no impact on future relations with the "eco-minded" communities in Poland. It also did not have a significant impact on future forms of FSC cooperation and contacts in Poland.
- Should forest areas be administratively subordinate to State Forests but managed by, for instance, university forestry faculties, and, serving as forestry research and experimental stations, be subject to certification. This approach provoked much debate and general disapproval, since it is evident that, given the research nature of these facilities, conduct of forest management in experimental stations does not have to and frequently does not meet all criteria of sustainable development.
- Private and other types of forest owners have shown complete disinterest in certification.

- The absence in Poland of certification standards and procedures other than the FSC was seen by the state administration as a situation that should be changed. It was then proposed to develop certification standards according to the PEFC system (PEFC 2004 a,b). As a Pan-European and, currently a global initiative, the PEFC model fits perfectly into the "free market and free competition" concept, and its reliance on national standards is quite attractive. It seems likely that the establishment of a Polish PEFC standard will lead to some parity between the PEFC and FSC systems in the near future (Valtanan 2001).
- The virtual absence of information about potential financial advantages to forestry of having been awarded certification. The meagre information, which came from producers of wooden window and door fittings and flooring panels, was often interpreted, particularly in the initial phase, as allowing the timber-processing industry to reap undeserved profits from the efforts of foresters. Hence it was often suggested that possession of the certificate should be grounds for increasing the price of timber.
- It should be noted that despite having the entirety of forest management covered by certification, the lack of interest from buyers of the raw and semi-processed materials and by-products of forestry (e.g., mushrooms, berries, honey, etc.) means that this important segment of forestry is still not included in the market as a certified product.

Forest Owners

Research on certification and eco-certification conducted since 1993 by the SGGW Forest Utilization Faculty under this author's guidance shows that the present ownership structure of forests in Poland does not provide mechanisms for inducing private forest owners to seek certification. At the same time, it appears that owners of community forests should soon show interest in certifying their forests. The latest research (results from 1999-2000) concerning the timber market in Poland and growing interest shown by private forest owners subscribing to forest owner associations clearly support such development trends.

Current Status of Forestland Certification

To date, FSC is the only organization involved in the certification of Polish forests. The first cycle of certification of the forests administered by the State Forests in Poland was nearly complete as of early 2004, with the sole exception of the Regional Directorate of the State Forests in the south of Poland. The reasons for this last exception involve procedural issues reflecting errors committed in contract negotiations, and are not substantively related to forest management. In several Regional Directorates, a follow-up audit was done and the certificate validity was extended for another five years, and in other Regional Directorates work is underway to prepare for signing new contracts.

The awarded certificates have equal status in terms of any type of forest operations in Poland, both in terms of forest protection, silviculture or utilization of forest resources. There is also no distinction made between forestry operations partly subsidised by the state budget (such as afforestation or reforestation of woodlands) or State Forests financed operations commissioned to outsourced contractors.

Representatives of the wood industry still hold the opinion that it is necessary that the timber raw materials purchased by them have a certificate. This is true for both the large, international companies (e.g., Intercell, IKEA, etc.) and small plants exporting their products. Such opinions are presented in the trade literature and by Polska Izba Drzewna (Polish Timber Board).

In late 2003 intensive efforts were launched to develop certification standards consistent with the rules, criteria and indicators applied by Programme for Endorsement of Forest Certification (PEFC), by drafting its own Rules for the Verification of the Chain of Custody of Wood within the Polish Forest Certification Scheme (Peter 2003).

Current Status of the Certified Marketplace

Certification was introduced in Poland with the acceptance of State Forests, but mainly under pressure from private business, which was procuring and processing timber and exporting finished wood products to other countries. It is estimated that at present some 80 firms processing wood in Poland have chain of custody certificates issued by FSC. The State Forests remain neutral in this respect, neither encouraging nor discouraging timber buyers from seeking C-o-C certification.

Estimates indicate that some 80 percent of lumber in Poland derives from FSC-certified operations, particularly timber for further processing, mainly into wooden construction fittings, pulp and paper, and furniture, plus all special grades timber for processing into veneer and plywood. The present market situation of certified timber is driven by customer demand, even though only 80 of the timber processing companies hold C-o-C certificates. Buyers interested in procuring timber from State Forests receive assurance of FSC certification of the State Forests involved. All of the strategic timber customers of State Forests (in total over half of annual wood production), such as Castorama, IKEA, Leroy Merlin, OBI, British Premium, Intercell, etc., demand certificates as a pre-condition for contracts. Smaller scale buyers of wood operating in local markets, and manufacturers of specific wood products with export contracts, need C-o-C confirmation.

At present, the real bottleneck to increasing the number of firms with C-o-C certificates is the shortage of timber processing firms capable of meeting the applicable rules and procedures. As a rule these are small-scale woodworking operations, without demanding customers, applying obsolete processing and production technologies, operating in local markets, within a limited range of products.

It can be said that certification conducted according to FSC rules and standards has been accepted, embraced and universally adopted by State Forests. Efforts are well underway in FSC to develop Poland-specific criteria and proper forest management benchmarks.

EFFECTS OF FOREST CERTIFICATION

Power

No systematic research has been carried out on questions of local community attitudes to forest certification processes in Poland. Spot surveys, observations and comments from the Association of Foresters and Wood Technology as well as Regional Directorates indicate that earning certificates by the State Forests in many instances exerted a positive impact on attitudes of civic interest groups toward forest administration; but it was just as often claimed that it had no impact whatsoever on forest administration. This divergence of opinion was due either to closer contacts of the two communities during the audit or, in part, to a realisation that this is a process with final effects reaching far beyond the local perspective on environmental issues. The need for involving public opinion, or at least segments of it, not so much in the decision-making process, but rather in assessing the quality of forestry management, has most certainly resulted in reducing tensions between the foresters' community and local administration, NGOs, and the media.

On the other hand, although one should not overestimate the significance of certification in controlling corruption, acceptance of external review of the manner and method of forest management appears to be a very important consequence of changes taking place through the certification process. This is integrally bound up with free movement of goods and service requirements, where an important element in the forest/wood scene is a C-o-C document, potentially aiding development of both sectors. This should be noted on both the local and on the national scale. The above assessment is based on data concerning turnover and the principles of sales of timber, analysis of documents pertaining to illegal harvesting of timber, as well as to documents of the Central Statistical Office.

Social

In the social sphere, the impact of certification in Poland is very difficult to assess, certainly requiring more time and application of research tools from the arsenals of sociology, in the application and interpretation of which this author does not feel qualified. There certainly have been positive changes in Polish society in the communication of objective information and education regarding certification and its relation to the Brundtland Commission Report of 1986 and the 1992 Earth Summit in Rio de Janeiro, as well as results of the Ministerial Conference for Protection of Forests in Europe (MCPFE) held in Helsinki in 1993 (Walder zum Leben 1996).

This awareness allowed for avoidance of serious conflicts, at least dulling the edge of attacks against forestry and foresters, occurring over the past fifteen years or so. Attempts by non-governmental organizations to change forest policy largely failed due to their lack of arguments rooted in the forest-related experience. Even proposals that could have been proven on the basis of research or experience could not be and were not unconditionally accepted by the forest administration.

On the other hand, demands by local communities to safeguard forestry jobs, collect local taxes from State Forests, and maintain public access to forestlands were bolstered by the certification process. In these areas certification has also had the effect of exacerbating potential conflicts. Examples of problem areas include the requirement to reduce the volume of timber harvests, exempt large fragments of forests from economic exploitation, or leave quantities of dead wood in the forest. One of the weakest points in the certification rules, not just there, but in the whole model of sustainable forestry, is the question of ensuring forest sustainability while fully respecting the demands posed by local customs, regulations, and real social needs of access to forest resources. Insurance of public access and use of minor forest products, in the form of collecting mushrooms, berries and other forest floor produce for personal needs, is guaranteed by the Polish law of the land, and certification rules do not change anything in this respect. Nonetheless, procuring lumber, even for the personal needs of local residents, is possible only in the form of purchase.

An important additional trait of certification standards is their relative clarity as regards interpretation. Their terms are universally acceptable and, hence, also acceptable to local communities. This is also linked with educational aspects, which bond eco-minded groups much closer to the cause of protecting their shared environment than to any other cause.

Economic

At present, appraisal of economic effects must be limited to registering certain developments, without quantifying them. However, studying the documents from the past five years published in the reports of listed companies, wood-processing plants, and official statistics, including transaction prices on the timber market, the timber harvest volume and changes in the technology of work while performing various forest operations, wages for workers and general labour costs, the following can be stated:

- It is certain that the sale of lumber has been considerably facilitated by meeting the certification requirements demanded by buyers of semi-processed and processed wood and wood derivatives;
- The present market for wood in Poland does not register changes in the price level of lumber sold from forests, irrespective of whether or not it is chain-of-custody certified;
- The need for strict observance of restrictions on the use of pesticides, herbicides, application of shields, ergonomic barriers, work safety devices and gear, etc., increases production costs and requires application of advanced technology and techniques. From this perspective, the costs of lumber production have increased.

Environmental

One of the fundamental dilemmas, which should be addressed when assessing certification, concerns the question of whether or not environmental objectives are being

met. The model of forest management applicable in Polish forestry practice answers this question in the affirmative. If this is to be accepted, then one could claim that certification will add nothing new in this respect. But, even in Poland, one can perceive positive changes in forest management resulting from introduction of a certification system.

First of all, certification provoked extensive debates in the forestry community as to whether provisions of certification rules were well founded and whether they were reflected in the respective regulations governing conduct of forest management (WWF 2003-2004). Such discussions were and are being conducted both on the level of Parliamentary Committees, the Council of the Ministry of Environment, State Forests and scientific circles. Many of the outcomes of these discussions were reflected in the documents describing the principles of proceedings in forest resource management in Poland (Acidy i instrukcje 2003, 2004). Second, a parallel circuit has been created to allow for checking the efficacy and appropriate design of actions to safeguard forest ecosystems. Thus, capacity for environmental learning has been strengthened. Third, certification was one of the triggers for discussions regarding heterogeneity of forest sites, discussions that were badly needed in the forestry community. Fourth, the volume of harvested timber is independent of certification, just as it is immune (to a considerable degree) to the rise or decline of market demand for wood, because these volumes are dictated by the state and the needs of the forests themselves.

CONCLUSION

Summary

Rising threats to the environment, including forests, partly due to forest management methods, have necessitated a search for additional means for the legitimization of forestry and the wood raw material delivery chain. The initiative of wood product manufacturers and buyers was a strong and positive impulse, significantly promoting and supporting certification. These desires for public acceptance and market strength were the primary factors facilitating introduction of certification to Polish forestry. A highly advanced identification of the proposed certification standards, criteria, and indicators with the approved paradigm of sustained, multifunctional forest management is likely to be the most important factor promoting certification in Poland in the future.

If the status of a certificate obtained by a forest owner — regardless of the legal form of forest ownership — were to equal the requirements of national standards for forest management and, additionally, were an efficient tool for the promotion of forest raw materials, semi-products and products, then a substantial growth in the interest in and impact of certification would occur.

The greatest achievement of certification in Poland is its common use, resulting primarily from the consistency of the certification rules with the forest management rules in Poland. Efforts to attribute the effects of certification in Poland to the pres-

sure of different interest groups is perceived as a negative feature of applied certification in many quarters.

Certification is not and cannot be a panacea for all the challenges of forest administration and management. It cannot solve the problems resulting from processes such as natural and controllable species succession; the necessity of converting forest stands and removing ecological and industrial disasters; managing land resources in unbalanced management conditions; extremely complex activities aimed at preserving biological diversity; and many other specialist solutions. To expand its effectiveness in the future, certification should move in the direction of setting framework standards based on specific, detailed references to a given country or even a given region.

Roadblocks and Challenges

Documentation of the above issues is very impressive and the author's views and opinions reflect the richness and complexity of the subject matter that forestry has to deal with (Paschalis-Jakubowicz 1996). The author mentions forestry as the primary agent since the importance of the problem can only be seen from the perspective of forestry, and not from a single sector of the timber industry, since it represents the long-term actual interests and aspirations of the citizens of our country. This is because forestry acknowledges and understands the diverse and irreplaceable role forests play in our lives. This apparent unfairness in treating the timber industry and forestry is illusory, since the strength of this union lies in the fact that they are united on many levels by common interest.

The analysis of findings published in the literature and my own research results lead me to outline a few problem areas where the timber industry's and forestry's interests converge and where they depart. I have focused on problem identification and not on ready-made solutions, believing that the evidence supporting the claims will point further discussion in the right direction and help create a basis for appropriate agreements.

The main thesis of this study is that forestry and the timber industry play strategic roles in the development of the State, and any rulings must be consistent with a strategy for the balanced development of our country in its current phase. An assumption must be made that certain forms of cooperation between the timber industry and forestry will be and should be induced by the State.

The collapse of several or even one branch of the timber industry (especially lumber) in Poland could result in deregulation of the Polish timber market, with consequences that are difficult to foresee. In particular, it could lead to the removal of wood from certain segments of the market and could stimulate more wood substitution in the market. It could also lead to a sudden increase of imports, stimulated by competitive prices and EU resolutions on the flow of goods and services and free trade, as well as the lack of sale opportunities in Poland for certain raw wood materials according to dimension, quality, or type of wood.

The size of demand for raw wood materials in Poland will be determined mainly by the country's economic growth conditions, and in particular, by the growth of forestry and the timber industry.

Poland's participation in the EU structure will have a certain impact on the way our timber resources are utilized, both in qualitative and quantitative terms. It should be expected that the EU member countries also will have to make certain readjustments in the extent to which they utilize their own raw materials base. Unfortunately, one should expect a trend towards unfavorable change (prices and harvesting volume) in certain current and future EU member countries (Sweden, Finland, Austria, Germany, the Czech Republic, Slovenia, Romania, Bulgaria) and for Polish forestry. Leaving the above decisions only to the forest and timber industry decision makers may not be the best option and may not result in optimal solutions.

Certification was proposed as a system whose aim was to unite, not to divide, and it was seen as a solution that could be easily accepted by both producers and buyers. Meanwhile, in Poland, somewhat later than in other European countries (especially the EU member countries), a more intensified operation of external factors on forests and forestry began.

The strong pressure of NGOs has led to social conflicts, especially on the local level. Opinions presented in the mass media have undermined both the rationale of forest management and scientific bases of forestry. The two largest non-governmental organizations operating in Poland for many years, the Polish Forest Society (operating since 1882) and the Association of Engineers and Technologists of Forestry and Wood Processing, were not able to settle these disputes despite their intensive publishing and educational efforts. This situation was further complicated by other factors, such as the lack of representation of individual forest owners in local and state administrations; difficulties in defining and classifying national parks, natural protection areas, nature reserves, and legal documents such as cadastres in Poland according to the European standards; the lack of development planning schemes; destabilized timber markets; inflation; an unstable government in Poland, and many other reasons.

There is no doubt that one of the serious problems forestry faced was the sense of harm and injured professional pride on the part of foresters, who, convinced of their high qualifications and good forest management that met all the requirements for sustainable forestry according to the Helsinki criteria, having secured professional and social standing, were suddenly criticized by different groups of NGOs and individual environmentalists and forced to test their professional and practical knowledge of the trade.

It was then decided at the level of the former Ministry of Natural Resources Protection and Forestry and the General Directorate of the State Forests that State Forests needed to introduce a certification system for forest management, provided that the certification team would consist of independent members having an appropriate background and knowledge of forestry and enjoying a good standing with the NGOs. Moreover, the State Forests fully accepted the scheme of work and procedures implemented by FSC upon analyzing the criteria and guidelines thereof. A daring

decision was made to subject all forests to the certification process carried out by independent agencies.

Future Developments/Scenarios

Analysis of the certification experience in Poland to date leads to the conclusion that the certification processes will proceed in forestry and the wood industry and will be treated as a necessary condition for further development of both sectors. Development of certification processes is an important factor influencing financial conditions and, following this, any further growth of the forestry and timber industry. Separation of wood and wood products into two separate certification processes may be declining. One should expect the deepening of "chain of custody" certification.

Certification rules must evolve in line with the changes taking place in environmental protection and management, including forestry, in different parts of the world. Europe is not an exception, and the versatility of changes is, contrary to common opinion, very high. It means that natural, geographic, cultural, economic, traditional cultural, religious, or political conditions largely determine the effectiveness and possibility of using and enforcing the use of certification directives.

It is believed that neither today nor in the future will the non-governmental organizations' pressure have any crucial impact on changing the decisions about forest resources administration and management in Europe or in Poland. A much greater role should be assigned to the governmental agencies' position in ensuring compliance with the signed international agreements and influences of the international market on raw materials, intermediate products and forest products.

Future Research

The list of study areas associated with certification is very long, including issues related to forestry, wood processing, economic aspects of environment management, public communication, and biodiversity. However, it is believed that the greatest current challenge in this area is to find answers concerning the functioning of natural and deformed forest ecosystems under stress.

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ACRONYMS

C-o-C	Chain-of-Custody
EEC	Eastern European Countries
EU	European Union
FSC	Forest Steward Council
MaB	Man and Biosphere
MDF	Medium Density Fiberboard
OSB	Oriented Strength Board
PEFC	Programme for the Endorsement of Certification
SFM	Sustainable Forest Management
UNCED	UN Conference on Environment and Development
WWF	World Wide Fund for Nature

Forest Certification in Russia

*Maria Tysiachniouk**

ABSTRACT

Although the newly emergent market economy in Russia has brought danger to Russian forests, particularly old growth forests, the cross-border influence of market forces has also encouraged the importation of sustainable forestry practices to Russia. The FSC has been the major force in this process. More recently, PEFC-oriented initiatives have begun to play a role. This case study describes the processes through which the FSC is being imported to Russia, the relationship between chains of supply and chains of demand, and the effects of FSC certification on local as well as national institutions. It contrasts the relative effectiveness of FSC certification in the European part of Russia with that in the Asian part, where markets currently show less sensitivity to the value of sustainable forestry. The study demonstrates the essential role of environmental NGO networks, especially WWF and Greenpeace, in promoting FSC certification.

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INTRODUCTION

The most prominent impacts of certification in Russia are the protection of high conservation value forests and the introduction of intensive forest management practices in place of extensive ones, which were dominant during the socialist period. Social impacts include better worker protection and security and new forms of intersectoral dialogue and civil society institutions, thus enhancing development of democratic initiatives in rural communities. To date, economic impacts are less significant, although FSC certification has given greater stability and security to Russian firms in contracting with western buyers.

Certification is still in an early stage, but the number of export-oriented companies pursuing certification is likely to grow. To date, support varies by region. It is much greater in the European part of Russia than in the Far East, largely owing to European buyers' demands for certified wood, who themselves came under pressure from non-governmental organizations to make such demands. Russia's border with China, on the other hand, has experienced countervailing trends: corruption on both sides of the border, extensive illegal logging, and a wild market with no control over wood prices (Kotlobay 2002). High demand for non-certified wood by Asian markets, especially those in China, as well as corruption networks, both Russian and Chinese, and illegal operations, have prevented certification in Siberia and the Russian Far East.

There are currently three different efforts to promote forest certification in Russia. Two initiatives are devoted to promoting nationally-based systems that would facilitate the certification process, make it cheaper, and involve Russian auditing firms. The third initiative promotes the Forest Stewardship Council (FSC) system. The first national initiative, currently in the early stages of its development, is supported by the World Wildlife Fund (WWF),[1] the large national company[2] Ilim Pulp, and the Ministry of Natural Resources of the Russian Federation. This initiative has produced standards that are procedurally and substantively consistent with FSC requirements, and at the same time can be accredited through the Programme for the Endorsement of Forest Certification (PEFC – formerly Pan-European Forest Certification) system.[3] The second national initiative is supported by the Union of Timber Merchants and Timber Exporters and by some former officials from the former Ministry of Industrial Science.[4] They also are planning to accredit their national certification system through PEFC. Both Russian national forest certification initiatives are still in the preparatory stages and, due to personal disagreements among the promoters, are unlikely to merge.

The FSC initiative is also at an early stage, but has progressed steadily, especially since 2003. The FSC is promoted primarily by WWF, as well as by other environmental NGOs and WWF partnerships, such as WWF-IKEA, WWF-Stora-Enso, and companies that are certified or going through the certification process. The attitudes of governmental agencies toward the FSC have recently changed from negative to positive. New institutions related to the FSC, such as a National Working Group, Regional Working Groups, and FSC certification centers are functioning effectively. National and regional standards have been developed, but not yet

[1] WWF only recently started to support voluntary forest certification. Before 2003, WWF was promoting only FSC.

[2] Interview with Ilim Pulp staff responsible for forest certification, June 2004.

[3] Interview with the president of the council, academician Isaev, May 22, 2005.

[4] The Ministry was closed by President Putin in March 2004.

accredited by FSC international. A national FSC office was established in February 2005. Several model demonstration projects are now in place, including the Pscov Model Forest, promoted by the WWF-Stora-Enso partnership, where a system of intensive sustainable management has been implemented and demonstrated. A radically new system of forest management planning using economic norms and a scenario approach with optimization techniques is being used. A second model forest, Model Forest Silver Tiger (Preluzie[5]) has also demonstrated that the transition to sustainable forest management is possible, even where forestland is rented by small Russian companies. The forest management certificate of Priluzie leskhoz has helped the small company Luza Les to receive a chain of custody certificate.

[5] Silver Tiger was formerly the WWF, but now is an independent NGO; it continues to be a WWF partner.

However, some certified operations involve more positive changes then others. There are some "weak" FSC certificates, such as that of Holz-Dammers (where IMO was the auditor) in the Archangelsk region, which was temporarily suspended and later reinstated. In general, only in model forests, where WWF has closely scrutinized and guided the certification process, have all stakeholders, including the general public, been involved in decision-making. In the majority of FSC-certified territories, the local public was informed, but not involved in the certification process. However, even in cases where the public does not directly participate, forest communities receive benefits embedded in the FSC's system of social standards. Additionally, FSC-certified companies claim that FSC certification has given them stability and security in the marketplace. In two cases companies claim that their income grew by ten percent.

This case study focuses on national voluntary forest certification initiatives only in the "initial support" section; FSC processes are discussed throughout the paper.[6]

[6] The study is based on semistructured interviews conducted with all types of stakeholders, several case studies of certified territories, and analysis of documents.

BACKGROUND FACTORS

Historical Context

Forestry Problems

The lack of effective state forest policy[7] and the permanent restructuring of the forest management system[8] are the primary barriers to sustainable forest management in Russia. In general, forest policies and legislation in Russia do meet sustainable forest management criteria, but forest planning and management do not.

[7] Interview with TITANs Holding representative, July 6, 2004; interview with State Duma Sub Committee of Forestry representative, July 5, 2004.

[8] Interview with academician Isaev, July 6, 2004; interview with Nefediev, Ministry of Natural Resources representative, March 2004.

Traditionally, socialist forestry was extensive and forestry operations moved quickly from place to place allowing relatively large clearcuts, although they were typically small in comparison with unharvested areas. Currently, the size of allowable clear cuts has been reduced, but forestry remains extensive. Timber operations are most concentrated in the regions bordering Europe and Asia. Many high conservation value forests (HCVF), especially those close to the borders, are in danger of being heavily logged. Many areas near roads and transportation arteries are being deforested, while there is not enough capacity and interest in newly established firms to conduct forestry in the regions far from the borders.

Illegal forestry bloomed after Perestroika, when Russia experienced an economic downturn. The "wild privatization" of the early 1990s saw the rise of organized crime in forestry. This new brand of "Wild East" capitalism involves former ruling elites of the Communist Party, as well as regional governments, administrators, law enforcement agencies, and police forces. Although illegal logging reduces government revenues, it serves the interests of the corrupted elite. After government forest production failed, its former employees found a new lucrative niche in illegal logging, especially in the Russian Far East. After Russia's borders were opened, satisfying China's monumental demand for wood became a profitable option. In many regions, Russian mafias formed around illegal logging, with levels of government involvement varying from place to place (Tysiachniouk and Reisman 2004).

The practice of illegal logging spread not only among organized crime networks, but also among villagers, who could make quick money to help them survive in a poor and unstable economy. The flow of wood across the border skyrocketed throughout the 1990s. Today, according to WWF expert estimates, illegal wood trafficking approaches 5.5 million cubic meters per year. Primorye Kray alone sees an annual illegal harvest of $150 million US (Kotlobay 2002), which is equivalent to approximately half of the Kray's annual budget.[9] The transition to a market economy, coupled with government collapse and economic depression, have caused this rapid rise in commercial crime.

[9] WWF booklet, 2002.

The torrential flow of illegal wood from the Russian Far East into northern China has thwarted stabilization of the region's faltering economy. Since China prohibited the logging of its own forests in 1998, the Russian Far East has become its major timber source. Twelve percent of Russia's total wood exports go to China (Ptichnikov and Voropaev 2002). The combination of massive and unrestricted timber demands and Russian corruption has allowed illegal logging to spiral out of control in the Far East.[10] The black market for wood is very strong and has become deeply rooted in the region over the last 10 years. This area has a large border with China and is also close to Japan, Taiwan, Hong Kong, and South Korea. These East Asian markets and the low demand for certified wood play an important role in the character of forestry currently occurring in the Russian Far East. Chinese markets have proven highly insensitive to environmental concerns, as well as to Russia's domestic troubles.[11]

[10] Interview with Greenpeace representative, March 2004.

[11] Interview with head of WWF-Vladivostok's Forest program, 2002.

These powerful forces are promoting illegal logging of the forests of the Far East, particularly the valuable cedar-broadleaf forests. The rush to sell illegal wood also circumvents a regional need to invest in domestic wood processing enterprises. Today, nearly 50 percent of the timber exported from the Russian Far East goes to China in the form of round logs.[12] China re-exports a high percentage of the Russian wood that it purchases in the form of furniture and other processed goods. In addition to losing its resources and tax money, Russia is sending employment opportunities in wood processing to China. Furthermore, prices of illegal wood are extremely low and hamper the efforts of responsible forest producers to engage in normal export business. This situation in the Russian Far East makes certification extremely difficult.

[12] WWF booklet, 2002.

Some forest enterprises in Russia also feel insecure due to inter-corporate conflicts, colloquially called "forest wars." These fights are based on challenges to the honesty

of some actors during the privatization process of the 1990s, and some companies are seen as taking over the business of the others. Two major holdings, TITAN[13] and Ilim Pulp,[14] are involved in a "forest war" with another one. These fights inhibit investments in new equipment, infrastructure, and certification.

Policy Responses

Russia's current system of forest management is in a state of constant restructuring. In 2000, President Putin closed the Federal Forest Service and transferred its responsibilities to the Ministry of Natural Resources. The Ministry of Natural Resources thus became responsible for both protecting and harvesting forests. The interactions among different divisions of government are further complicated by shifting jurisdictions. In 2004, after Putin's reelection, the restructuring of the Ministries in Russia continued.

Today forest management is governed by the Forest Code of 1997, which is expected to be significantly amended. Currently the Ministry of Natural Resources, in conjunction with the Ministry of Economics, is developing the new code. The new code is under consideration by the State Duma and has completed the first stage of hearings. In the new code, mechanisms will be created to facilitate foreign investment in the Russian forest sector. In order to increase investments, the code will make awarding concessions easier (Petrov 2003). The code will reconstruct responsibilities of state agencies and probably will lead to privatization of *leskhozes.*[15] Concessions will give more responsibility to companies that use forests and make them responsible for forest revitalization and thinning. In earlier editions of the code, private property in forests after 2010 was proposed. However, this proposal was opposed by thousands of different stakeholders.[16] Most likely, the land will remain public property for many years to come,[17] but mechanisms will be developed for forest privatization in the long run.

Non-governmental organizations, especially the Forest Club[18] and WWF, have taken an active role in the development of the new forest code. They prepared joint suggestions on the new code and submitted them to the government officials in charge of drafting it. In addition, environmental organizations promote sustainable forest management through their own programs and projects. For example, WWF has supported enforcement brigades formed under the Ministry for Natural Resources to catch illegal loggers in the Far East.

In the 1990s, Greenpeace International organized several direct actions against companies that were harvesting HCVF in the Karelia and Arghangelsk regions. In partnership with other NGOs they created maps of all old growth forests in Russia and distributed them to both Russian forest producers and western forest consumers (Tysaichniouk and Reisman 2002). Simultaneously the Taiga Rescue Network[19] organized consumer boycotts in Europe for products produced from Russian HCVFs. The campaign caused Stora Enso significant monetary losses,[20] thus prompting the company to develop an environmental policy and to encourage its daughter firm, STF Strugy, which operates in Pscov region, to seek FSC certification. Other companies

[13] Interview with TITANs vice director of public relations, July 6, 2004.

[14] Interview with Ilim Pulp certification director, June 3, 2004.

[15] Interview with State Duma Deputy, July 5th, 2004. Leskhozes are survivals from the Soviet era, when they combined forest policy making, regulatory, management and harvesting functions at the local administrative level. Their current status remains somewhat unclear, as harvesting and management functions are gradually being given over to other actors. The process is highly uneven and variable across the 1800+ leskhozes in the Russian Federation. Today, some observers argue that since ownership of the forests is vested in the Russian Federation, leskhozes should be made more directly accountable to national policy making institutions. (Petrov 2003).

[16] Interview with academician Isaev, July 6th, 2004; interview with Communist Party Representative at State Duma, July 5th, 2004.

[17] Interview with State Duma Deputy, July 5th, 2004.

[18] The Forest Club consists of Greenpeace, Center for Biodiversity Conservation (CBC) and the Social Ecological Union (SEU).

[19] International NGO with headquarters in Sweden.

[20] Interview with STF-Strug manager, Strugy Krasnie, 2002.

were also impacted by the consumer boycotts and started to think about what kind of wood is involved in trade with European consumers. The NGO boycotts were focused on firms that had been operating legally in Karelia. One result of the boycott was a movement to establish the Kalevala National Park, a movement steadfastly resisted by both industry and the government. The Park was finally established in 2004, but has not brought any income to the economy due to a lack of infrastructure. However, the boycott was a turning point in the interaction among stakeholders. Both firms and governments began to consider NGOs as stakeholders.[21] NGO trans-boundary campaigns can be considered the pre-history of Russian certification.[22] Since the early 1990s, WWF and the Forest Club have promoted forest certification.

[21] Interview with Burmistrov, WWF staff, director of the Pscov model forest, Strugy Krasnie, 2002.

[22] Russian NGOs are generally staffed by highly educated people with a high level of expertise.

Structural Features

Ownership and Tenure

Russia's forests cover 1.2 billion hectares – 69 percent of the entire country.[23] They are publicly owned and administered by the Federal Ministry of Natural Resources, whose policies are carried out through numerous regional branches. Local administration is still carried out by *leskhozes*, the traditional forest management agencies deriving from socialist times.[24] The *leshkozes* are guided by ten year plans developed by the Forest Inventory Agency, an engineering and planning institution usually situated in the region, and subordinated to the Ministry of Natural Resources. Although the *leskhozes*[25] have little input into the formulation of the long-range plans, their authority includes renting tracts of forest to private timber companies as well as performing rudimentary maintenance (such as thinning) and protecting the forest from thieves and natural disaster. A central role of the *leskhozes* is to ensure that the operations of the private timber companies are consistent with laws and regulations. The rent paid by the timber companies is transferred to the federal government, rather than kept by the *leskhoz*. The *leskhozes* are funded almost exclusively from federal government budgets. The actual funding level, however, is often below that appropriated in the budget. Thus, the negative element in public ownership of forests originates not in the ownership itself, but to a larger extent in relationships between federal, regional and local government units.

[23] Conception of Development of Forest Management for 2003-2004, approved by Prime Minister Kasianov, 18 January 2003, #69.

[24] The new forest code will most likely lead to privatization of *leskhozes*.

[25] The role of *leskhozes* will be changed in the new forest code; there is a proposal to convert them into private companies.

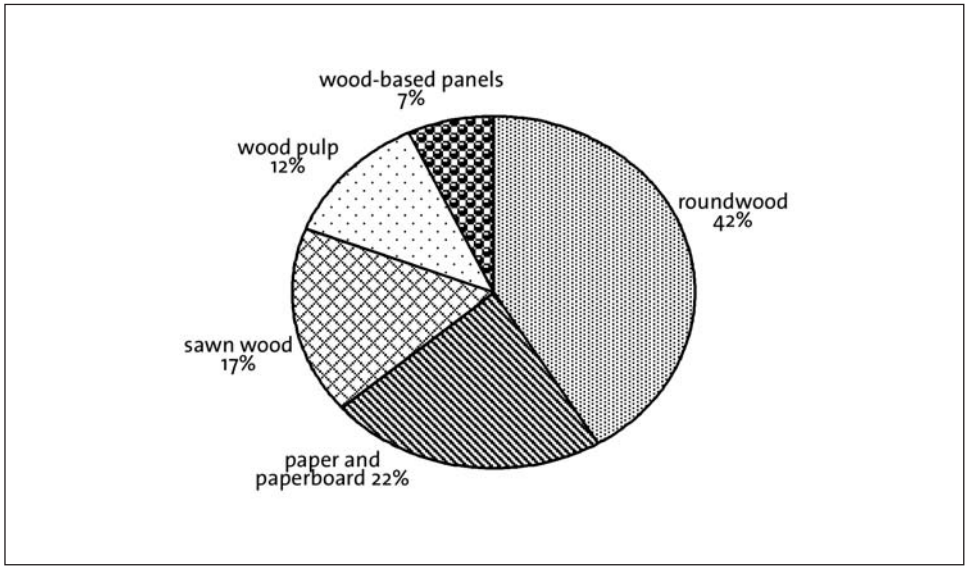
Markets

In Russia, commercial logging exists on 100 million hectares of forested land, with an annual harvest of 140-160 million cubic meters of wood. According to government management plans, the potential exists to harvest up to 500 million cubic meters per year.[26] Russia accounts for 22 percent of the world's forests. Russian wood accounts for 3 percent of the world's production, but Russia exports more unprocessed round wood than any other country. The export of Russian round wood has been gradually increasing since 1997 (see Figures 1 and 2).[27]

[26] Conception, op. cit. p.3.

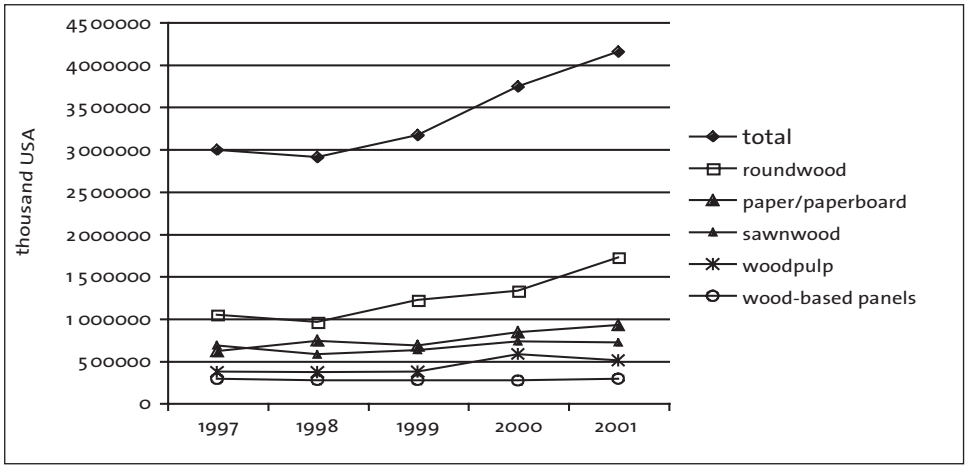
[27] State Customs Committee of Russia, 2002; the diagram is from a WWF trade and investment study.

Figure 1 Structure of Russian forest products export by value in 2001



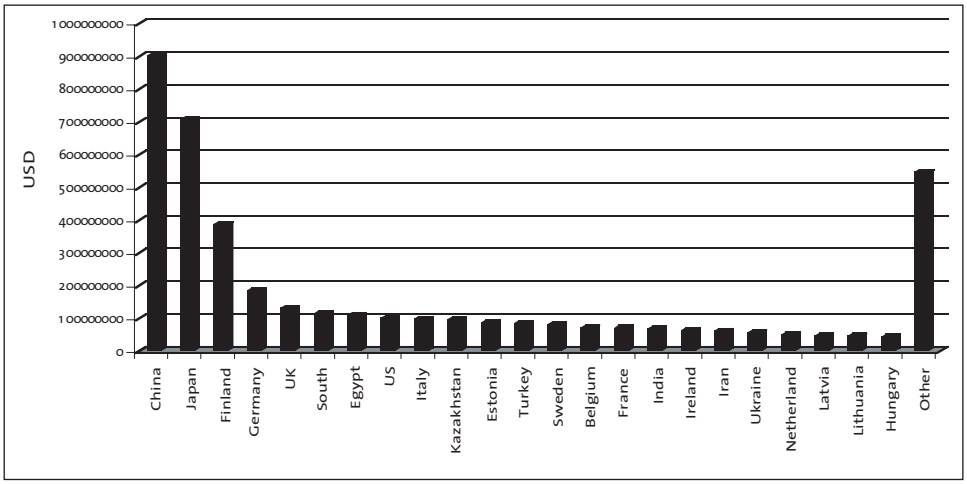
Source: Russian Trade and Investment Study conducted by A. Ptichnikov and A. Voropaev, WWF Russian Program Office, 2002.

Figure 2 Dynamics of Russian forest products export by value



Source: Russian Trade and Investment Study conducted by A. Ptichnikov and A. Voropaev, WWF Russian Program Office, 2002.

Figure 3 Russian forest products exports by country in 2001



Source: Russian Trade and Investment Study conducted by A. Ptichnikov and A. Voropaev, WWF Russian Program Office, 2002.

Two thirds of all harvested wood is exported as processed products. Ten Russian forest companies provide 25 percent of all harvesting and processing in Russia.[28] In 2003, 40 percent of Russia's wood exports went to the European Union, 24 percent to China, and 15 percent to Japan (see Figure 3).[29]

In 1999, at least 500,000 cubic meters of forest products were exported to Estonia and around 100,000 cubic meters to Latvia.[30] Russian forest products exported to western Europe in 2002 were: Finland 72 percent, Germany 10 percent, UK 4 percent, Sweden 3 percent, Italy 2 percent, other countries less (see Figures 4 and 5).[31]

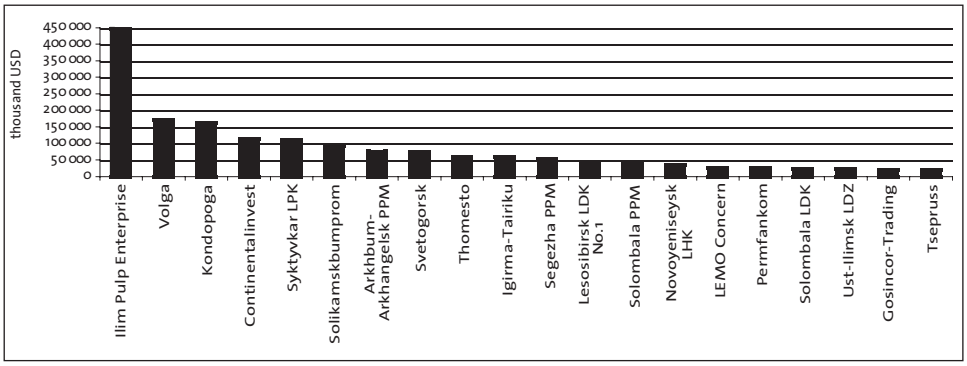
[28] WWF program office report, Moscow 2003.

[29] WWF database 2003.

[30] WWF databases, 2002.

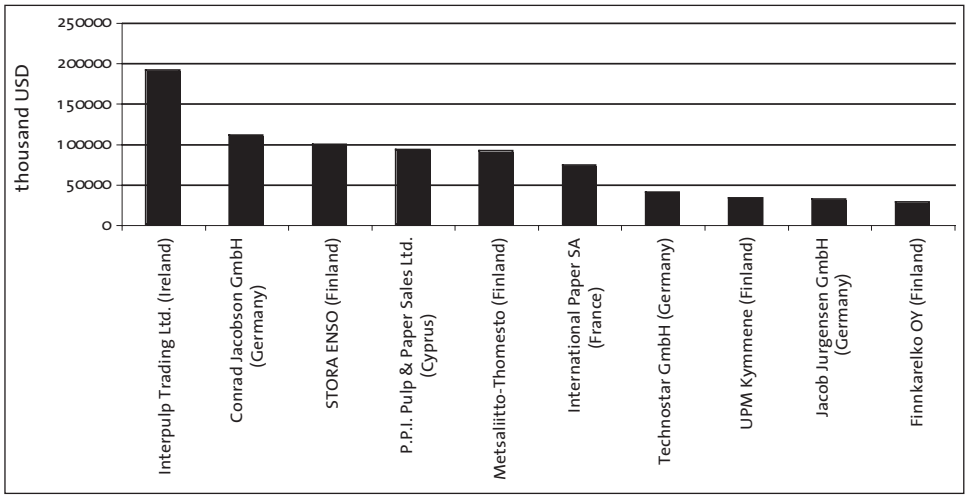
[31] State Customs Committee of Russia 2002.

Figure 4 Leading forest exporters to Europe in 2001



Source: Russian Trade and Investment Study, conducted by A. Ptichnikov and A. Voropaev, WWF Russian Program Office, 2002.

Figure 5 Leading European importers from Russia in 2001 (by company)



Source: Russian Trade and Investment Study, conducted by A. Ptichnikov and A. Voropaev, WWF Russian Program Office, 2002.

The percentage of certified wood trade in Russia remains quite low. According to WWF data, members of the Global Forest Trade Network account for only 7 percent of Russian wood exports, while nonmembers account for 93 percent. Foreign nonmember importers comprise 99.8 percent of all importers while members make up the remaining 0.2 percent. Leading importing members of European buyers groups are Van Hoorembeke Timber, IKEA International A/S, and SCA Forest Products.[32] While the quantity of certified trade is low at present, it appears poised to grow quite rapidly because major firms, such as Ilim Pulp, are in the process of obtaining certification and support it.

[32] WWF obtained these data from State Customs Committee of Russia, 2002.

The export of illegally harvested Russian wood is very high. In northwest Russia in 2000 official round wood production was 15 to 17 million cubic meters. Roundwood and sawnwood exports totaled 16 million cubic meters. Roundwood converted into pulp and paper totaled 5 million cubic meters, while 3 million cubic meters was used for the home market. In total, 24 million cubic meters was produced, 7-9 million cubic meters over the official production estimates, indicating high levels of illegally harvested wood.[33]

[33] WWF Russian Program Office, 2002.

An example from the Russian Far East shows a much bigger illegal element in logging accounts. The legally allowed annual cutting rate and export of hardwood (e.g. ash, oak) from Primorskiy Kray totals 260 thousand cubic meters. However, the annual export data from the Russian Customs Department is 464 thousand cubic meters. The annual export as estimated by harvesters is 700 thousand cubic meters. Illegal trade occurs due to long trade chains which muddle the origin of wood, nontransparent business practices, a lack of an established chain-of-custody, and perfunctory verification,[34] together with huge demand and indifference to Russian environmental impacts in China. In Western Europe, different forms of oversight and checks, such as FSC and Greenpeace, prevent the consumption of certain kinds of

[34] WWF study 2002.

Russian timber. Yet the context of the Russia-China border not only allows this form of wild economy, but also encourages it. Taking advantage of China's proximity and demands, Primorie and Khabarovsk krais offer huge forest massifs of valuable wood with unfettered export opportunities.

The annual capital investment for silvicultural equipment and timber processing technologies necessary to move the forest sector modernization towards environmentally friendly practices is in the range of $US3 billion.[35] However, in 2000, the total investment in the forest sector was one-fifth of that amount, at $US580 million, and two-thirds of that was in the pulp and paper industry. The shortage of loans and foreign investment forces Russian companies to use mostly their own funds to modernize their operations. Forestry company funds account for 82 percent, Russian banks for 13 percent, and foreign investment for 5 percent of all forest sector investment in Russia.[36]

[35] Estimate of the Federal Program for Development of the Forest Complex.

[36] WWF Russian Trade and Investment Study. WWF obtained these data from State Statistical Committee of Russia, 2002.

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

As stated in the introduction, there are three certification initiatives in Russia: two national initiatives and the FSC. Both national initiatives are in the early stages and their future remains uncertain. This section characterizes these initiatives, but focuses largely on the institutional design of the FSC initiative, which is the only one that has seen significant development in Russia.

Initiatives to Develop a National System of Forest Certification

Compulsory National Forest Certification Initiative

Article 73 of Russia's 1997 Forest Code calls for a compulsory national forest certification program to be implemented by the (now-defunct) Federal Forest Service (Rosleskhoz). In 1997, the federal government perceived the FSC as an intrusion on Russian sovereignty while observing that many European countries were developing national systems of forest certification.[37] It thus gave the Forest Inventory Agencies responsibility for the development of standards and auditing. Yet, because the government perceived trade with Europe as private firm business, it was not strongly motivated to move forward with the compulsory certification program.[38] The government's primary motivation was to create an additional law enforcement structure to generate additional annual charges from the companies to augment the governmental budget.[39] Thus, compulsory national certification was never implemented and has been effectively abandoned by the government.

[37] Phone interview with Dmitriev, WWF staff, who at that time worked in Rosleskhoz, March, 2004.

[38] Phone interview with Dmitriev, WWF staff, who at that time worked in Rosleskhoz, March, 2004.

[39] Interview with Rakchmanin, Institute of Forest Industry, Moscow, February 2004; governmental representatives reject this motivation.

First Voluntary National Certification Initiative

The first national voluntary effort is supervised and supported by the Ministry for Natural Resources. This effort appeared mostly because of the international pressure

and because the FSC process seemed too complicated for many of Russian companies. The biggest Russian companies would prefer to have Russian auditors and a simpler certification scheme. Funding available from the World Bank was one incentive for the government to participate in this initiative. On May 14, 2003, the "National Council for Forest Certification in Russia" was established and officially registered. In 2003-2004, a series of meetings related to forest certification took place.[40] The Council involved World Bank Russian representative A. Kushlin, World Bank consultant S. Pitovranov, several people from the International Institute of Forestry, Russian forest company Ilim Pulp representative D. Chuiko, WWF representative V. Dmitriev, and representative of the World Conservation Union (IUCN) V. Tepliakov as stakeholders.

Members of the Council have different attitudes toward certification. The national standards are supposed to be "national in content and international in form".[41] The standards are also intended to be similar to those required both by FSC and PEFC.[42] The development of national standards was started in the International Institute of Forestry under the supervision of academician A. Isaev, who is currently chairing the National Council. On May 22, 2005, the Council signed an agreement on cooperation with FSC International on standard development. FSC International is providing the Council with materials on auditor accreditation and other logistical support free of charge.[43] Thus, this initiative has an important, but still evolving relationship to the FSC, the main difference being that it intends to use auditors from Russia.

Part of the funding for the national system of forest certification came from the World Bank pilot project on sustainable forest use. Additional funding was provided by a grant from the Finnish government.[44] The World Bank lent $US60 million to the Russian Ministry of Natural Resources in order to promote sustainable forestry, of which $400,000-450,000 will go to promote forest certification and to create a "certification climate" and infrastructure.[45] The head of the World Bank project in Washington D.C., Gerh Dieterich, is a specialist in forest certification and is involved in projects not only in Russia, but also in other countries with transitional economies, such as Romania, Bulgaria, and Albania. He pays a great deal of attention to the promotion of forest certification in Russia. In the framework of the World Bank project, there is a special sub-project called "Forest Certification and Sustainable Forest Management." The Finnish firm INDUFOR[46] won the tender on the certification part of the World Bank project.[47] INDUFOR is currently assessing all systems of certification in the Russian context and developing recommendations on what system is most appropriate.

The national initiative is planning to rely on FSC certification centers, which were set up by WWF. WWF hopes that this national initiative will facilitate promotion of FSC. Thus, this national voluntary forest certification initiative is not necessarily competitive with the FSC and is drawing upon FSC institutions and experts. The main difference is likely to be the accreditation bodies, which are expected to be independent from the FSC.[48]

Experts from the World Bank project have also created a list of pilot *leskhozes* that will be guided toward national certification in the framework of World Bank project. The World Bank project is also designed to facilitate industry in the certification

[40] Interview with Nefediev, head of the Department of Forest Use of the Ministry for Natural Resources, March 2004.

[41] Interview with academician Isaev, responsible for standards development March 2004.

[42] Interview with Isaev, May 22, 2005.

[43] Participant observation, May 22, 2005, Zvenigorod.

[44] Interview with Pitovravov, World Bank consultant, March 2004.

[45] Interview with Pitovranov, World Bank consultant in Russia, March 2004.

[46] When the field research for this paper was underway (Spring 2004) INGUFOR could not sign its contract with the Ministry for Natural Resources because Putin changed the Minister and the new Minister was not familiar with the situation with certification.

[47] INGUFOR was competing with WWF for this tender. WWF did not win the tender because formal documents were filled out incorrectly (interview with the World Bank consultant, February 2004).

[48] Phone interview with Dmitriev, WWF staff, March, 2004.

process and assist firms with any type of certification they choose – national, PEFC or FSC.[49]

[49] Interview with Ptichnikov, WWF staff, February 2004.

Second Voluntary National Initiative

The Union of Timber Merchants and Timber Exporters of Russia, which consists predominantly of exporters of round wood to Finland and China, is the source of the second national initiative of voluntary forest certification. They call it "The National System of Voluntary Forest Management Certification in Russia." The Central Research and Development Project and Design Institute of Mechanization and Energy of the Timber Industry (TSNIIME), with participation of the All-Russia Research and Development Institute of Forestry and Mechanization of Forest Industry and the Moscow State Forest University, has developed and tested a set of national forest standards. The developers of this system drew on the Finnish experience of developing a Forest Management Certification System, and the system is close to the Helsinki criteria. "The Concept of Sustainable Forest Management in the Russian Federation," approved by the Federal Forestry Service in 1998, was also used.

In August 2002, the system was tested at two enterprises in the Vladimir region. The developers claim that the system was efficient and that its criteria almost completely reflect the activities of timber industry enterprises with respect to the certification requirements. The system was also discussed by timber exporters of the Russian Federation, whose recommendations were taken into account when the final standards were developed (2003). Final testing took place in January 2004 in Voziagales, and the auditors are currently working on assessing results. The initiative is oriented toward PEFC forest certification. The Union of Forest Owners of Land and the Ministry of Industrial Science[50] financed it. NGOs and the forest processing industry were not involved in this process and do not support this initiative.[51] Although the initiative was not a reaction to the World Bank funded initiative, its developers are upset that it was not financed by the World Bank.

This initiative also established the Russian National Council for Voluntary Forest Certification, responsible for standards development and building certification institutions. The principles, criteria, and indicators were developed and published in the Journal *Forest Certification in Russia* (2003). This initiative's developers see FSC, but not the first national initiative, as a competitor.[52] This system is currently collapsing in the context of Putin's new Prime Minister Fradkov and further restructuring of Russian governmental agencies. The ex-Prime Minister Kasianov supported the Union of Timber Merchants and Timber Exporters and was assessing the needs of forestry in Russia based on the needs of round wood exporters. Now governmental support for this initiative is gone. However, the initiative is seeking accreditation of its standards by the PEFC.

[50] The Ministry of Industrial Science was closed by Putin in March 2004. At the time of my interviews in February 2004 it was functioning normally.

[51] Interview with Ptichnikov, WWF staff, February 2004.

[52] One of WWF representatives claims that unification of two initiatives is impossible due to personal issues among key personnel.

FSC Certification Initiatives

The first FSC certifications in Russia came via market relationships. Three enterprises – (1) Kosikhinski Forest, Altai Region with their processing enterprise Timber

Production Pricebatch Ltd.,[53] (2) Koverninskiy Leskhoz, Nizniy Novgorod oblast,[54] and (3) Holz Dammers GmbH in Arghangelsk oblast[55] – received their certificates without any help from WWF or forest certification centers. They were certified privately in response to requests for FSC certification from their western co-owners and partners. Only after they had received forest management and chain of custody certificates did they begin to share their experiences, interact with FSC institutional designers in Russia, and participate in conferences on certification. In 1996, the Paper Mill Volga started working on FSC certification, which it finally received in 2000. In 1997, the enterprise Kozikhinsky Leshoz in Altay Region received an FSC certificate.[56]

Also in 1997, at a meeting in Finland, environmental NGO representatives decided to start promoting the FSC system in Russia. The TASIS project in Karelia, called "Sustainable Governance of Natural Resources in North-Western Russia," was started in the framework of the Finnish consulting unit Sakhalitus of the Finnish Forestry Service. The Finnish Forestry Service under the NGO pressure initiated a feasibility study on the need for certification in Russia. Andrey Ptichnokov (currently director of the national FSC office) worked at TASIS and was responsible for the feasibility study. However, when he tried to report on the results of his study to the Russian-Finnish commission on forest use, the Russian representatives to the commission did not allow him to present his findings. At that time, the Russian Forest Service was concerned about Russia's international image and did not allow disclosure of information that would show the international community what was going on in the Russian forest sector. Mr. Ptichnikov resigned and took a new job at WWF and started promoting forest certification on behalf of WWF.[57]

In 1998 the environmental organizations[58] World Wildlife Fund (WWF), Greenpeace, Social Ecological Union (SEU), and the Biodiversity Conservation Center (BCC) began to promote FSC certification in Russia (Tysiachniouk 2003). Each of these organizations worked with European partners and was familiar with the FSC process in Europe. In 1998, WWF sent information regarding FSC forest certification to 5,000 forest producers and forest enterprises. At that time the interest of forest companies in certification was still low. Only 10 of the 5,000 companies requested more information.[59] Still, in 1998, WWF organized a conference on FSC certification in Petrozavodsk, Karelia Republic. The goal was to start a dialogue with business and show the government that Russia needed both compulsory and voluntary certification. The conference was sponsored by the MacArthur Foundation. It was the first time that business representatives were invited to discuss issues with NGO representatives. Only a few forest companies attended the conference, which was dominated by scientists and NGO representatives. This can be explained by the existence of big conflicts between the forest industry in Karelia and environmental NGOs such as those involved in the Forest Club due to Greenpeace's direct action and consumer boycotts. In addition, forest companies in Karelia are interested predominantly in exports to Finland, where interest in FSC is low. At that time, the Russian government was still committed to compulsory certification and opposed to voluntary approaches, while environmental NGOs opposed compulsory systems and promoted the FSC. As a result of the conference, the Federal Forest

[53] Trading with the Body Shop, UK; received the certificate in 2000.

[54] Russian mother company-Pulp and Paper Mill Volga; received the certificate in 2002.

[55] Co-owned by Dammers Mers, Germany, received its certificate in 2000.

[56] Interview with Ptichnikov, WWF staff, February 2004.

[57] In 2004 Mr. Ptichnokov worked for INDUFOR on an assessment of FSC potential in Russia and in February 2005 become a director of the Russian National FSC office.

[58] Members of these organizations are generally highly educated and longtime members of the movement. Most of the current staff participated in nature protection activities during socialism.

[59] Interview with Ptichnikov, WWF staff, February 2004.

Service became informed about the FSC and started to pay attention to it. Within the government the first respondents were scientists, typically the most progressive people, and they started to educate governmental officials.[60] Despite conflicts, governmental representatives participated and the conference can be considered the first intersectoral dialogue on forest certification in Russia.

[60] Interview with Ptichnikov, WWF staff, February 2004.

In 1999, a second conference took place in Pushkino, Moscow oblast, where a working group was created comprised of participants from business, representatives on social issues and environmental NGOs. Later WWF formed an organization that eventually became the FSC National Working Group to promote the FSC system; it used a Coordination Council as a governance body. At that time forest companies did not feel comfortable enough to openly work with NGOs, but rather preferred to interact informally. They participated in the events as private individuals and not as representatives of their companies.[61]

[61] Interview with WWF representative, March 2004.

The interest of the majority of forest companies in certification at that time remained very low. SEU activists went to Krasnoyarsky Kray to talk to the biggest export-oriented forest producers, the New Enisy Forest Combine and the Novosibirsk plant, but neither company expressed interest.[62] The Federal Forest Service was still promoting compulsory certification and created a regional center for compulsory certification within the Novgorod Center for Forest Protection. WWF awarded a grant to this center to develop an FSC model in parallel with governmental compulsory forest certification. As indicated in the terms of this grant, the Novgorod Certification Center began to work with companies and three became interested in FSC certification. One, Madok, was certified in 2001. The Novorod Center also co-sponsored a conference with WWF in 1999. Participants included several forest companies, NGOs, and governmental representatives. Three international auditing companies came to Russia to explain the FSC process.[63]

[62] Interview with Korpachevsky, BCC staff, February 2004.

[63] Interview with Ptichnikov, WWF staff, February 2004.

Today, the most active forest certification center is in Arghangelsk. Forest companies in that region are very interested in the FSC because they trade with Europe and there is a market demand for FSC certified products. There are similar centers in Krasnoyarsk and Moscow, while the weakest and the most conflictive is in Khabarovsk. The Krasnoyarsk initiative successfully guided a company in Novo Eniseysk to FSC certification in 2004.[64] The Novgorod Center has lost its effectiveness.

[64] Forest news, May 17th, 2004, www.wwf.ru

In 2000 a conference took place on FSC certification in Komi Republic. At that time the first set of FSC standards was developed and field-tested at the Model Forest Priluzie.[65]

[65] Interview with Ptichnikov, WWF staff, February 2004.

Institutional Design

The Forest Club (SEU, Greenpeace, CBC) and WWF are the primary promoters of forest certification in Russia. WWF is by far the most active in the institutional design of forest certification, but the contact person of the Russian national initiative, Vladimir Chuprov, is a Greenpeace activist.

FSC forest certification has been promoted through a series of WWF institutional initiatives. WWF disseminated information about FSC through a series of

conferences as described above. It first promoted intersectoral dialogue among governments, forest users, and environmental NGOs. It also initiated the national and regional working groups on standards development and as well as model-demonstration projects. WWF started the Association of Ecologically Responsible Forest Companies in 2000, a forest producer group. In 2002, WWF together with Greenpeace, IUCN, BBC, and SEU developed criteria for ecologically responsible forest businesses. These criteria were used to develop "step-wise" ecological policies for forest companies. They were adopted by the Global Forest Trade Network (GFTN) as wood procurement and membership principles. The principles of membership in the Russian Producers were adopted by its current members: Ilim Pulp PPM, Archngelsk PPM (Pulp and Paper Mill), Volga PPM, Kartontara PPM, Solombala LDK, and Onega LDK. Altogether, producer group members control up to 35-40 percent of Russian wood consumption, (Ptichnikov 2003) but still very little is sold through GFTN. Still, the Association of Ecologically Responsible Forest Companies serves as a conduit through which WWF connects forest producers with responsible buyers groups in the West.[66] Promotion of FSC certification by WWF was implemented through partnerships with IKEA, with Stora Enso in the Pscov Model Forest, and cooperation with regional forest business associations (forest companies of Pomorie in Arghangelsk and PALEX in the Russian Far East).

One mechanism for promoting responsible forest management by WWF is eco-rating. In 2002, WWF conducted an eco-rating of 29 leading Russian timber processing companies. The eco-rating was based on self evaluation. Companies filled out a questionnaire related to their environmental practices and NGOs ground-truthed the information.[67] It turned out that self-evaluation[68] did not exactly reflect the true level of ecological responsibility of the company.[69] The results were disseminated to buyers around the world and posted on the Internet.[70]

To help companies make the often difficult changes necessary to achieve FSC certification, the WWF has developed a "step-wise" approach for Russian companies and is guiding them through this process. The first step involves adoption of an environmental policy and preparation of an eco-action plan. The second step requires the company to control wood legality, establish a chain of custody system, and conduct an internal audit. The third step involves landscape planning and high conservation value forest protection. The last step involves reaching good forest management and certification.[71] WWF publishes materials with examples of good environmental policy done by the companies, such as Svetogorsk, Arkhangelsk, Volda, and Onega Pulp and Paper Mills. They also publish examples of environmental policy of international companies operating in Russia, such as Stora Enso, UPM-Kymmene, Metsaliito, and IKEA, and explain how appropriate environmental policy facilitates the process of certification (Ptichnikov 2003).

WWF-Model demonstration projects serve as educational grounds upon which to show how intensive and sustainable forest management schemes can work. The Pscov Model Forest developed a new system of forest management planning, using economic norms and a scenario approach with optimization techniques. Some model forest management techniques have been incorporated into current forest norms (for

[66] The percentage of Russian trade by producer group members in GFTN is still very low, but WWF hopes it will increase.

[67] Interview with Dmitriev, WWF staff, February 2002.

[68] Among the companies with high ratings are: Arghangelsk Pulp and Paper Mill, Baykal Pulp and Paper Mill, Dallesprom, Kotlass Pulp and Paper Mill, Plitspychprom, Solikambumprom, Solombala LDK, Terneyles, Tyndales, Chudovo-RWS, and National Timber Company. Some FSC-certified companies evaluated themselves lower then those who are not (for example, Volga Paper (FSC) and Oneghskiy LDK (Malashuika Les has FSC)).

[69] Personal communication with WWF staff person, 2002. This list of companies is not equivalent to the list of the members of the Russian Producers Group. In the Russian Producers Group, the practices of the company are carefully checked. Interview with Rizhkov, February 2004.

[70] http://www.wwf.ru/about/what_we_do/forests/ratings/eng

[71] WWF 2003, report and powerpoint presentation.

example, leaving wetland areas not logged, leaving old growth plots untouched)[72] and are being disseminated into three different areas. Approximately 100 forest companies and 1000 forest service people have received training at the Pscov Model Forest.

The project of WWF-IKEA (covering Russia, China, Romania, Bulgaria, Lithuania, Latvia and Estonia) also contributes to FSC's institutional design. IKEA has step-by-step requirements for their suppliers and through a partnership with WWF tries to support greening processes for forest businesses. The last step is equivalent to FSC standards. The project began in 2002 and focuses on four regions of Russia: Arghangelsky region, Vologda region, Irkutsk, and Krasnoyarsk. There are four key elements in the WWF-IKEA project.[73] The first is development of mechanisms for the High Conservation Value Forests (HCVF). This element is developing in Arghangelsk. The World Bank-WWF alliance is also interested in preserving critical forests, the concept of which is relatively close to HCVF, so WWF-IKEA and WWF-World Bank Alliance collaborate on this issue. The HCVF element is tied to FSC Principle 9, and focuses on designating such forests and supporting them.

By working on HVCF, the WWF-IKEA project extends Principle 9 to the regional level. They work with regional scientific institutions in an effort to create a methodology for designating HCVF (which is not equivalent to intact forests[74]), field-test this methodology, and suggest amendments to regional legislation, taking into account the HVCF. Development of mechanisms for their use and conservation is concentrated in Arghangelsk region, because, on one hand, there are big plots of HCVF and, on the other hand, forestry is intense and export-oriented in this region. Forest producers were frightened by Greenpeace's threat to their European markets, and so are now ready to work with environmental organizations. WWF-IKEA created a working group with all stakeholders involved, such as administration, forest industry, science, a forest inventory team, representatives of Model Forests, and NGOs including Greenpeace. In addition, they have a technical group that tests the methodology in the field, and reports to the working group. In 2004, WWF-IKEA is planning to start working in Klrasnoyarsk on the same issue.[75]

The second component focuses on illegal logging. The WWF-IKEA project prepared an in-depth analysis and made recommendations to regional administrations on what can be done to stop illegal logging.[76]

The third component involves strengthening the Association of Responsible Forest Producers by involving new members, including IKEA suppliers, helping companies to formulate environmental policies, and strengthening contacts with the Global Trade Network. WWF-IKEA works with current and potential members of the Association. Their efforts include education of top company managers, connecting them with Swedish and Canadian producers, as well as organizing study tours to Sweden and Canada.

The fourth component is the creation of certification centers for education and training. The project prepares staff for existing and newly established certification centers. These staff members are trained to be qualified as auditors or can work as consultants for *leskhozes* or the forest industry. In Arghangelska and Krasnoyarsk, there are already qualified staff that can be teachers, and there are young people who

[72] Norms are used by companies seeking FSC. These norms are not included in the forest legislation yet, but are commonly used and leskhozes give special permission to the companies seeking FSC.

[73] Interview with WWF-IKEA project coordinator E. Kulikova, March 2004.

[74] Intact forests are virgin forests, while HVCF includes social, religious, cultural heritage places.

[75] Interview with WWF-IKEA project coordinator E. Kulikova, March 2004.

[76] As WWF is a partnership builder, at the moment they do not make this information public, according to my personal communication with WWF staff. A decision on publicity of the information will be made later.

need education. In Vologda, there are no specialists in certification, but there is interest in attaining these qualifications. In Irkutsk, there are no specialists and no interest in specialization. For this reason, the WWF-IKEA project took trainees not only from their priority regions, but from others as well. They educate not only representatives of certification centers, but university staff and Forest Inventory Agencies. They conduct a series of seminars and workshops, some of which take place in Model Forests.[77]

In addition, WWF-IKEA is working to educate forest industry staff about certification. They conduct seminars for different enterprises throughout Russia. There is a huge interest in studying FSC forest management and chain of custody certificates.[78]

FSC National Initiatives

Russia has one FSC National Working Group[79] and two regional working groups (in Komi Republic and Krasnoyarsk). The National Working Group was by FSC in June 2006.[80] The National Group consists of three chambers: social, economic and environmental.[81] Its membership consists of more than thirty people. They have a coordination council of nine people with one representative of the Komi indigenous people.[82]

The national FSC office was established in February 2005 with initial funding provided by the European Union grant program. The FSC office will link clients with auditors and facilitate certification processes. Chuprov of Greenpeace is the FSC contact person. He is an information channel between FSC International and the situation in Russia. He informs the FSC about both successes and failures. The fourth possible initiative is a national FSC Board, which exists in the bylaws but has yet to be implemented.[83]

FSC centers sometimes serve as precursors for the auditing firms. Representatives of the Novgorod certification center became representatives of SGS (auditing company), which has a representative in St. Petersburg. They certified Madok in Novgorod. Russia does not have yet auditors accredited by FSC International, but the firm Europartner based in St. Petersburg is seeking accreditation.[84]

Standards

In May 1998, the national working group on certification was formed. The major task of the national working group was to develop framework standards, which, on the one hand, would be consistent with FSC international standards and, on the other, would reflect Russian particularities and solve Russian forestry problems. In the early stages the working group had multiple internal conflicts due to the difference between the radical participating environmental NGO and business. Despite these conflicts, the radical group Greenpeace has participated in the group since the early stages of certification.[85] In 1998, the national working group representative of FSC wrote a letter to the government of Komi Republic in order to promote the development of regional FSC standards. In parallel, regional working groups were also created. The most active and efficient group was formed around the WWF

[77] Interview with WWF-IKEA project coordinator E. Kulikova, March 2004.

[78] Interview with WWF-IKEA project coordinator E. Kulikova, March 2004.

[79] The head of the National Working Group is Vladimir Chuprov, Greenpeace staff.

[80] Interview with the head of the National Working Group Korpachevsky, May 21 2005.

[81] There is no chamber representing indigenous people.

[82] Phone interview with Chuprov, FSC contact person, May 2004.

[83] Interview with Chuprov, contact person of the national FSC initiative, February 2004.

[84] Interview with Europartner representative, June 3, 2004.

[85] Interview with NGO activist, March 2004.

project Preluzie Model Forest in the Komi Republic. They developed and tested regional standards, and the project was well organized. The second group worked in Krasnoyarsk and the third in the Far East. The working group in the Komi Republic and in Krasnoyarsk developed regional standards, but the group in the Far East was eventually dissolved, largely as a result of multiple conflicts within the group.[86]

[86] Interview with Ptichnikov, WWF staff, February 2004.

In October 2003, the framework for national FSC standards in Russia was finalized. The criteria are very close to the ones approved by the Ministry of Natural Resources in 1998; however, the technical indicators are much better developed than they were before (Shvidenko and N. Isson 2003). The FSC national standards include stronger protections for the rights of indigenous people than does Russian governmental policy. The national FSC standards have been tested in five different places. Currently work is underway to harmonize the national standards with the regional (sub-national) ones developed in the Komi Republic and Krasnoyarsk.

Accreditation and registration of the Russian national standards by FSC International is a goal. Until the Russian national standards are registered, auditing companies accredited by FSC apply the general standards of FSC.[87] When the standards receive FSC approval, they will be the official standards for Russia and will govern all auditors.

[87] Interview with Chuprov, Greenpeace staff, and a contact person of Russian national initiative, February 2004.

Certification was designed to address preservation of HCVF, but many contradictions and conflicts still occur around Principle 9. Russian legislation provides that old growth virgin forests should be preserved only when they belong to the first category of forests (those that are close to waterways or contain valuable species or are in the specially protected areas). When forest companies rent territories to do commercial forestry, these territories often contain old growth forests, especially in the Arghangelsk region. The company has the right to cut this forest under Russian legislation. But environmental organizations such as Greenpeace, BCC, SEU and WWF consider virgin forests to be as high conservation value forests that need to be preserved, or at least subject to a special policy. Greenpeace and their partners published a map of all virgin forests in Russia and distributed this map to both Russian forest producers and Western buyers. Environmentalists argue that FSC must help preserve virgin forests, and a great deal of attention needs to be paid to the standards related to their preservation. Because the criteria and indicators of HCVF are very different for different regions of Russia, much work is still required to harmonize the standards (Chaprov 2003).

Several forested regions of Russia are populated by indigenous peoples. Indigenous cultures throughout Russia — the Komi, Koryak, Itelmen, Udegeis, Chukchi in the north, and many others — have suffered much since the advent of Russia. In Tsarist times, the Russian Empire's eastward expansion brought Christianity, as well as marauding Cossacks demanding tributes in fur from the native peoples.

Later, Soviet policy toward indigenous peoples brought even more far-reaching changes to their cultures and ways of life. The State Committee for Numerically-Small Peoples of the North, Siberia, and the Far East oversaw this policy, operating with the primary goal of turning the native people from aboriginal semi-nomads into full place-tied citizens of modern Soviet society. The policy of "centralization" moved

small subsistence-based community clans into more centralized villages. This allowed the state to more efficiently deliver subsidies, which included bread, coffee, tea, sugar, and other basics. Native people were put to work on collective farms, and children of the reindeer herders were sent to boarding schools for education. After *perestroika*, subsidies halted abruptly, rural economies soured, and indigenous people became even more disempowered. The Komi people from the Komi Republic live in timber producing regions in the European part of Russia. In the Far East, forest conflicts and tensions occur with Udegeis populations. Since the early 1990s there has been new legislation and a policy process to create "Territories of Traditional Nature Use" for indigenous people, also called ethno-ecological refuges (Zaporodsky and Morashko 2000). This policy is applicable to Indigenous Low-Numbered Populations of the North.[88] The absence of appropriate norms inhibits the designation of such territories. Many native communities, such as Komi and Udegeis, are not considered low-numbered and there is no government policy to incorporate them in the forest decision-making process. FSC certification has the potential to clarify and protect the rights of these people.

[88] Ethnicities are considered low populated indigenous peoples in case their numbers do not exceed 50,000.

[89] Interview with the head of administration, Obiatchevo, March 2002.

[90] Interview with the head of administration, Obiatchevo, March 2002.

[91] Interview with chair of Forest Service of Komi Department of Natural Resources, March, 2002.

[92] Interview with coordinator of the working group on regional certification standards, March 2002.

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

The attitude toward FSC certification of the State Forest Service under the Ministry for Natural Resources has changed from negative to positive. Although the Ministry of Natural Resources remains more interested in promoting national forest certification, it currently supports the FSC process as well.

WWF's Preluzie Model Forest has received extensive support from local, regional, and national levels of government. Government officials have shown themselves to be quite passionate about Preluzie Model Forest and its potential for bettering the region's economy.[89] They are also expressing a sense of ownership. The head of administration in the Preluzye region said, "We look at the project like our child,"[90] while officials on the republic level claim that the Model Forest is a government initiative. Another official said, "In this project, everything started with the power structure, with the government."[91] This attitude may reflect WWF's strategy of cooperating with many departments of the government, including the Ministry of Economy, the Judicial Department, the Forest Committee, and the Ministry of Transport and Connections. Several of these departments have representatives working closely with Model Forest employees to develop FSC standards for Komi. One respondent felt that these government officials are very dedicated to the project. He said, "I sometimes wonder what their interest is, besides scientific interest. There can't be much material interest. We usually meet in the working group for 2-6 hours, sometimes the whole day. Everybody is listening, adding, suggesting, and arguing."[92] Other than as small grant recipients, government officials receive no pay for this work. Government officials in Komi have shown much more excitement about the project than those in Pskov.

WWF's small grant program has helped to build government support for the model forests. Several republic-level officials received grants for forestry research and expressed deep appreciation for the opportunity. The Model Forest also took some government officials to Sweden to view FSC-certified operations. Such efforts quickly brought government support in the form of scientific knowledge, leniency with forestry norms, and participation in the Model Forest's strategy development and planning group.

Reactions to certification vary more in the local forest management units, *leskhozes*. In territories that are already certified, the reaction is usually positive. However, in places that remain distant from the process, certification is perceived as foreign intervention into sovereign forest governance. In less successful cases, such as in the territory of Holz Dammers, the attitude of the *leskhoz* did not change from negative to positive. The head of the *leskhoz* perceives that the company gets benefits it does not deserve. Some tensions occur because those seeking the FSC certification need to receive special permission to change forest practices and to be exempted from certain requirements of existing Russian forest law. Companies typically change practices even before special permissions are issued and are therefore often fined by *leskhozes*, although the amounts are frequently nominal. They try to hide those fines from the FSC auditors.[93]

Leskhozes do not receive direct benefits from certification; most benefits of certification go to private firms. At the same time, *leskhozes* must administer forest operations in the certified territory, often with increased complications and responsibilities. Nonetheless, the attitudes of *leshkoz* officials sometimes change from negative to positive in the course of the certification process, as happened in Preluzie Model Forest.

FSC certification is known by almost all forest businesses in Russia. Many of them are considering pursuing certification in the future, especially those situated close to the European border. Companies conducting forestry in the areas distant from the borders are usually not interested in certification. Smaller companies are also not interested or cannot afford to become certified.

All environmental organizations currently support forest certification. Social NGOs and workers' trade unions are usually not familiar with the FSC process.

Current Status of Forestland Certification

Currently Russia has only FSC-certified forestland. As of January 1, 2005 there were approximately 4 million ha of land under FSC-certified forestry operations. Certification has boomed since 2003 and interest in it continues to grow.[94]

[93] Interview with the director of Emetski leskhoz, June 2003.

[94] Interview with Korpachevsky, May 2005.

Table 1 FSC forest management and chain-of-custody certificates in Russia

Company	Region	Mother (partner) company	Number, type and duration of the certificate	Area certified, in thousands of ha	Auditor
Kosikhinskiy Agricultural Leskhoz	Altay Kray	Timber Production Pricebatch Ltd., Kosikha and Nalobikha Sawmills	SA-FM/COC-1181 2000-2005	32,712	Soil Association
a) Holz Dammers Gmbh Arkhangelsk, b) HDM Holz Dammers Moers	Arkhangelsk Oblast	Dammers Moers (Germany)	IMO-FM/COC-2099, 2000-2005	65,905	IMO
Madok	Novgorod Oblast	Leitinger (Austria)	SGS-FM/COC-0849, 2001-2006	31,200	SGS Qualifor
Priluzje Leskhoz Model Forest	Komi Republic	Priluzie Model Forest	SW-FM/COC-242 2003-2008	794,409	Smartwood
Maloshuykales	Arkhangelsk Oblast	Orimi Wood, Onega Sawmill	GFA-FM/COC-1078, 2003-2008	336,445	GFA TerraSystems
STF-Strug	Pskov Oblast	StoraEnso, Pskov Model Forest	SW-FM-283F, 2003-2008	18,440	Smartwood
Novoyenisey Forest Chemical Complex	Krasnoyarsk Kray	–	SA-FM/COC-1357, 2004-2009	49,333	Soil Association
Belozersky Lespromkhoz	Vologda Oblast	Cherepovetsles	SGS-FM/COC-1828, 2004-2009	221,492	SGS Qualifor
Bely Ruchey	Vologda Oblast	Cherepovetsles	GFA-FM/COC-1120, 2004-2009	398	GFA TerraSystems
Svetlozersk	Arkhangelsk Oblast	Solombala Sawmill, Timbex	GFA-FM/COC-1114, 2004-2009	171,900	GFA TerraSystems
Kai	Kirov Oblast	Domostroitel, IKEA TORG	SW-FM/COC-1379, 2004-2009	124,203	Smartwood
Terneyles	Primorskiy Kray	Sumitomo	SGS-FM/COC-1925, 2004-2009	1,394,488	SGS Qualifor
Lesosibirsk Sawmill No.1	Krasnoyarsk Kray, Motyginskiy Leskhoz, Leskhoz	Basic Element Group	SGS-FM/COC-1987, 2004-2009	219,155	SGS Qualifor

Table 2 FSC chain-of-custody certificates in Russia

Company	Region	Mother (parner) company	Number, type and duration of the certificate	Auditor
Kosikha and Nalobikha Sawmills	Altay Kray	Timber Production Pricebatch Ltd., Kosikhinskiy Agricultural Leskhoz	SA-COC-1137, 2000-2005	Soil Association
Timber Production Pricebatch Ltd.	Altay Kray	Kosikha and Nalobikha Sawmills, Kosikhinskiy Agricultural Leskhoz	SA-COC-1138, 2000-2005	Soil Association
Luzales	Komi Republic, Priluzye Model Forest	Chovyules, Priluzye Model Forest	SW-COC-1040, 2003-2008	Smartwood
Noshulskiy LZK	Komi Republic, Priluzye Model Forest	Priluzye Model Forest	SW-COC-1073, 2003-2008	Smartwood
Syktyvkar Plywood Mill	Komi Republic, Priluzye Model Forest	Priluzye Model Forest	SW-COC-1254, 2004-2009	Smartwood
Kustyshev NM	Komi Republic, Priluzye Model Forest	Priluzye Model Forest	SW-COC-1267, 2004-2009	Smartwood
Novoyenisey Forest Chemical Complex (NE Russia FCC)	Krasnoyarsk Kray	–	SA-COC-1357, 2004-2009	Soil Association
Sibirskaya sosna	Irkutsk Oblast	Pristina Pine	SW-COC-1312, 2004-2009	Smartwood

EFFECTS OF CERTIFICATION

Power

The FSC certification system has influenced the distribution of power on the regional level. This is especially evident in the Arghangelsk region, where the majority of forest companies are interested in certification. The working group formed to develop regional standards included not only forestry specialists, but also environmental NGOs, business representatives, and administrative officials. Before certification emerged, only experts and governmental agencies were involved in the decision-making process. No intersectoral dialogue existed in society, especially around the issue of HCVF. The certification process allowed stakeholders to learn to participate in dialogue and find consensus. Thus, forest certification has led to significant change in the formerly non-inclusive regional public policy-making process.[95]

[95] Interview with Ptichnikov, WWF staff, February 2004.

The impacts of certification on power relations vary among cases. Where certification was guided by WWF, as in the model forests,[96] impacts on local community power structure are much more significant than in cases where NGO involvement was minimal, as in the Holz Dammers case. Power impacts of FSC-certified model forests also differ from one another. WWF created the Preluzie Model Forest in a region built on forestry, but not in the border region. The Komi Republic is much further to the east than Pscov Oblast, and this one factor results in a disparity between the two Model Forests. Pscov is close to Russia's European border and so it attracts the export-oriented subsidiaries of multinational European logging firms, such as STF-Srugy, daughter firm of Stora Enso. Preluzie's *leskhoz* rents land mostly to smaller Russian companies oriented toward domestic markets Because Russian markets lack the environmental sensitivity and higher prices of European markets, these companies see little reason to invest in creating a green image. While Pscov represents an exception, the Komi Republic represents the more common situation of forestry in Russia's vast interior. The companies working in Peluzye *leskhoz* do not feel the influence of European markets as strongly. For this reason, partnership with industry remains undeveloped.[97] Thus far, the effects of FSC certification processes appear not to have spread beyond the areas in which certification has actually occurred.

[96] Model forests Pscov and Preluzie both received FSC certificates in the summer of 2003.

[97] An exception is Luza Les, which is situated in Priluzie and received a COC certificate.

In both the Pscov and Preluzie model forests, WWF launched a campaign to network with all stakeholders in the forest and to educate them about sustainable forestry. In each case WWF established a small grant program to pay for research and creative projects pertaining to the Model Forests. The small grant programs have focused on scientists, teachers, educators, a museum curator, and librarians. Teachers and educators, especially, help to spread knowledge and ideas, and shape the mindset of succeeding generations. The grant programs also provided unique opportunities for government officials in the Ministry of Natural Resources, several of whom carried out forestry research funded by WWF. The programs also funded Ph.D. research on forest economics for local students in Siktivkar and revitalized old Soviet structures for producing non-wood forest products (Tysiachniouk and Reisman 2004).

Throughout the country, Russian citizens are directly dependent on forests, including the wild mushrooms and berries found therein. For this reason, there exists

a general public mistrust of logging operations. In addition, community members have been especially suspicious of foreign companies, whom they felt would simply send their forests abroad. In working with the communities, it became WWF's job to soothe public opposition to forestry by illustrating the difference between conventional Russian forestry and FSC sustainable forestry. In all projects requiring public involvement, WWF uses the local intelligentsia (the educated class) to construct links with the rest of the population.

FSC criteria demand that the local communities and indigenous peoples have a voice in forestry decisions. Raising public interest in the Model Forest, which WWF accomplished, laid the groundwork for official public participation. Both the Pscov and Priluzie Model Forests created Forest Clubs that bring a broad array of forest stakeholders together in productive dialogue. The Forest Clubs meet regularly, and attendees include company officials, *leskhoz* workers, administrators, forest scientists, WWF staffers, and interested local citizens. WWF bills the Forest Clubs as models of democracy and citizen involvement in forestry, as it ideally, although perhaps not practically, happens in the West. In Priluzie, special attention was given to participation of the Komi people in decision-making processes.

The Pscov Model Forest also illustrates the importance of NGO legwork for western commercial interests in Russian natural resources. By acquiring partners and support for the Pscov Model Forest, WWF laid the foundation for popular acceptance of STF-Strugy's foreign logging practices and FSC in general. The Preluzie Model Forest illustrates the converse – that the cooperation of industry can be extremely valuable for NGOs seeking to bring western practices into Russian forestry. Although the Preluzie Model Forest received FSC certification in 2003, this does not mean that wood produced by renting companies in the *leskhoz* will bear the FSC mark. For this to happen, individual companies must certify the entire chain-of-custody. The forest management certification gives these companies a head start and may promote their interest. One of the companies on the certified territory, Luza Les, has taken this opportunity and obtained a chain of custody certificate.

Companies seeking FSC certification are typically not very sophisticated, and do not have the capacity to work with communities and governments that WWF has with its extensive resources ($US3 million invested in stakeholder involvement in Pscov Model forest and $US6 million in Preluzie Model Forest).

The weakest certification case was Holz Dammers, where no stakeholder consultation occurred and local power relations remain unchanged. The community remains disempowered and unfamiliar with FSC process. In other cases, communities were informed about FSC procedures, but did not use their opportunity to become true stakeholders.

Social

Forest certification has had significant social effects in Russia. Some of the most notable have occurred in the Pscov and Preluzie Model Forests. In both cases, mechanisms for public participation have been created that have strengthened not only workers' but also villagers' rights. Certification allowed villagers to participate in

discussions of what plots should be left untouched because they were sites for collecting mushrooms and berries. Overall, the projects enhanced existing civil society institutions and brought new energy into communities.

In most other certified territories, worker protections increased and salary delays decreased. Workers came to understand that certification can be used as a social protection tool. For example, in Malashuika Les, the public received information about certification through newspapers and radio. Forest workers there were traditionally disempowered and did not know how to request better working conditions and salaries. FSC brought them benefits, which they would never request themselves. Currently they strongly appreciate their benefits.[98]

[98] Participant observation in Malashuika Les, March 2004.

The Timber Production enterprise Kozikhinski Leskhoz was one of the first to receive FSC certification, and since 2000 has spurred significant improvements in social conditions in the region. It has contributed money to the program "Life without Drugs" and financed equipment for the Center for Rehabilitation of Drug Addicts. It also financed the hospice in Barnaul. In 2004 it reconstructed and equipped the local kindergarten. In 2005 planned to contribute to the Center for Ameliorating of Early Pathologies, which will be the first such center in the region. The Prays Betch enterprise accumulates money for social issues at the special community Social Fund and uses it for charitable contributions to social problems.[99]

[99] Interview with Nadezda Strachova, member of social chamber of national coordination council, May 22, 2005.

On the other hand, very few positive consequences occurred in the FSC-certified settlement Dvinskoy (enterprise Holz Dammers), where both workers and villagers still suffer salary delays and the social infrastructure continues to be quite poor. The Arghangelski region provides a direct contrast to Dvinskoy. As a result of certification, the local public is included in the dialogue about the use of virgin forests. Without FSC, the negotiations would occur only between Greenpeace and forest companies and the needs of the population would not be taken into account.[100]

[100] Interview with Ptichnikov, WWF staff, February 2004.

Terney Les in the Far East[101] provides an interesting case for FSC's social criteria. The main settlement near the company's operations is Plastun, and its inhabitants are all employees of Terney Les or one of its daughter firms. This simplified the certification process considerably. Turney Les' residents do not appear to need additional programs to better their lives because of the social programs the company is already providing to its employees. Here, the company's and the public's wellbeing go hand-in-hand. A more conflictive situation arose because Terney Les rented forests on the Samarga River and encroached on an indigenous Udegeis settlement. The area also contains a large section of unique, virgin forests. The Udegeis community was split over the question of whether or not to allow Terney Les' operations in their forests.[102] The company plans to build a logging road through the forest, which would also serve the Udegeis settlement. A representative of Terney Les pitched this idea to a group of people in the community and received praise for the access this road would bring. Critics claim, however, that this representative came to the Udegeis village while the men were away on a hunting trip, and used presents for the women as bribes.[103] Thus, the social implications of the certification process remain debatable.

[101] Not certified, only seeking certification.

[102] Interview with M. Korpachevsky, CBC, July 6th, 2004.

[103] Interview with BROCK staff Lebedev, December 2002.

WWF hired a professional ethnologist to research the situation of Udegeis natives in Samarga and elsewhere in the Far East, in order to ascertain what is best for them

and what they want. This ethnologist also happens to be an activist from the radical environmental organization Rainbow Savers. WWF suggested creating a national park with a complete prohibition on logging, but the Udegeis did not support the idea. According to WWF Vladivostok's director, "For [the Udegeis] the most important thing is that nobody touches them. That is all they want."[104] The relationship between WWF and the Association of Indigenous Peoples in Primorie Kray remains to be developed.[105]

[104] Interview with WWF-employed ethnographer expert, December 2002.

[105] Interview with WWF's SPA expert, December 2002.

Economic

Certification appears to have much potential as an economic instrument for the management of forests allocated to concession or rent. It can help to strengthen forest governance structures because it integrates the interests of producers, consumers, nature protection and effective participation of civil society. Internationalization of forestry and foreign investments may also help the Russian processing industry, which may in turn help address the problems of extensive border-based forestry (Shvarts 2003). Calculations made on the FSC Certified Pscov Model Forest project indicate that the intensive form of forest management has the potential to yield a tenfold increase in profits over time.[106] Forest certification is a major way of implementing such intensive management practices.

[106] WWF study, 2002.

For the most part, FSC certification has been achieved by companies already operating in the European market. Certification helped to increase their contacts in Europe and to ensure long term contracts.[107] Certification tends to make forest companies feel more secure about the future. In some cases forest companies sought certification in response to demands made by their buyers, thereby protecting future trade with environmentally sensitive consumers.[108] Sales by Holz Dammers increased in Germany as a result of the certificate. Kosikhinsky Forest Enterprise and Madok GmbH increased their sales. These are the only two enterprises that significantly improved their position in the market after receiving FSC certification (Chuprov 2003).

[107] Vladimir Chuprov, contact person of Russian national initiative, interview February 2004.

[108] Interview with Ptichnikov, WWF staff, February 2004.

Another issue that forest certification attempts to address is the rapidly growing market in illegally harvested timber. As noted above, this is a major problem in regions adjacent to the Chinese border, where illegal logging may account for as much as 80 percent of all forest operations.[109] To date it remains questionable whether certification has the power to counter the powerful incentives that have grown up for illegal logging.

[109] Statistics on illegal logging in Far East differ in WWF and Ministry of Natural Resources sources. Data gathered by the Russian government agencies show numbers much less than those collected by WWF (interview with Churilova, Ministry of Natural Resources staff, March 2004).

Environmental

Perhaps the most significant issue that can be addressed through forest certification in Russia is consumption of wood from pristine and high conservation value forests (HCVFs). Certified companies are required to identify and protect HCVFs, taking into account biodiversity and adopting sustainable forest management.[110] As a consequence, FSC certification has significantly reduced the threats to high conservation value forests on certified lands in the European part of Russia. This is especially true in the Arghangelsk region and in the Komi Republic. Moreover,

[110] Ptichnikov, Voropaev, WWF report 2002.

certification has made it possible to protect forests in territories that are rented to forest companies, and not only in specially protected areas. In the Pscov region and in Altay regions, scientific research on plots with high biodiversity was stimulated, and some plots with high biodiversity were preserved. This would not have occurred without the FSC process.[111] Criteria and indicators for pristine and HCVF were developed and tested in the Model Forests. Currently, criteria and indicators for HCVF are also being developed for Arghangelsk and the Russian Far East. Certification is also likely to help protect them.

[111] Interview with Ptichnikov, WWF staff, February 2004.

The system of landscape-level planning of high value forests was elaborated in both Preluzie and Pscov Model Forests. This system has been adopted by the State Forest inventory companies in their forest management planning process. The certification process in the Komi Republic encouraged the government to conduct and fund an inventory of pristine forests on one million hectares. In Malashuika Les, research has been done on endangered species of animals and plants, and new technological maps were created for forest use, taking into account location of valuable ecosystems. Again, without the FSC process this would not have happened.

Even in the Holz Dammers case, the environmental situation appears to have improved. The company adopted a moratorium for a big plot of virgin forests, significantly reducing overall impacts.[112] The company's certificate was suspended in 2002 but reinstated the next year after the company committed to the moratorium. Thus, the certificate was effectively used as a bargaining tool. Although the environmental improvements in its logging operations were not great, the company could legally have harvested the old growth forests on the territory it rents. Environmental organizations, particularly Greenpeace,[113] considered that it was worth allowing the company to regain its FSC certificate because of the value of old growth forests. If the company has a certificate, environmental organizations can influence its actions, but if not, their leverage is greatly reduced.[114]

[112] Rizkov, auditor, chair of the association of responsible forest producers, interview February 2004.

[113] Interview with Vladimir Chuprov, Greenpeace staff, February 2004.

[114] Chuprov, FSC contact person and Greenpeace staff, interview February 2004.

CONCLUSION

Summary

FSC emerged in Russia, on the one hand, because certain buyers in Europe requested certification from their Russian suppliers. On the other hand, FSC emerged because environmental organizations, especially WWF, Greenpeace, SEU, and BCC actively promoted it. WWF demonstration projects, WWF-Stora Enso, and WWF-IKEA partnerships contributed to institutional design. Thus, WWF and Greenpeace have been instrumental in promoting FSC certification.

Greenpeace and WWF employees working in Russia are nearly all Russian, but the money for preservation and the FSC principles of "what needs to be preserved and how" are filtered down from international headquarters into the newly formed Russian institutions. The international networks are essential. However, in Russia, non-governmental sectors cannot operate apart from the government because all land, including forests, is federal property. All NGO certification initiatives

necessarily involve the Russian government as a landowner. This study shows how the NGOs have engaged the Russian government, as well as industry and the public. It also illustrates the barriers they face in persuading stakeholders in the forest and different sectors of Russian society of the desirability of certification and how they have overcome them.

The FSC appears to represent a way of bringing the Russian forest industry into European markets and simultaneously of bringing the European practices and technologies into Russia. Interestingly, much of WWF's promotion of FSC certification in Russia has been funded by western government agencies, including the World Bank, the Swedish International Development Agency, and the Swiss Agency for Development and Collaboration.

In general, certification seeks to increase forest profit, promote reforestation, and improve management and control functions. Certification is a mechanism for developing relevant trade policy, supporting environmentally responsible business, and instituting investment safeguards.

Roadblocks and Challenges

Inconsistencies between some FSC principles and Russian legislation, as well as internal inconsistencies within Russian legislation, constitute an important challenge to certification. On the one hand, there are regulations mandating that old growth forests should be cut because they are ready to be harvested; on the other hand, there is a law on environmental protection mandating that virgin forests with high biodiversity be preserved. Often forest producers have old growth forests in their territory. To comply with FSC, they need to preserve HCVF. According to standard interpretations of Russian legislation, they do not, although as noted above, there are also countervailing requirements.[115] The legislation needs to be clarified and coordinated with the FSC system if it is to be readily and widely adopted. A similar barrier for forest producers is that some FSC requirements, such as leaving critical habitat areas untouched, contradict Russian legislation. Companies that do not cut all of the wood on their rented territory can be fined. This is a small barrier, however. Usually companies seeking FSC certification receive special permission from the Ministry for Natural Resources to comply with FSC.[116]

[115] Chuprov Vladimir, contact person of Russian national initiative, interview February 2004

[116] Interview with Ptichnikov, WWF staff, February 2004

Illegal logging is a major roadblock to certification in certain regions of Russia. During socialism, illegal logging was extremely rare due to strict enforcement of the law and severe punishment for stealing from the government. After *perestroika*'s privatization laws, a criminal element quickly entered the country's commerce, including the forest sector. The volume of illegal logs began to rise, often with the cooperation of corrupt government officials. In European Russia, illegal logging also remains high, but usually does not occur in certified territories or by those seeking certification.

Future Development

Although certification appears well underway in northwest Russia, its future in the Russian Far East remains uncertain. Western Europe and northeast Asia represent two

very different contexts for certification. In Europe, in general, environmental consciousness is global in outlook, and the environmental movement of the West has begun to infiltrate Russia, greatly affecting its nature protection initiatives. Currently, there are not many barriers to certification in the European part of Russia.

In February 2004, the European Parliament adopted an EU Action Plan for Forest Law Enforcement, Governance and Trade (FLEGT),[117] which mandates transparency on the source of wood in trade in order to stop importation to the EU of illegally logged wood. Both environmental NGOs and industry in Russia see certification as a way to prove wood origin. Indeed, they often interpret FLEGT as an implicit EU demand for certification. FLEGT thus seems to increase the likelihood that certification will thrive in the European part of Russia. On the other hand, it could have the opposite impact, since FLEGT is planning to introduce licenses which would be easier to get than FSC certification. Currently, companies are not familiar with these licenses, so FLEGT continues to promote certification, but it is impossible to predict the long term impact of FLEGT on certification.

[117] http://europe.eu.int/common/development/body/theme/forest/initiative/index/en.htm.

In contrast, China's market economy is well-developed but its environmental consciousness remains limited. While European interests are pushing Russia toward ecological modernization and sustainable development, China and the Russian Far East have meshed to create a breeding ground for political corruption, a wild economy, and unchecked environmental degradation. China's deforestation and flooding problems led in the late 1990s to a government ban on logging in most Chinese provinces. Its domestic timber production fell nearly to zero and Russia quickly became a major source of raw materials for China's consumer products industry. High demand for non-certified roundwood in Asian markets and the high level of illegal logging and corruption in eastern Russian trade networks prevent significant growth of certification in eastern Russia. There is some hope for change with the Chinese government commitment to organize a green Olympics in 2008 and the WWF-IKEA project in China, which will promote forest certification. However, the environmental community in Russia does not believe that the change will be significant. Certification works as a tool to promote sustainable forestry when there is demand for certified wood, which does not exist from Chinese buyers. Therefore, improving the prospects for forest certification in eastern Russia will require a growth in demand for certified wood in Asian markets. Governmental intervention and disruption of corrupt networks will also be necessary to make certification in the Far East possible. In Russia overall, international NGOs, governmental agencies and international markets are necessary requirements for certification to gain domestic support.

Future Research

It is essential to study the role of NGOs and their networks in promoting certification. In future research it will be important to investigate why cross-border NGO networks between Russia and Europe are effective in promoting forest certification and NGO networks between Russia and Asia are ineffective. Understanding the barriers to transboundary NGO networking will facilitate possible network formation and future construction of sensitive markets.

Comparative analysis of certification processes in post Soviet countries is essential for assessing and understanding what governmental policy best promotes certification. Such research can determine what lessons on certification can be learned and transferred to other countries in the region.

Several hypotheses for future research emerge from the research presented in this study:

1. In countries where democratic institutions are underdeveloped, NGO intervention is necessary to build intersectoral dialogue around national standards;
2. NGOs are essential in promoting public participation in forest communities; when NGOs are not involved in working with the public, the public does not participate;
3. Foreign companies opening subsidiaries in Russian territories need NGOs as facilitators in seeking certification, while national companies can more easily meet certification criteria without NGO intervention;
4. The epistemic community of scientists is essential for legitimizing the process of certification;
5. Small companies need NGO intervention in order to seek group certificates.

LIST OF ORGANISATIONS CONSULTED

Organization	Date	Location
Russian State Duma, Committee for Ecology	27-29 January 2004 (3 interviews with State Duma Deputies, 2 interviews with staff)	Moscow, Russia
Russian State Duma Committee for Natural Resources	27-29 January 2004 (4 interviews with State Duma Deputies, 2 interviews with staff) March 9, 2 interviews with State Duma Deputies 5 July 2004 (4 interviews with State Duma Deputies, 2 interviews with staff)	Moscow, Russia
Ministry for Natural Resources	3-6 February 2004 (7 interviews)	Moscow, Russia
Ministry for External Economic Development	9 February	Moscow, Russia
Ministry for Industrial Science	10 February 2004	Moscow, Russia
World Bank	11 February 2004, interview with the World Bank consultant	Moscow, Russia
Design Institute of Mechanization and Energy of Timber Industry	12 February 2004	Moscow, Russia
All Russia Research and Development Institute of Forest Industry	12 February 2004	Moscow, Russia
ORIMI Holding	4 March 2004	St. Petersburg, Russia
LEMO Holding	2 March 2004	St. Petersburg, Russia
Arghangelsk Pulp and Paper Mill	6 July 2004	Moscow, Russia
Ilim Pulp Enterprise	2-3 June 2004, 2 interviews	St. Petersburg, Russia
Europartner	3 June 2004	St. Petersburg, Russia
WWF-Moscow	February-March, 2004 –multiple interviews and participant observation	Moscow, Russia
WWF-Far East	26 March 4 interviews	Vladivostok, Russia
WWF-IKEA project	20 February 2004, 3 interviews	Moscow, Russia
Bureau of Regional Public Campaigns	26 March 3 interviews	Vladivostok, Russia
Greenpeace	9 March 2004 21 May 2005	Moscow, Russia

Center for Biodiversity Conservation	13 February 2004 24-25 May 2005	Moscow, Russia
Social Ecological Union	9 March 2004	Moscow, Russia
St. Petersburg State University, Department of Nature Protection	17 May 2004	St. Petersburg, Russia
International Institute of Forestry	6 July 2004 24 May 2005	Moscow, Russia

ADDITIONAL SOURCES

1. 132 interviews conducted in 2001-2003 with certification stakeholders, including regional and local administrations, regional branches of the Ministry for Natural Resources, Leskhoz representatives, local community representatives, workers, and NGO representatives in field expeditions:
   a) February 2002, Pscov Model Forest, Strugi Krasnie, Pscov Oblast, Russian Federation;
   b) March 2002, Preluzie Model Forest, Siktivkar and Obiatchevo, Komi Republic;
   c) April 2002, field trip to Petrozavodsk, Arghangelsk and Murmansk;
   d) December 2002, expedition to the Russian Far East;
   e) May 2003 expedition to Arghangelsk and Dvinscoy settlement, Arghangelsk Region.
2. 15 interviews conducted 7-17 December by Antonina Kuliasova, Ivan Kulisov and Svetlana Pchelkina in Arghangelsk, Onega and Malashuika, Arghangelsk Region.
3. 17 interviews with certification stakeholders conducted by Antonina Kuliasova and Ivan Kuliasov in March 2004 in Arghangelsk Region (Dvinskoy and Malashuika settlements).

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ACRONYMS

FSC	Forest Stewardship Council
GFTN	Global Forest Trade Network
HCVF	High Conservation Value Forests
IUCN	World Conservation Union
NGOs	Non-Governmental Organizations
PEFC	Pan-European Forest Council/Programme for the Endorsement of Forest Certification
TSNIIME	The Central Research and Development Project and Design Institute of Mechanization and Energy of the Timber Industry
SEU	Social Ecological Union
WWF	World Wide Fund for Nature

REGIONAL OVERVIEW

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INTRODUCTION

This section presents case studies of forest certification in four Latin American countries – Guatemala, Mexico, Brazil and Bolivia. By 2005, 170 forest management units covering 6.4 million hectares in Latin America had become Forest Stewardship Council (FSC) certified. In addition, 283 chain of custody certificates were issued in 15 Latin American countries. Although less than one percent of the forest land base in Latin America has third party certification, the certification process since 1992 has been important both for on the ground forest management and as an arena in which to discuss ideas surrounding sustainable forestry. Eight FSC-affiliated national initiatives and working groups in a number of other Latin American countries have opened up spaces for national dialogue on forestry policies and practices among diverse stakeholder groups, including local and indigenous communities. However, as the case studies also caution, issues exist that challenge the long-term viability of certification in the region, in particular as regards its economic basis and the involvement of community-based entities.

These four case studies provide fine-grained detail of the trajectory of forest certification from the 1990s to the present. Certification got an early start in Bolivia with government, international NGO and industry support. In 1994, the BOLFOR forest project was funded by USAID, which stimulated national dialogue regarding the formulation of the new forest law and provided technical assistance, research and training for sustainable forest management (SFM). A few years later, in 1997, USAID provided similar support for SFM in the Maya Biosphere Reserve, which had been created in the Peten region of Guatemala in 1990. International support also proved critical in Mexico where forest certification was promoted among communally owned forests (*ejidos*) by a civil society alliance (CCMSS) with the Rainforest Alliance's SmartWood program, beginning in 1994. Mexico's new forest law, created in 2002, promotes and provides support for forest certification.

The first FSC national initiative in Latin America began in Bolivia in 1995. Bolivia's new forest law of 1996 indirectly facilitated certification by, among other things, changing the formula for taxation of timber concessions to a per area basis rather than a per harvested volume basis, discouraging the selective harvest of valuable but endangered tree species such as mahogany. In addition, it grants a 20% discount on the concession fees for certified operations, in recognition of reduced monitoring costs on the part of the state. The strong move toward sustainable forest management resulted in a reduction of the concession area by three-quarters, as many companies felt they could not comply with stricter rules and regulations. In 1998, Bolivia created a strong Forest Service, to administer the new regulations, and one year later Bolivia's National FSC Standard was approved after four years of work. In neighboring Brazil, an FSC working group was formed in 1997 that developed standards for tropical and plantation forests. CERFLOR, an alternative Brazilian certification standard with strong industry support, was provisionally recognized by the Programme for the Endorsement of Forest Certification schemes (PEFC) in 2002, although discussions of the CERFLOR standard began as early as 1991. In contrast to Bolivia, where all the

certified forests are native, close to 70 percent of certified forests in Brazil are plantation forests. In Guatemala, the national certification initiative (CONESFORGUA) came into existence in 2002 and is yet to be endorsed by FSC. Likewise, Mexico has no endorsed FSC standard, despite multiple initiatives to create one since 1997.

SIMILARITIES

The Latin American case studies share a number of characteristics that have influenced the development of certification in that region. Some of these similarities aided and encouraged the development of FSC certification, such as the active role of international development agencies and non-governmental organizations, and generally high levels of government support for the certification process (with the exception of Brazil, which has played a more neutral or even negative role). Other similarities – such as the species-rich forest ecosystems with relatively low abundance of valuable timber species and high levels of illegal logging – present distinct challenges for forest certification, requiring a more careful benefit-cost analysis along with the formulation and monitoring of many more indicators of sustainability than in the more homogeneous forests of the global north, which also benefits from a longer tradition of forestry and forest administration.

International non-governmental organizations and donors have played a large role in the introduction and evolution of certification in each of our case study countries. Interventions have included capacity building, such as the sponsoring of certification workshops and assessor trainings by the Rainforest Alliance's SmartWood program in Guatemala and Bolivia, and the provision of funds by the Worldwide Fund for Nature (WWF) to cover the direct costs of certification in Mexico. The international NGOs have tended to favor FSC third party forest certification, which explains why FSC became the dominant certification program in each country with relatively little competition from alternative accreditation and certification bodies, save for Brazil's CERFLOR program, a national standard that is industry-driven and is more engaged with governmental forestry agencies than the FSC.

The NGOs' and donors' financial and technical support of community forestry operations also helps explain why such a large number of community forests have been certified in Mexico and Guatemala. This support, however, has proved to be a double-edged sword, as economic benefits for communities have been sporadic and there has been a lack of local internalization of the value of certification that, in view of the often unfavorable benefit-cost ratio, poses challenges to the future of the certification process involving community-based entities. Creating a sense of ownership and a sound economic basis for both sustainable forest management and certification is a major challenge in Latin America and is one of the important questions facing the region, as discussed below.

Governments have played a major role in promoting forest certification in all these Latin American case study countries, with the exception of Brazil. In Guatemala, after

initial resistance against forest management in the Maya Biosphere Reserve (MBR), the government made the attainment and maintenance of FSC forest certification mandatory for all forestry concessions in the multiple use zone of the reserve within three years of their establishment. One result of this policy is that the overwhelming majority of certified concessions in Guatemala are located in the multiple use zone of the MBR. Between 1999 and 2002, Mexico registered a large increase in the number of FSC-certified forestry operations, with support and incentives provided by federal agencies and some state governments. In Bolivia, government policy states that FSC-certified companies do not have to undergo both national and third party certification audits: the award of FSC certification is accepted by the state as a basis for contract renewal. In contrast, in Brazil, national forest regulatory agencies have been cautious in embracing third party certification, and in fact, may in some cases actively discourage it. In the Brazil case study, May reports that "in some localities, regulators have imposed additional burdens on those who have adopted certified natural forest management.. . . Such restrictions have sometimes extended to small-scale community-based forest management efforts, despite supportive official rhetoric and donor support." These barriers may have been partially leveled by the Lula administration, but are still daunting.

While government support for certification generally facilitated the certification process in Latin America, in all four case study countries, oversight and administration of forests and forest-based initiatives (protected areas, production forests) was divided among separate institutions, which often translated in practice into a lack of a coherent policy for the forest sector. The case studies also highlight common issues like weak institutions at national and local levels and limited technical capacity at all levels to manage forests sustainably.

Ecologically, most of the natural forests in the Latin American case study countries contain the high species diversity that is typical of tropical ecosystems (with the exception of the areas of Mexico that are covered in drier scrubland forests). This diversity of tree species has practical implications for forestry and forest certification: it means that a large amount of the wood that is logged is made up of "commercially lesser known species," which are often difficult to sell, especially to international buyers who may only be familiar with a narrow range of well-known species, such as mahogany and tropical cedar. This adds an additional marketing challenge for certified operations, which are required to make efforts to add value to and find markets for more than just the most well-known species.

Illegal logging is an intractable problem across the region, affecting both industrial and community-based operations. In Guatemala, illegal logging was said to be responsible for the logging of an additional 30 to 50 percent of the total volume reported. In Bolivia, about 50 percent of the volume of timber per annum was reported to be illegally harvested. In Brazil, May describes the relatively faster growth in certification of plantation forests as "reflect[ing] the continued state of disorganization reigning in the wood industry in the Amazon, where even recent expansion in certified area represent a drop in an ocean of illegal and nominally legal extraction from deforestation." These high rates of illegal logging have put high

volumes of low-cost wood in competition with certified forest products, and made the economic viability of certification even more tenuous.

DIFFERENCES

Our Latin American case study countries differ in important ways. Forest tenure and level of industrialization of the forest sector range across a continuum among the four case studies. In Bolivia, all natural forests belong to the state, and a number of large industrial forest companies with government concessions have achieved FSC certification. In neighboring Brazil, land tenure is often unclear, with overlapping tenures and the widespread forgery of land titles, particularly in the Amazon region, leading to difficulties in the regularization of land tenure and certification. Industrial plantation forestry is, however, an important land use outside of the Amazon. The relatively high levels of industrial forestry in these two countries has meant that pro-FSC pressure from international buyers became a strong driver of FSC certification, with operations scrambling to use certification to maintain their access to U.S. and European markets.

At the same time, in both of these countries, on-going national processes to recognize and/or extend indigenous land rights and strengthen protected areas have reduced the privileged access to forest lands formerly enjoyed by large companies. In Brazil, it should be made clear that this privileged access is by default, since there is no concession system in place as yet. Economic and political power are the avenues used by such firms to dominate the forest estate, nominally still in public hands.

In comparison, small-scale community forestry plays a more important role in Guatemala and Mexico. In Mexico 80 percent of forestlands belong to *ejidos* and communities, 15 percent is private property belonging to small scale landowners, and the remaining 5 percent is government property. In Guatemala, 38 percent of forests are privately owned, 34 percent owned by the state and 23 percent owned by municipalities or communities. The high percentages of certified community operations in the Guatemala and Mexico cases therefore come as no surprise; nor do the challenges that these operations face, which include difficulty accessing international markets, lack of business experience, low product quality, low economies of scale, and inefficient production. In the northern region of Mexico, however, where processing industries sell into North American markets, we do see examples of market preference for wood and wood products certified under the FSC system providing economic incentives to community-based operations.

Finally, the status of FSC standard development and approval differs in our case study countries. Brazil and Bolivia each have FSC-approved national standards. The process of national standard development continues in Guatemala and Mexico; it is suggested in the case studies that the lack of approved standards in these countries is a hindrance to the further development of certification there, and that the completion of FSC standards should be a high priority. Lack of agreement on FSC standards for plantations, despite the adoption of national standards in Brazil, remains a complicating factor.

IMPORTANT QUESTIONS FACING THE REGION

The major issues and challenges facing certification in Latin America in the future involve the long-term economic viability of certification, in particular as regards the widening gap between industrial and community-based operations, and the ability of certification to raise the forest practices bar on an industry-wide level.

In terms of economic viability, it is inevitable that donor funding supporting certification will eventually be reduced, and critical that operations that were certified with donor support – in particular, community-based entities – receive assistance to develop their technical and business skills and become financially self-sufficient. The case studies suggest that few of these community-based operations will be in a position to maintain their FSC certificate once donor funding is gone. The Mexico and Guatemala case studies in particular emphasize the need to find creative ways to help these operations access certified markets and otherwise increase economic viability, and, perhaps more importantly, to determine whether the community-level benefits of certification, which often include improved management systems and efficiencies but rarely include tangible monetary benefits, outweigh the financial costs. The Guatemalan case study suggests that one direction is to develop integrated supply chains of certified forest and wood products, involving alliances between community-based entities and industrial companies. While such an approach will not eliminate all disadvantages the former face in comparison with the latter, the increased value added along the supply chain would generate higher monetary benefits to be distributed between the community-based entities and the industrial companies in a more equitable fashion.

Economic viability of certification is made even more difficult because certified operations are forced to compete in the marketplace with forest products stemming from illegal forestry activities. These products are much cheaper to produce and flood international and domestic markets with a low-cost alternative to certified forest products. This competition threatens the economic viability of certification in the region and must be addressed by domestic and international governments and forest product buyers. Two examples of northern countries taking action – even if not as vigorously as NGOs and some southern countries would hope – are furnished by the EU Action Plan for control of international trade in illegally harvested timber and the upcoming EC Regulation on the same subject.

Finally, many of the Latin American case studies describe the need to move certification up a notch and reach those operations that are not yet "certifiable." How can certification better raise the bar for industry-wide practices? What are the best ways to bring in more players in an equitable process towards sustainable forest management and certification? Which policies and market tools can foster this process, and what is the role that public and private sector representatives, donors, development agencies, and NGOs should play in this regard? Appropriate answers to these questions will ensure that forest certification in Latin America and elsewhere can contribute to major development goals based on the sustainable management of natural resources.

Forest Certification in Bolivia

*Lincoln Quevedo**

ABSTRACT

Forest certification has been widely adopted by Bolivian stakeholders as a result of a strong combination of policy, training, technical assistance, and economic incentives for responsible forest management. The new Forestry Law of 1996 and associated regulations, the national dependency on foreign exports, and national and international support of forest management and certification together facilitated the development of forest certification in Bolivia. Several benefits result from certification: improved forest management practices in the field; reduction of social conflicts among timber companies and local communities; maintenance of existing markets or access to new ones; reduced enforcement costs for state agencies; and support of the new Forestry Law and its norms. Almost 1.5 million hectares have been certified by the Forest Stewardship Council, of which 96 percent belong to large timber firms. Only one of the 13 certificates is associated with a community-based operation. The promotion of community participation in forest management and certification processes is still needed, as well as the identification of High Conservation Value Forests and additional research on forest ecology and silviculture.

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INTRODUCTION

Acceptable and sound forest management practices are essential for forest certification. This is what the new Bolivia Forestry Law has promoted since its promulgation in 1996. Under Bolivia's former Forestry Law, commercial use of forests was virtually monopolized by large logging firms. Today, in addition to timber companies, other groups such as indigenous people, local communities, and small landowners have the right to access productive forests. Under the old law, timber companies paid per volume harvested, a practice that facilitated the accumulation of large landholdings among a few companies, led to corruption, and promoted selective harvesting of the most valuable species, especially mahogany.

The new law democratized stakeholders' access rights to forested lands for commercial objectives, created forest management norms, and minimized overlapping rights among stakeholders. In addition, the law improved the national forest administration, established clear rules for forest managers (Quevedo 1998), and enforced the adoption of improved management practices among concessionaries (Boscolo *et al.* 2002). In short, the new Forestry Law prepared companies and landowners for certification standards by building a solid legal, technical, and administrative forestry platform. The law was a response to mounting domestic societal outcry about decades of unsustainable and mining-type forest harvesting.

In July 1997 the Forest Service granted 5.47 million hectares of forestland to timber companies (Superintendencia Forestal 1997) – one-quarter of the 22 million hectares that they had originally controlled. This reduction in available forest area, the Forestry Law changes, plus the indigenous demands for lands, meant that new social actors could access the forest for commercial objectives, but left millions of hectares in limbo without any form of formal management and vulnerable to shifting cultivation.

Today firms must pay per area instead of per harvested volume and are forced to intensify land use and capital (Bojanic 2001). The primary goal of the fees payment by area system was to eliminate corruption during the allocation and supervision of volume harvested. Recently this payment system was modified further: companies now pay only for the area on which they effectively intervene each year, i.e. the annual cutting area, in addition to a fee paid to the Forest Service for "supervision service."

This new payment system has reduced the amount of fees paid to the government and municipalities, but it appears to have economically revitalized the forest industry. As a result of the fee payment system (by area, not volume), the new Forestry Law indirectly discourages selective harvesting and forces forest managers to seek new species and markets. According to Jack (1999a), this is where we find one of the connections between the new forestry regime and certification: the search for "green markets" for non-traditional species.

When forest managers in Bolivia fulfill the national forest management laws and regulations, they meet several certification requirements (Nebel *et al.* 2003, Contreras-Hermosilla and Vargas 2001, Jack 1999a). The development of certification is indeed a result of a process promoted by the new Forestry Law (PRISMA 2000),

which created favorable conditions for forest certification (Moreno 2003). However, it is fair to say that fulfilling the Forestry Law requirements does not necessarily imply sustainable forest management or the successful completion of a certification assessment.

The new Forestry Law was not the only factor leading to changes in forest management in Bolivia. There was also a massive institutional movement that led Bolivia toward improved forest management and certification: there was a commitment among the institutions related to the forest sector to support the new system and to work toward social, economic and environmental forest sustainability.

By 1997 the Bolivian political environment was ripe for forest certification; since the beginning of the process, certification received enough support from national organizations, including the government. International aid from government agencies as well as from non-governmental organizations (NGOs) played a significant role in the capacity building of forest management and certification. The FSC Bolivian national initiative received enough support from most stakeholders, including Bolivia's government and national and international NGOs.

Almost 1.5 million hectares of Bolivia's forestland is certified under the Forest Stewardship Council (FSC) system. There is a wide commitment among stakeholders to support certification, especially among large firms, although community-based forest management still needs to be promoted. Finally, the lack of adoption of the Criteria and Indicators system for sustainable management developed by the International Tropical Timber Organization (ITTO) and the *Tratado de Cooperación Amazónica* – TCA (Amazon Cooperation Treaty), facilitated the introduction of the FSC system.

Forest certification development is a result of an interesting and unique combination of public policy, legislation, training, technical assistance and economic incentives for forest management. This case study analyzes these dynamics.

BACKGROUND FACTORS

Historical Context

Forestry Problems

As in most developing countries, the Bolivian forestry sector faced substantial difficulties with respect to forest certification, many of which were associated with the country's economic and social issues. Illegal logging was uncontrolled because of the weakness of the Forest Service, the existence of corruption, and a lack of authority.

Deforestation was another threat to forest conservation because of shifting cultivation and agro-industry: the national rate of deforestation is about 270,000 hectares per year (Rojas *et al.* 2003); the Santa Cruz Department is the most affected by human activities with 203,400 hectares deforested each year (Camacho *et al.* 2001).

The absence of sustainable forest management was the rule and forestry was characterized by the high-grading (Nebel *et al.* 2003) of a few valuable species (*Swietenia macrophylla, Cedrela* spp, and *Amburana cearensis*). Although forest management was clearly defined and demanded by the former Forestry Law,

sustainable forest management plans were not implemented in the field (Superintendencia Forestal 1997). International markets played a role in high-grading the most valuable species, since these markets are oriented toward a few valuable timber species, which are now scarce.

Only timber companies were allowed access to forestland, and held 22 million hectares under long-term contracts (Stolz and Quevedo 1992). This inequity caused several social conflicts, since other stakeholders could not access the forest for commercial purposes. The lack of serious management, corruption in the public and private forestry sectors, and inequity brought a lack of credibility to the forestry sector. In part because of this, loggers were blamed for all forest destruction and had a very poor reputation.

Cordero (2003) identifies the different illegal operations in Bolivia: (a) invasion of public lands and harvesting; (b) harvesting in different areas than those authorized; (c) illegal use of permits (e.g. use the same permit for several harvestings); (d) illegal timber transportation; and (e) illegal reception and wood processing in sawmills. As a result of illegal logging, sustainable forest management was undermined.

Policy Responses

Before the 1996 Forestry Law, little was done by the government to prevent forestry problems. The Forest Service was contaminated by corruption – with exceptions of course – and the timber industry acted freely. The most important attempt to increase the efficiency of the forest administration was the decentralization of the Forest Service in 1985, an action that did not achieve its objective: the problems that existed at the national level were replicated at the local level.

On the other hand, several NGOs, especially the *Asociación Ecológica del Oriente* (ASEO), or Eastern Ecological Association, developed national campaigns against forest destruction, demanding sustainable forest management, an end to forest conversion, and transparent public administration. By this time, several northern NGOs were demanding boycotts of the tropical timber trade, which ended with a forest certification system. Gradually, public awareness was raised and this has certainly contributed to forestry sector changes, although deforestation caused by shifting cultivation and agro-industry continues to this day.

Structural Features

Ownership and Tenure

Bolivia has a total land area of almost 110 million hectares, of which 50 percent is covered by natural forests (Castello and Roca 2002). Forest management occurs mainly in tropical and subtropical forests. Here, seven forest regions are used for timber production: Amazon, Choré, Preandino-amazónico, Bajo Paraguá, Guarayos, Chiquitanía and Chaco. The Amazon is the region with the highest standing timber volume per hectare (Dauber *et al.* 1999). The productive forests represent about 41 million hectares, 28 million hectares of which are declared appropriate for full forest management (Castello and Roca 2002).

In Bolivia, all natural forests ultimately belong to the government; the state grants commercial harvesting rights to four main groups (long-term contracts are not granted any longer) in accordance with the Forestry Law (Table 1). All groups are required to have a forest management plan approved by the Forest Service.

Table 1 Forest Bolivian rights granted (as of December 2003)

Type of Right	Quantity	Area (ha)
Forest Concessions	78	5,091,087
Local Social Associations (ASL)	19	531,161
Indigenous Lands (TCO)	23	560,273
Private lands above 200 ha	128	739,121
Private lands equal or below 200 ha	649	78,803
Long-term contracts	2	225,400
Total	**899**	**7,225,844**

Source: Superintendencia Forestal, 2003, data not published

Forest Concessionaries and the Timber Industry

This sector includes companies with large areas (average of 65,000 hectares per concession). The government grants these companies 40-year concessions, which are renewable every five years after a technical audit. If the operation is certified in accordance with an international system (such as FSC), it does not need to pass a government audit and contract renewal occurs automatically.

With the new forestry regime, companies could choose to convert their long-term harvesting contracts to the system of forest concessions or to maintain their contracts as granted by the old forestry law. Long-term contracts provided the legal means to grant rights to those industries that preferred not to use the concession scheme. Today, there are only two long-term contacts left (Table 1). New concessions are supposed to be granted through international auctions (although none has been held yet).

In general, forest concessionaries are vertically integrated and carry out all of the processes in the production chain: forest management, logging, primary and secondary transformation, and national and international commercialization. However, the timber industry is poorly diversified; most timber products are solid wood (Castello and Roca 2002). The timber industry produces mainly furniture, flooring, doors, laminates and other products such as sawn timber, veneer, plywood and particle board.

Secondary transformation of timber is essentially concentrated in this part of the forest sector, as firms have more financial resources, technology and experience than other segments of the sector. With the exception of one, all companies are national. Most timber companies are part of the *Camara Forestal de Bolivia*-CFB, or Bolivian Forestry Chamber.

Asociaciónes Sociales del Lugar (ASLs, or Local Social Associations)

ASLs have an average management area of 28,000 hectares with a minimum of 261 ha and a maximum of 62,572 ha. The Forest Service grants concessions to them for 40 years under the same regulations followed by timber companies. These concessions are given to local people (i.e. that effectively live on site) without auction as long as they meet the requirements for ASLs. According to the new Law, local people from any municipality may request up to 20 percent of the public forest area of the local municipality as long as they are organized as an ASL. Table 2 shows that there are 19 ASLs across the country, all with forest management plans approved by the Forest Service.

Table 2 ASLs with approved forest management plans (as of December 2003)

No	ASL Name	Department	Area (ha)
1	Asociación Agroforestal San Rafael	Santa Cruz	52,928
2	Asociación de Cortadores de Madera de Comunidad Mucha Miel	Santa Cruz	20,474
3	Asociación Forestal Madereros San Miguel –AFOMASAM	Santa Cruz	46,624
4	Asociación de Madereros de San Miguel de Velasco – AMAISAM	Santa Cruz	41,495
5	Asociación de Madereros Agroforestal San Ignacio De Velasco – AMASIV	Santa Cruz	44,176
6	Asociación Comunitaria Agroforestal Santa Ana – AMASAV	Santa Cruz	42,408
7	Asociación de Aserradero Yapacaní	Santa Cruz	62,572
8	Agrupación Social La Candelaria	La Paz	15,876
9	Agrupación Social del Lugar Copacabana	La Paz	15,482
10	Agrupación Social Caoba	La Paz	15,109
11	Asociación Agroforestal Maderera Siete Palmas	La Paz	15,102
12	Agrupación Social Forestal San Antonio	La Paz	14,986
13	San Josecito El Tunal	Tarija	261
14	Asociación Agroforestal Comunitaria El Tuna	Santa Cruz	25,295
15	Agrupación Social El Triunfo	La Paz	16,664
16	Asociación de Madereros Guapomo	Santa Cruz	45,025
17	Asociación Agropecuaria Forestal y Artesanal – Idiama	La Paz	18,386
18	Asociación Forestal Monte Verde	Santa Cruz	18,302
19	Asociación Forestal Puerto Alegre	Santa Cruz	19,996
	Total area		531,161

Source: Superintendencia Forestal 2004, data not published

To create an ASL it is necessary to have at least 20 members, all of whom must be local residents with at least five years of settlement in the area. Most ASL concessions have been granted to former local loggers who have good organizational capacity, logging knowledge, and resources. Despite these capacities, however, ASLs show a lack of consolidation as enterprises; they need to improve their administrative and financial management skills, and develop a participatory mechanism (Certificación Forestal

2000). Several problems have been identified by FAO/PAFBOL s/f, and PRISMA (2000) for ASLs:

- high degree of financial and technical vulnerability;
- low levels of technical assistance from municipalities on forest management;
- deficient organization and administration;
- lack of market information;
- lack of capacity in business management;
- lack of capacity to provide large volumes and quality for formal markets;

Many of these loggers used to harvest forests illegally, in part due to the former legal impediments to accessing productive forests. The challenge now is to bring all of those actors to legality and responsible management, facilitate their access to forests, and give them technical assistance. In general, ASLs produce logs and some saw timber to sell in local markets. Several ASLs are inactive or need to develop more efficient organizational management systems. This explains in part why forest lands managed by ASLs are not certified, although a few of them have expressed some interest in certification in the past (Katherine Pierront, SmartWood/Bolivia, 2004, personal communication).

Private Lands

Private lands belong to groups or individuals that have either purchased lands outright or have acquired them free from the government. Since the forestry technical norms are less onerous for areas below 200 ha, most plans approved by the Forestry Service belong to small owners (84 percent of plans are for areas less than 200 ha, 16 percent of plans pertain to areas greater than 200 ha). This difference in technical norms for small and large properties has led some loggers and landowners in the east of Bolivia to obtain permits to harvest timber on small, 3 ha tracts, and then to illegally harvest timber on lands adjacent to these properties (Cronkleton and Albornoz 2003).

In recent years, interest in forest management and certification by private landowners has grown. In general, these landowners produce sawn timber and sell on local markets.

Indigenous Lands

Indigenous lands belong to the so-called Tierras Comunitarias de Origen (TCO), or Original Community Lands, and are legally granted to indigenous peoples by the Bolivian government. These lands are considered private lands, and are legally equivalent to other forms of land tenure rights recognized by the Bolivian constitution. These stakeholders have gained exclusive rights to forest resource use inside their territories.

Although most Bolivian people are indigenous, all lands ultimately belong to the Bolivian state and it is the government that grants land rights to indigenous and non-indigenous people. To constitute a TCO, i.e. for land to be recognized as "indigenous land," the community must demonstrate its traditional right to that land. The process generally takes years and is characterized by conflicts with other private rights or land interests, and overlapping ownership rights.

A good example of these conflicts is the TCO Monteverde, which is in permanent conflict with ranchers who claim rights over portions of the land inside the TCO. Most TCOs hold large areas and it is difficult for them to protect their lands or simply to be free of conflicts because of previous land settlements. There are currently 51 indigenous land claims, covering 17,495,677 hectares, but as of July 2003 only 3,330,493 hectares had been legally defined as TCO lands (Cronkleton and Albornoz 2004). As of December 2003 the Forest Service had approved 23 TCO forest management plans for a total of 560,273 ha (Table 3).

On average, approved indigenous plans cover 26,000 hectares, which generally is less than the total TCO land. Despite the traditional knowledge of indigenous people regarding natural forests, today this sector probably faces the largest difficulties in implementing long-term commercial forest management plans. This is largely due to its lack of experience in business administration and wood processing, and lack of capital. Like ASLs and private and communal lands, TCOs mainly produce logs and sawn timber and sell in local markets. Most people from TCOs work in agriculture rather than forestry.

Of all of these actors, timber companies are best prepared for certification because of their experience in timber harvesting, wood processing, and commercialization, as well as their access to capital. Since certification is directly connected to international markets in Bolivia, large firms are the most interested in certification. Although they face several limitations, indigenous initiatives present a great potential for forest management and certification, mainly due to large indigenous forest holdings.

Table 3 Indigenous forest management plans approved by the Forest Service (by December 2003)

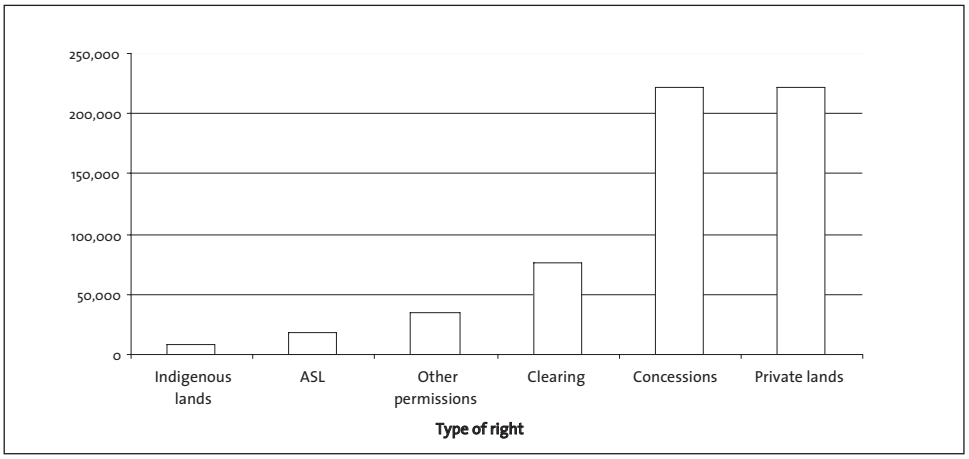
	TCO Name	Department	Area (ha)
1	Territorio Indigena Multietnico – TIM	Beni	15,467
2	Territorio Indígena Siriono TCO-TIS	Beni	12,017
3	Gran Concejo Tsimane Chimane I TCO – TICH	Beni	10,401
4	Gran Concejo Tsimane Chimane II TCO – TICH	Beni	50,277
5	Comunidad Indigena Villa Esperanza TCO – TIMI	Beni	1,327
6	Comunidad Indigena San Juan de Dios de Litoral TCO – TIMI	Beni	532
7	Comunidad Indigena El Chontal TCO – TIMI	Beni	1,661
8	Yuqui TCO – Yuqui	Cochabamba	55,986
9	Yuracare TCO – Yuracare	Cochabamba	60,809
10	Asociacion Agroforestal Tumupasa AGROFOREST TCO – Tacana	La Paz	7,707
11	Comunidad Indigena San Pedro TCO – Tacana	La Paz	20,638
12	Asociación de Pequeños Industriales Agroforestales de Tumupasa APIAT TCO – Tacana	La Paz	2,773
13	Central Indigena Del Bajo Paragua CIBAPA TCO – Bajo Paragua	Santa Cruz	90,758
14	Central Indigena de Comunidades Originarias de Lomerio – CICOL TCO – Lomerio y Zapoco	Santa Cruz	60,800
15	El Carmen Sapocó Santa Monica TCO – Monte Verde	Santa Cruz	7,434
16	Comunidad Indigena Cosorio Palestina – TCO Monte Verde	Santa Cruz	4,000
17	Comunidad Indigena Zapoco TCO – Ayoreo	Santa Cruz	19,982
18	Comunidad Indígena Yotau TCO – Guarayos	Santa Cruz	28,586
19	Zona Agraria Santa Maria, TCO – Guarayos	Santa Cruz	2,433
20	Asociacion Indigena Maderera Cururu – AIMCU TCO – Guarayos	Santa Cruz	26,421
21	Asociacion Indigena Forestal Urubicha Salvatierra AIFUS TCO – Guarayos	Santa Cruz	41,123
22	Asociación Forestal Indigena Salvatierra AFIS TCO – Guarayos	Santa Cruz	38,701
23	Comunidad Puerto San Salvador TCO – Yuracare	Cochabamba	440
			560,273

Source: Superintendencia Forestal, 2004, data not published

Markets

The Bolivian forest sector contributes only 3 percent of the Gross Internal Product but 11 percent of foreign exports (STCP 2000). About 50 percent of the industry's productivity is export-related, which is why certification has been welcomed by the timber industry. In 2002 the Forest Service authorized an allowable cut of 581,782 m3 (see Figure 1 for authorization by stakeholder), but Castello and Roca (2002) indicate that in reality 1.1 million m3 of timber is cut each year. The difference may be explained by illegal harvesting, which is severely affecting legal timber business through its unfair competition.

Figure 1 Volume authorized by the Forest Service in 2002, by stakeholder



Source: Superintendencia Forestal 2003

According to CFB (2003), in 2002 the value of exports was US$88.2 million. The main products exported included Brazil nuts (US$ 28 million), boards (US$ 20.3 million), doors (US$ 13 million), chairs (US$ 4.4 million), furniture (US$ 3 million), and others.

A total of 45 species were exported. The main species were: *Cedrela* spp. (US$ 11.3 million), *Swietenia macrophylla* (US$ 8.3 million), *Amburana cearensis* (US$ 8.14 million), *Cedrelinga catenaeformis* (US$ 6 million). Other important species were *Cariniana* spp, *Machaerium* spp, *Hura crepitans* and *Ficus* spp. The main markets were USA (US$ 42.6 million), UK (US$ 15.6 million), México (US$ 6.6 million), Chile (US$ 3.43 million) and the Netherlands (US$ 2.3 million). Other significant markets included Germany, Italy, France, Perú and Argentina.

The dependence on foreign exports and the presence of environmentally sensitive markets have together contributed to the certification boom in Bolivia. According to the manager of La Chonta concession, a certified operation, forest certification is an opportunity for the Bolivian timber industry but it is not truly voluntary because it has been imposed by the current international green-labeling trend (Antelo 2000).

Similarly, STCP (2000) considers that in the medium-term certification will be a basic requirement (not an option) for accessing environmentally sensitive markets such as the United Kingdom, Netherlands, and Germany. Although the green market plays an influential role, Jack (1999a) reminds us that certification was developed not only by the market, but also with support from national organizations and the new Bolivian Forestry Law.

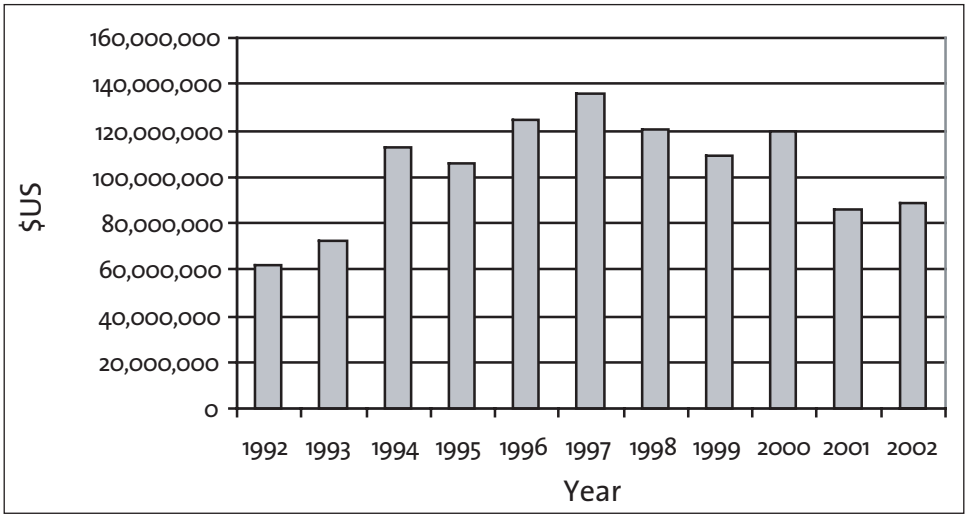
Forest products exports are presented in Table 4. In 2002 a total volume of 63,574 m^3 was exported, the equivalent of US$ 88.2 million. Figure 2 presents the dollar value of forest products exports for an 11-year period.

Table 4 Bolivian forest products exports (in US$) for 2000, 2001, and 2002

Type of Product	Year 2000	Year 2001	Year 2002
Raw material	24,753,487	21,158,814	20,622,482
Elaborated (including Brazil nuts)	69,058,949	59,844,610	58,348,552
Semi elaborated	25,730,323	4,784,854	8,557,392
Other	380,120	164,251	696,298
Total	119,922,878	85,953,529	88,224,724

Source: CFB (2003)

Figure 2 Value of Bolivian forest products exports (in $US) between 1992 and 2002.



Source: CFB (2003)

According to Carden (2003), the market is not a problem for the Bolivian forest industry, but rather, internal deficiencies such as: a lack of communication links between potential buyers and producers; the lack of logging contractors to harvest and saw trunks; unpublished information about the availability of species and volume; illegal harvesting; old transformation equipment poorly maintained and

generally underutilized; the lack of financial liquidity and access to financing; and finally, traditional non-professional family-based company administrations. Similarly, Sainz (1999) identifies the following limitations to timber company exports: inconsistency of product quality; insufficient capacity to respond to sub-contract orders; and low industrial efficiency.

Sacre (2002) concurs with Carden (2003) regarding market issues, and claims that Bolivia has a large potential to access new markets and expand current markets, but its timber industry also needs to focus on valued-added certified products. Here, certification offers an opportunity for small carpenters who could take advantage of the green market (Viehbeck 1999). In general, the Bolivian timber industry is very small compared to other neighbor Amazon countries; harvesting per unit area is also low, averaging 3-4 m^3/ha.

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

Around 1990, a series of events occurred that made the environment appropriate for forest management and certification:

1990 The first attempt to implement a reduced-impact logging effort was carried out in the Chore Reserve by the SENMA/BID Project, with the introduction of harvesting inventory (100 percent), marking, and mapping of harvested trees. This practice was later consolidated by the BOLFOR Project.

1993 WWF established a field office with a focus on forest management training. This initiative has led to a Program Office that supports community certification.

1994 The BOLFOR forest project was funded, aimed at providing technical assistance, research and training for forest management.

1994 A national workshop decided to implement the certification process under FSC Principles and Criteria (P&C).

1995 The *Consejo Boliviano para la Certificación Forestal Voluntaria* (CFV; the Bolivian Council for Voluntary Forest Certification) was officially established.

1996 Bolivia's new Forestry Law was promulgated.

1996 The CIMAR/SmartWood certification program was created, which looked to develop local capacities, promote certification among timber industries and local communities, and reduce certification costs (Saravia and Peña 1999). This program, together with CFV, implemented a series of workshops on certification throughout Bolivia.

1997 A strong Forest Service was created and replaced the old and inefficient forest service. National forest management regulations were established in coordination with the BOLFOR Project.

1999 CADEFOR (*Centro Amazónico de Desarrollo Forestal* or Amazonian Center for Forest Development) was created with BOLFOR´s support.

Other initiatives, agencies and foreign governments that contributed to improved forest management (and certification) were PROMAB, PANFOR, FTPP, CIAT, MHNNKM, APCOP, SNV, CIFOR, USAID, FAO, ITTO, DANIDA, the McArthur Foundation, the Alton Jones Foundation, WWF, FSC, and governments of the Netherlands, Germany, Sweden, United Kingdom, and Switzerland.

The efforts to adopt the TCA and ITTO Criteria and Indicators failed to be implemented. Bolivian stakeholders decided to adopt the FSC scheme because it was a market-based approach to certification that seemed to be accepted by most consumers in the northern hemisphere.

Certification first emerged with the implementation of the BOLFOR Project, a USAID/Bolivian government project. The BOLFOR Project began in February of 1994, when USAID signed a contract with a consortium of actors that included Chemonics International and the subcontractors Tropical Research and Development (TRD), Conservation International (CI) and Wildlife Conservation Society (WCS). BOLFOR's goals were to reduce the degradation of forest, soil, and water resources and to protect the biodiversity of Bolivia's forests; its purpose was to build Bolivian public and private sector capacity to develop and support sustainable forest use programs.

In 1994, BOLFOR Project hired Richard Donovan as a consultant to develop strategic options for initiating voluntary forest certification in Bolivia. Donovan recommended that BOLFOR promote the certification process under the FSC scheme. On October 11th of the same year, BOLFOR organized a broad national workshop to discuss the need for a forest certification process. Sixty-five people attended the meeting, representing the different interests, including government, timber industry, environmentalists, NGOs, indigenous groups, and academics; all agreed to support a national initiative under the FSC system. A working group was immediately formed. The next year the CFV was legally established as an NGO, and began focusing its attention on promoting certification and developing standards.[1] Today, many of the CFV founding members actively participate in the national and international FSC dialogue.

[1] For a full review of the CFV process see Jack (1999a, 1999b).

It is interesting that, while the national government promoted certification, it never attempted to interfere with or control the process. It was clear to government officials from the beginning that forest certification was a voluntary process, the success of which depended on its transparency, credibility, and independence from the government sphere. BOLFOR's officers were responsible for clarifying the government's role in certification to high-level government officials and for communicating the objectives and benefits of certification, all of which were easily understood.

At the onset of certification, however, it was necessary to address a lack of interest among the industrial forest companies led by the CFB (*Camara Forestal de Bolivia* or Bolivian Forestry Chamber), which saw certification as a maneuver of NGOs, ecologists, and northern conservationists and a roadblock to their commercial interests. Despite industry concerns, however, the certification process continued its course in Bolivia along with the international process, which convinced some markets to give preference to certified products.

Although the timber industry did not initially trust certification, it did not boycott the effort. Time passed and as the benefits of certification became apparent – specifically that it was not a "trap" and that it was a feasible goal that did not require tremendous effort – more firms engaged in the process, including the CFB itself. By this point, all doors were open to certification, a phenomenon that led Bolivia to become, today, the world's first country with certified tropical natural forests.

The CFV follows a similar structure to that of the FSC: it has a board of directors that represents the three chambers (environmental, social and economic) and a diverse member group that represents different interests. CFV was endorsed by FSC in January 1998 as a national initiative. In general, it successfully raised significant funds; the main donors were BOLFOR I (Chemonics/USAID), BOLFOR II (TNC/USAID), the McArthur Foundation, the Alton Jones Foundation, WWF, FSC, and GTZ. The objectives of the CFV are to:

- guarantee the credibility of the voluntary forest certification process;
- enforce the application of forest certification principles;
- act on conflict resolution and interpret certification rules;
- promote forest certification at the national and international levels; and
- link the national and international certification efforts and initiatives.

CFV was the first FSC national initiative in Latin America. This brought about advantages as well as disadvantages. International attention throughout CFV's development allowed it to obtain financial support relatively easily; however, FSC's lack of experience in dealing with national initiatives and standards development translated into inadequate guidance and slower development.

It is clear that the 1990s witnessed a high internal and external interest in forest certification. It is tempting to attribute it to Bolivia's new Forestry Law, but the process started several years before the law's promulgation. The real interest was actually in sustainable forest management, which was probably cultivated by the wide, participatory, national discussion about a new forestry law that started in 1992. The public wanted better use and management of the natural forests and this probably attracted international cooperation. Certification itself resulted from this effort to improve forest management practices.

Institutional Design

One of the immediate tasks of the CFV was the development of Bolivia's national forest certification standards. Technical committees were created by CFV to develop national standards for forest management and, later, a separate standard for Brazil nuts. Both committees consisted of experts and represented social, economic, and environmental interests.

Most likely it was the participative process for developing the national standards that attracted the attention of many stakeholders, who viewed the process as an open, balanced and transparent forum within which to discuss forest issues. Such a forum is difficult to find in the private, NGO, or governmental spheres.

For the first time, many interests – some of which were opposed – came to the same table to openly and respectfully discuss forest management concerns with the clear aim of reaching a consensus. As a result, the approved standards were fully accepted by stakeholders and were effectively implemented in the field. Another factor that sped the certification process was the number of educational courses on certification and chain-of-custody, as well as a series of workshops directed by CFV and SmartWood that promoted certification among forest companies, the communities, and foresters.

Standards

The technical committee for standards development was established in December 1994 and was composed of 12 well known, respected individuals from the environmental, social and economic chambers. At this time the CFB was not supportive of the certification process; it refused to collaborate with the technical committee but did not try to keep its members from doing so.

Four key principles were identified to guide the creation of the Bolivian standard: the principle of *legality* of operations, the principle of *gradualism* in achieving sustainable forest management, the principle of the *precautionary approach*, and the principle of the use of the *best available technology* (CFV 2000a).

The only true controversial issue was related to rights of indigenous groups, forest workers, and concessionaries. In the end, agreements were reached. The success of the process was assured by the group's flexibility. Individual players were not seeking personal gain but, rather, supported the certification initiative (Jack 1999b). According to Nittler and Cordero (1995), the main debate in the standards working group developed around the following questions:

- Should the standards "impose" or "promote" forest management?
- How detailed should the standards be, and when and how may the certifiers use their own criteria during assessments?
- How should land tenure and community rights be dealt with?

The standards-setting process can essentially be characterized as follows: (a) the technical committee prepared several drafts; (b) the drafts were widely distributed among national and regional stakeholders; (c) the technical committee considered the stakeholders' recommendations and prepared a new draft which was again distributed among the stakeholders; (d) more drafts were prepared by the technical committee and finally submitted to the CFV Board of Directors; and finally (e) the CFV Board of Directors approved the final version and submitted it to FSC for its endorsement. The consultation process involved a series of workshops and consultations among approximately 450 stakeholders and ended with a field test. The standards were finally endorsed by the FSC in January of 1999.[2]

[2] For a full review of the standards process see Jack (1999a, 1999b).

CFV's and FSC's lack of experience in national standards development delayed the process since no guidelines were available. For example, the working group developed indicators without correlating them to the FSC P&C. A reorganization of the indicators was done at FSC`s request. Additionally, at the beginning of the process,

the indicators were so specific that they appeared to be management prescriptions that were not flexible enough to allow maneuvering by certifiers or forest managers. This approach was seriously criticized by reviewers and later corrected. Jack (1999a) summarizes the factors that led to a consensus during the standards development in the working group:

- a neutral facilitator, who created a comfortable atmosphere;
- the existence of FSC P&C, which clarified what could be done and what could not, i.e. it delineated the arena for the players;
- the participation of scientists, immune to potential vested interests;
- the fact that BOLFOR and CFV provided a neutral environment for participants;
- the understanding that, ultimately, certification will benefit all;
- minimal confrontation because of professionalism among the participants; and
- participants' striving to understand their colleague's point of view.

The implementation of the Bolivian FSC standard was relatively easy for forest management operators who followed their forest management plan approved by the Forest Service (Jimmy Rojas, Industria Maderera Pando, 2004, personal communication). According to the general manager of La Chonta Concession, "Certification is not difficult to reach if managers fulfill the new Forestry Law and its norms" (Antelo 2000). The main difference between the Bolivian Forestry Law and FSC Standards is the social/labor component, which is not included in government regulations and is likely the reason that social NGOs became very interested in certification in the beginning. Some other key requirements of the certification standard and possible conflicts with governmental norms included wildlife protection, forest damage reduction, road construction planning and maintenance, conflict management, forest protection, training, waste management, and accounting/administration.

One issue that remains unsolved is FSC Principle 9 regarding High Conservation Value Forests (HCVF), which apparently will require much effort from managers to identify and manage. The first attempt to deal with this issue was a study by Rumiz *et al.* (2001), which proposed indicators for the national certification standard. The study recognized the complexity of Principle 9, particularly that it might cause positive and negative effects on certification in Bolivia. The implications were: (a) higher management and certification costs; (b) the dilemma between strict protection and forest management; (c) the need for social research, local consultation, and land claims; and (d) the identification of biological and social HCVF attributes. Based on this report and further discussions, the CFV proposed a set of indicators to the FSC. Today CFV is currently implementing another study financed by Dutch foundations that aims at identifying HCVFs and their attributes.

In general, certification standards have directly and indirectly helped to solve or reduce several problems, including illegal logging in certified forest management units, hunting, markets, lack of forestry sector credibility, and social conflicts. Alarmingly, however, illegal logging continues across the forestlands. Rates of illegal harvesting and deforestation are probably increasing, as are limitations on the Forest Service's and municipalities' control over illegal logging. The following factors seems to be associated with illegal forest activities (Pacheco 2003):

- high costs of sustainable forest management relative to illegal logging;
- unrealistic forest and land use regulations;
- unclear land tenure;
- insufficient support to local forest users;
- financial difficulties of the Forest Service;
- little governance by municipalities.

After five years of implementation, the Bolivian standard was reviewed, adjusted and harmonized by the CFV Board of Directors in 2004.

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

At the beginning, certification was generally supported by most stakeholders, except by the timber industry, which initially did not trust the process. A few timber companies, such as La Chonta and CIMAL/IMR, became interested in the new niche for certified timber products within the international market and decided to certify their operations and explore the new market opportunity. This choice was a complete success for them. Tarumá was another leading firm in certification, but later lost its certificate. Other firms opposed certification and advocated against the new Forestry Law. This attitude still exists in some parts of the forestry sector, but most companies do not oppose certification openly.

I worked in 1997 for the recently established Forest Service and witnessed a dramatic change in one of the largest companies and its attitude toward certification. One day the chief forester of the company visited me and asked me to replace the management plan he had submitted to the Forest Service a few weeks earlier with an updated version. Since the plan was also a legal document and already under revision, it was not easy to replace. However, his argument was very convincing: the company had contacted a client in the United Kingdom, who offered to buy all of the company's garden furniture production – but only if the product was certified. Within six months, this company transformed its traditional harvesting scheme to a very efficient one and was later certified by FSC. The company had only been missing the market signal; its local capacity was ready to respond. Examples like this were enough to stimulate the interest of the forest industry in certification. Later, most

forest companies became the best allies of certification and the CFB adopted certification as an institutional policy. Today, 20 percent of the area under forest management in Bolivia is certified and a similar proportion is expected to be certified within the next two years.

Doubts about the forest certification process also existed outside the forest industry sector; some stakeholders from civil society suspected that certification was a Northern plan to control the world's rainforests. However, when Bolivia's logging companies adopted certification, most doubts disappeared. The national government affirmed its commitment to certification since it improved its image both inside and outside the country.

Community forests and indigenous people were also interested in certification, although the process is clearly dominated by industrial forest companies. In terms of forest management capacity and political influence, the community sector is the weakest in the certification process and timber companies the strongest. Since certification is closely related to the export of forest products, benefits are not evident for communities.

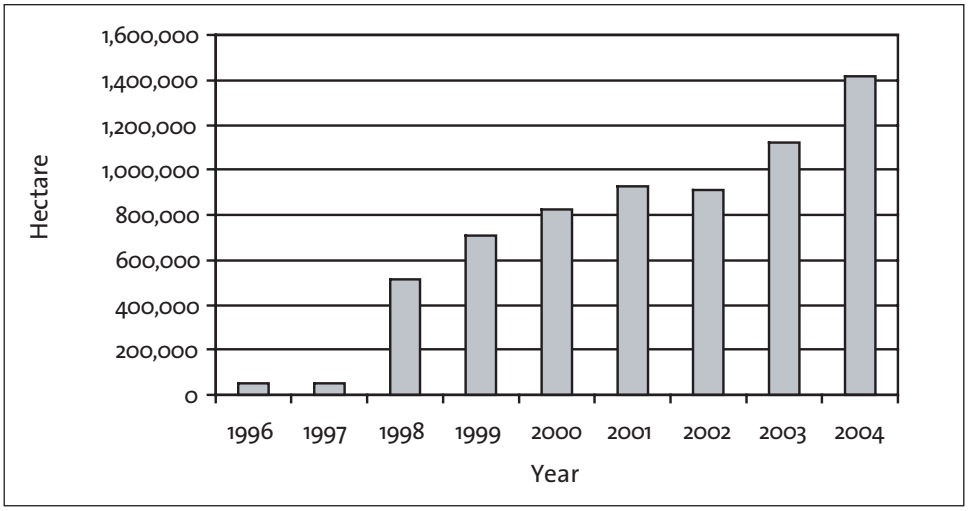
Along with other efforts to promote community participation in certification, the Green Label Project was implemented by SNV and *Confederación de Pueblos Indigenas del Oriente Boliviano* (CIDOB, or Confederation of Indigenous People of Eastern Bolivia), and financed by the Netherlands; the project's second phase was carried out by HIVOS (Semo 1999). The Green Label Project worked in coordination with the national certification process and had representatives at CFV and the standards technical committee. Despite its efforts, the Green Label Project was not able to add community-based initiatives to the group of certified producers; however, it was able to educate communities about the benefits of certification and forest management.

Similarly, since 1999, WWF-Bolivia has managed a fund supported by Sweden to finance technical assistance and certification for community-based forest operations in Latin America (Pierront 1999).

Current Status of Forestland Certification

Forest certification in Bolivia has grown quickly since 1998 (Figure 3). The country currently has 13 certified forest operations, totaling 1,414,083 hectares (Table 5) and 17 chain-of-custody operations (Table 6). Three forest management operations are currently involved in the certification process (Table 7), all through SmartWood. Two operations have lost their certificates and one has been temporally suspended. No Brazil nut management operation has yet been certified.

Figure 3 Growth of certification in Bolivia



Source: Based on data provided by SmartWood South America

Table 5 Certified forest management operations in Bolivia (as of July 2004)

Firm	Type of Right	Location	Area (ha)
Aserradero San Martín Concesión Cinma San Martín	Concession	Santa Cruz	119,200
Aserradero San Martín S.R.L. Concesión Cinma Pando	Concession	Santa Cruz	166,228
CIMAL/IMR Ltda.. Concesión Guarayos	Concession	Santa Cruz	181,750
CIMAL/IMR Ltda.. Concesión Marabol	Concession	Santa Cruz	75,500
CIMAL/IMR Ltda.. Concesión Velasco	Concession	Santa Cruz	154,494
Empresa Agroindustrial La Chonta Ltda. Concesión La Chonta	Concession	Santa Cruz	100,000
Empresa Agroindustrial La Chonta Ltda. Concesión Lago Rey	Concession	Santa Cruz	120,000
Indusmar S.R.L. Concesión Selva Negra	Concession	Cochabamba	67,402
Industria Maderera Pando S.A. (IMAPA)	Concession	Pando	38,000
INPA Parket S.R.L. – Propiedad Amazonic	Private	Santa Cruz	29,952
Sagusa Pando S.R.L. (Concesión Sagusa Pando)	Concession	Pando	66,060
Industria Forestal Cachuela S.A. (INFORCASA)	Concession	Pando	244,107
Territorio Comunitario de Origen – Yuqui	Community	Cochabamba	51,390
Total			1,414,083

Source: SmartWood 2004

Table 6 Chain-of-custody certified firms in Bolivia (as of April 2004)

Firm	Place
Bolivian Forest Saver S.R.L.	Santa Cruz
Carpintería Don Fernando S.R.L.	Santa Cruz
CIMAL/IMR Ltda. División Industrial	Santa Cruz
CIMAL/IMR Ltda. División Muebles	Santa Cruz
Empresa Agroindustrial La Chonta Ltda.	Santa Cruz
Forestal Agroindustrial Pacahuaras S.A.	Beni
INPA PARKET LTDA	Santa Cruz
Jolyka Bolivia S.R.L.	Cochabamba
Maderera Boliviana Etienne S.A. (MABET S.A.)	La Paz
Martínez Ultra Tech Doors Ltda.	Cochabamba
Sociedad Boliviana Maderera S.R.L. (SOBOLMA)	Santa Cruz
Taller Artesanal Bolivia	Santa Cruz
Taller Artesanal Hermanos Guasase	Santa Cruz
Tecnocarpinteria Amazonas S.R.L.	Santa Cruz
Tecnocarpinteria San Pedro S.R.L.	Santa Cruz
United Furniture Industries Bolivia S.A.	La Paz
MEDEX SRL.	Cochabamba

Source: SmartWood South America

Table 7 Bolivian forest management operations in certification process (by April 2004)

Firm	Type of Right	Location	Area (ha)
Aserradero San Pedro S.R.L.	Concession	Santa Cruz	17,000
Cimagro Pando S.R.L.	Concession	Pando	365,122
Complejo Industrial Maderero San José Ltda. (Concesión San José)	Concession	La Paz	60,000
Total			442,122

Source: Data provided by SmartWood South America

As shown in Table 5, there is only one certified community-based operation in Bolivia. Despite the nation's certification achievement, it is clear that community certification initiatives need to be improved or certified markets may be monopolized by big firms, and *equity* – one of the fundamental goals of FSC – will be jeopardized (Nebel *et al.* 2002).

Certification is concentrated in the largest, most capable and best-organized forest companies, which have used their capacities to benefit from certification. Three firms manage 65 percent of the certified area in Bolivia. The question is: how can small producers and community-based initiatives, with little capacity for forest management, be certified?

The concentration of certification in large forest firms in Latin America has already been pointed out by Markopoulos (2002), who claims that "*only the largest and most advanced enterprises will have the necessary financial resources, business experience and market linkages to exploit certification benefits*," and presents the following general shortcomings of certification vis-à-vis community forestry:

- Generic drawbacks of business intensification/reorientation;
- High cost of certification;
- Inaccessibility of green markets;
- Standards and procedures limitations;
- Unclear linkages between standards development and public policy processes.

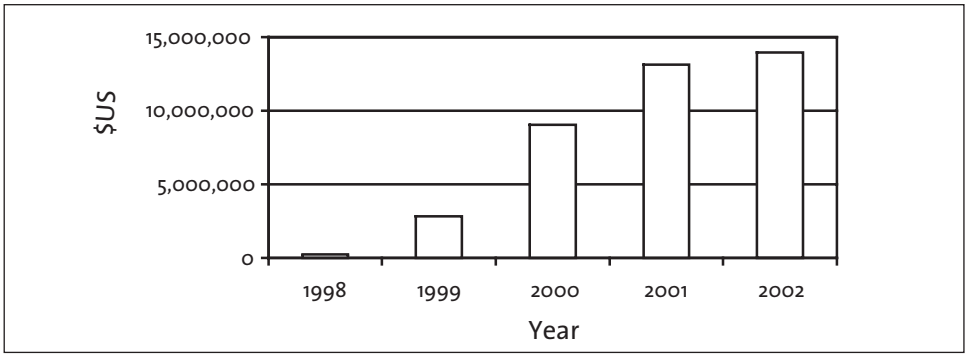
Similarly, Van Dam (2002) expresses his concern regarding certification's benefits to communities; he claims that forest certification has benefited the richest countries, the biggest enterprises, and the temperate and boreal forests. This argument is supported by the lack of a fair trade market for community forestry, the high concentration of certified area in the Northern countries, and the dominance in the South of large forest companies that have the resources to pay certification assessments and have experience with forest management and commercialization. In addition, Van Dam argues that large timber companies do not really promote sustainable local development and this is why an additional FSC Principle should be added regarding the role of large timber companies in local community development. However, the exact role of timber companies in local social development is open to question.

Current Status of the Certified Marketplace

Since Bolivia's timber industry is vertically integrated, most companies process their own raw materials. The supply of certified products is not sufficient to meet buyers' demands. Industries without certified forests are forced to mix 70 percent certified wood and 30 percent non-certified wood, as allowed by FSC (Jorge Vrsalovich, Jolyka, 2004, personal communication). Others with forest concessions seek additional certified supplies because their international buyers demand more than they can produce in their own forests (Alberto Arce, CIMAL/IMR Company, personal communication).

Within the last five years, the Bolivian economy has been affected by a general crisis and the timber industry has not been excepted. However, it has become clear that certified companies were better able to deal with the crisis than non-certified companies by maintaining or creating new markets and by improving their internal administrative and management systems (Pablo Antelo, La Chonta, personal communication). These certified firms showed others that sustainable forest management was possible, and even profitable, during a crisis. While timber exports have declined in the past few years, sales of certified products have increased each year (Figure 4).

Figure 4 Bolivian annual exports of certified products



Source: CFB 2003

EFFECTS OF CERTIFICATION

Forest certification was implemented to promote sustainable forest management and to serve as an incentive for the forest industry and social stakeholders. In many ways, certification has succeeded, and has helped solve or at least minimize many problems by promoting the implementation of real sustainable forest management in the field. As a result:

- Certified companies exert more control over their concessions and illegal logging is controlled, at least within the certified forest management unit. However, according to Nebel *et al.* (2003), forest certification is expected to have little impact on reducing deforestation outside forest management units.
- Less oversight is needed by the Forest Service for certified timber companies, since certifiers systematically verify the field management activities of forest managers and operators.
- Rare species and wildlife are better protected. Hunting is not allowed on certified forestlands, except in justified cases in relation to indigenous people.
- Sustainable forest management practices have been improved, although some local ecologists and silviculturalists now demand further progress toward sustainability through the adoption of various silvicultural practices (Fredericksen *et al.* 2003).
- Certified companies now have improved access to international markets, and more lesser-known species are being introduced into the marketplace.
- Credibility has increased, at least for certified companies (Nebel *et al.* 2003). In general, the forestry sector has a better reputation than it did 10 years ago.

- Better communication among timber companies and social stakeholders has developed, and social conflicts in the field have decreased.
- The group that has received the fewest benefits from the establishment of certification in Bolivia is community forest operations.

Power

At the national level, the best impact of certification was to improve the image of the forestry sector in general and of the forest industry in particular. Certification ensured that timber harvesting is done in a proper way, thereby satisfying a wide range of stakeholders. Previous critics of logging companies and forest certification are now defenders of those they once attacked. These critics included foresters and environmentalists who demanded sustainable forest management practices from logging companies. Since many foresters worked for logging companies, they frequently engaged in fierce debates.

Once sustainable practices were achieved by several timber companies, there was no longer a reason to attack loggers; instead, they needed support in order to keep the system working. Although it is probable that not all forest management plans are well implemented, the public expects that the Forest Service will supervise timber companies and, ultimately, enforce sustainable forest management.

Gradually, the forest sector was heard at the political level, not only because of its economic power but also because of its new achievement in forest management. With acknowledged credibility, certified operations received more attention from the national government, NGOs, and the international community. Banks are more willing to give loans to certified firms. Today the CFB manages a fund to finance certification, supported by the Swedish International Development Agency (SIDA). The goal of the fund is to raise US$250,000 in order to finance 100 percent of the scoping (preliminary assessment) and 50 percent of the full assessment of any forest management operation affiliated with the CFB. It has a board of directors consisting of three members from the CFB and one from CFV (CFV 2003a). In essence, Bolivia's timber industry gained credibility through forest certification and became more pro-management. It is not clear whether certification has affected the balance of power among industry, community and indigenous groups, except where the timber industry has consolidated its own green markets.

All actors, including government, NGOs, foresters, and forest companies, are proud of the national certification achievement. In 2002 the CFB received the prize "Gift to the Earth" given by WWF, which internationalized recognition of Bolivia's achievement in forest certification. The national government, recognizing the importance of sustainable forest management, has sanctioned a decree ordering all public construction works to use only timber from sustainably managed sources.

Social

Community-based forest management is more complex than that carried out by logging companies because of the need to address multiple objectives, including social and economic issues relating to the people settled on managed lands. A workshop on community forest management and the mechanisms of social participation in certification (CFV and CIEC 1997) ranked the degree of limitation (*high, low* and *no limitation*) for 14 initiatives against five possible constraints. The highest ranked constraints were lack of capital, tenure, and commercialization.

The community forest sector has not received benefits from forest certification as expected. In an attempt to solve this problem, several workshops have been held, but in all cases the answer was not the lack of funding to pay for certification, but a lack of forest management to certify.

Recognizing this weakness, several projects and organizations aim to support community-based operations, such as BOLFOR II, the FOMABO Project (financed by Danida), FTPP, and CFV. In 1999 a workshop was held to identify the opportunities and limitations of community-based forest management (CFV 2000b). The workshop concluded that efforts to improve community operations' capacity for forest management and access to certification should focus on providing them with information about forest management and certification, technical assistance, training, financing, and capacity-building for commercial production.

For the indigenous sector, there are two main incentives for certifying forest operations: access to better markets for their products and recognition of land claims by improving their public image. This is particularly true for the case of Lomerío (McDaniel 2004, Markopoulos 2002), in which land ownership consolidation has been the greatest certification benefit. Lomerio is an indigenous operation that was certified in 1996, making it the first certified operation in Bolivia. The operation lost its certificate five years later when its contract with the certifier ended and the operation could not satisfy the pre-conditions for its second certification assessment despite the attractive potential financial returns (Hanrahan and Grimes 1997). Lomerio's management problems became evident in 1999, when the Central Intercomunal of Lomerío (CICOL) decided to close its sawmill due to accounting and management problems. There were problems related to land conflicts with the ASL AMAISAN, community participation problems in decision-making; sales and benefits distribution (McDaniel 2004), lack of explicit community long-term commitment to sustainable forest management, and need for improvements in some aspects of financial and technical forest management.

Today, only one community-based plan holds a certificate: the Yuqui operation (51,390 hectares), certified in 2004, which received strong external support from BOLFOR and Centro Técnico Forestal-CETEFOR (Forestry Technical Center). WWF-Bolivia financed the cost of certification.

At the local level, within the certified forest industry, working conditions have improved.[3] Workers have better housing infrastructure, food, job security, training, and social benefits. In general, their rights are more respected than those of workers in non-

[3] Personal observation.

certified land units. In addition, better communication exists between timber companies and local communities. Social conflicts between certified areas and local communities have been minimized or solved,[4] and certification has facilitated dialogue among stakeholders. This includes improved rights of local communities to access timber and non-timber products for domestic uses, and reduced community illegal logging on certified operations, although more research is needed to assess these claims. For the timber industry, social issues are probably the most sensitive. Antelo (2000) mentions that this issue must be addressed with caution, but asserts that in the long term agreements between industry and communities will favor management operations.

[4] Personal observation.

Economic

The main markets for certified products are the UK, the U.S., Germany, the Netherlands, and Sweden. About 85 percent of products exported from Bolivia are destined for the UK or the U.S. In 1998, certified product exports totaled only US$0.18 million, but the figures increased to US$14 million in 2003. This trend contrasts with exports of non-certified timber products, which in 1998 totaled US$120 million and decreased to US$85 million in 2003 (CFB 2003). According to Sandoval (1999), the main benefit of certified operations was access to new markets, not better prices, but Nebel *et al.* (2003) claim that the average price premium was between 5 and 51 percent.

There is clearly a positive perception of companies that export certified products, with respect to certification. Fuertes (2000) reports an opinion poll of 43 exporting forest companies: 94.6 percent considered certification to be beneficial, 91.9 percent indicated that certification guaranteed fair pay and social benefits, 89.2 percent indicated that certification optimized company's operations, 86.5 percent considered that certification increases management costs, 75.7 percent concluded that there was a similarity between certification and the Forest Law, and 72.2 percent indicated that it improves labor conditions.

Environmental

It is difficult to discuss certification without addressing forest management, since the first is a consequence of the second. Within the last 10 years the Bolivian forestry sector has worked toward developing and implementing the basic requirements of sustainable forest management – essentially, the clarification of stakeholders' rights, field management planning, and on a lesser level, ecology and silviculture. Most achievements have been in facilitating stakeholder access to forestlands, eliminating an overlap of stakeholders rights, developing management norms, implementing annual cutting volumes and area for harvesting, creating census and harvesting maps, as well as focusing on marking seed trees and harvest trees, road construction and logging planning, and wildlife and riparian zones protection.[5]

[5] Personal observation.

The contribution of certification can be seen in the field: improved attitudes and more consistent management practices, compliance with governmental regulations, reductions in supervision costs for the Forest Service, and better relationships between timber companies and local communities (Olvis Camacho, Technical

Superintendent at the Forest Service, personal communication). High value conservation forest management is in its beginnings. Despite the fact that environmental benefits from certification appear obvious, they need to be empirically tested in the field. To what extent is certified forest management sustainable? What is missing?

CONCLUSION

Summary

Certification does not exist without forest management. In Bolivia, certification emerged when a series of events occurred that together promoted sustainable forest management: (a) several organizations decided to support forest management; (b) the new Forestry Law and its norms were promulgated; (c) a new and more efficient forest service (the Forest Service) was established; (d) and local capacity was developed for forest management and certification practices.

There is no doubt that certification has brought local benefits that are not related to markets or prices and that international market interest has reinforced certification. However, the lack of clarity about price premiums and the demands of international markets create uncertainty among stakeholders. At the national level, as suggested by Boscolo and Vargas (2001), certified operations should be given more incentives and the government should develop a stronger policy to provide certification benefits domestically.

The main impact of forest certification has been to make forest companies interested in better forest management, although some observers assert that it is time to increase the quality of field management operations. Effective monitoring of natural regeneration responses to harvesting and the implementation of silvicultural practices have been most unattended to.

Although conditions of forest workers in the field and the relationship between loggers and communities have improved, it is necessary to better incorporate community-based management plans in the certification system. Otherwise, the concept of *equity* will be jeopardized and larger timber companies will monopolize forest certification, including the market and a number of certification benefits.

The incorporation of communities is not an easy task, however. A workshop held in Santa Cruz, Bolivia, in June 2003 attempted to identify a strategy for community forest certification (CFV 2003b) and detailed a series of certification problems that seemed to prevent community certification, but failed to identify the main constraint, namely, the difficulty in implementing forest management plans. It is not enough to have funds for their assessments, to lower the standards (although adaptation to specific community/indigenous characteristics may be needed), or to create specific markets for communities. This is currently not the biggest problem in Bolivia; direct costs of certification in Bolivia are low compared to other countries in Central America (Sandoval 1999), and funds for assessments are available (at least for now), especially those managed by CFB and WWF. The real need is to create or support local conditions to implement forest management plans. To do this, it is necessary to

strengthen local forest management capacities (access to capital, and training in forest management, wood processing, and business management). However, this is a field that certification does not deal with. Social scientists, economists, and foresters should seek alternatives, which may include direct or indirect technical assistance for forest management and capacity building. Simultaneously, the FSC SLIMF strategy should keep working to make sure that certification does not contain barriers for community certification but, on the contrary, promotes it.

Roadblocks and Challenges

Certification in Bolivia faced some obstacles, but not many. The primary obstacle was opposition from industrial forest companies, which did not trust certification and perceived it as a "trap." For example, when the CFV and the Forest Management Trust once organized a meeting among Bolivian forest producers and international certified timber product buyers, the CFB refused to participate. The CFB systematically refused to participate in certification activities, but the approach of the working group was not to confront the CFB; rather, it worked with those companies interested in certification. When it was clear that certification was an effective tool for facilitating access to preferential markets and improving internal company administration systems and public credibility, the CFB adopted certification as an institutional policy.

As noted above, much attention needs to be directed to community forestry. The main limitations for community-based forest management according to CFV (2000b) are:

- Lack of experience in intensive forest management for commercial goals;
- Lack of technology, capital and organizational structure for production, processing, and wood products commercialization;
- The cost of certification and the implementation of standards;
- Lower product quality and harvest volumes than demanded on international markets;
- Low negotiation capacity when developing alliances with private companies.

Another challenge in the certification process was the lack of experience in Bolivia with certification and field forest management. The CFV was the first national initiative in the South, and, without a prototype, the working group learned by experience. It took years to write and submit the national standards to FSC for endorsement. In addition, although environmentalists and foresters usually belonged to the same chamber, they did not always agree on management issues, since they were both learning about real forest management and its impacts. Despite these challenges, the CFV standard was the first endorsed by FSC for the tropics.

Future Development

Over the past 10 years, Bolivia has experienced significant developments in forest management and forest certification, which I identify as Phase I. Now it is necessary to start Phase II of management, which is the inclusion of real monitoring of natural regeneration and responses to harvesting, and the implementation of silvicultural practices to assure that forest management is truly environmentally sustainable. Here, certifiers have a role in asking for continual improvement of forestry practices.

Future Research

HCVF management is expected to be a bottleneck for Bolivian certification. Research to identify HCVF attributes and applicable management methods will be necessary, which may be beyond the managers' capacity. If management becomes too expensive, too complicated, or scientist-dependent, it will be impracticable and no longer be an interesting option. Basic research should be funded and carried out by the Bolivian government, NGOs, and the international community.

Supporters of forest certification should continue to promote the use of certified products in the international market, identify fair markets, and advocate for better prices. In addition, domestic markets should also be developed, as otherwise certification market benefits will be a privilege only for exporters. Finally, the North-South balance in all approaches and negotiations is a requirement if stakeholders want certification to work in the long term in all corners of the Earth.

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LIST OF ORGANIZATIONS CONSULTED

Name	Organization
Mr. Alberto Arce	CIMAL/IMR Forest Concession
Mr. Henry Moreno	Bolivian Council for Voluntary Forest Certification
Mr. Pablo Antelo	Bolivian Forestry Chamber
Ms. Ruth Silva	WWF-Bolivia
Ms. Katherine Pierront	SmartWood
Mr. Rolyn Medina	SmartWood
Mr. Olvis Camacho	Forest Service
Mr. Thelmo Muñoz	Forest Service
Mr. Rudy Guzmán	CADEFOR
Mr. Roberto Quevedo	BOLFOR II

ACRONYMS

APCOP	*Apoyo para el Campesino del Oriente Boliviano* (Support for the Peasants-Indigenous People of the Eastern Bolivia)
ASEO	*Asociación Ecológica del Oriente* (Eastern Ecological Association)
ASL	*Asociaciones Sociales del Lugar* (Local Social Associations)
BID	*Banco Interamericano de Desarrollo* (Interamerican Development Bank)
CADEFOR	*Centro Amazónico de Desarrollo Forestal* (Amazonian Center for Forest Development
CETEFOR	*Centro Técnico Forestal* (Forestry Technical Center)
CFB	*Camara Forestal de Bolivia* (Bolivian Forestry Chamber).
CFV	*Consejo Boliviano para la Certificación Forestal Voluntaria* (Bolivian Council for Voluntary Forest Certification)
CI	Conservation International
CIAT	*Centro de Investigación Agrícola Tropical* (Tropical Center for Agricultural Research)
CICOL	*Central Intercomunal de Comunidades Originarias de Lomerío*s (Central Intercomunal of Lomerío)
CIDOB	*Confederación de Pueblos Indigenas del Oriente Boliviano* (Confederation of Indigenous People of Eastern Bolivia)
CIFOR	Center for International Forestry Research
CIMAR	*Centro de Investigación y Manejo de Recursos Naturales* (Center for Research and Natural Resources
DANIDA	Danish International Development Agency

FAO	Food and Agriculture Organization of the United Nations
FSC	Forest Stewardship Council
FTPP	Forest Trees and People Program
GTZ	*Gesellschaft für Technische Zusammenarbeit*/German Organization for Technical Cooperation
HCVF	High Conservation Value Forests
HIVOS	Humanistic Cooperation for Development Cooperation
ITTO	International Tropical Timber Organization
MHNNKM	*Museo de Historia Natural Noel Kempff Mercado* (Noel Kempff Mercado Natural History Museum)
NGOs	Non-governmental organizations
PANFOR	*Pando Forestal* (Pando Forestry)
SENMA	*Secretaría Nacional del Medio Ambiente* (National Secretariat for the Environment)
SIDA	Swedish International Development Agency
SLIMF	Small and Low Intensity Managed Forests
SNV	Netherlands Development Organization
TCA	*Tratado de Cooperación Amazónica* (Amazon Cooperation Treaty)
TCO	*Tierras Comunitarias de Origen* (Originally Community Lands)
TNC	The Nature Conservancy
TRD	Tropical Research and Development
USAID	US Agency for International Development
WCS	Wildlife Conservation Society
WWF	World Wide Fund for Nature

Forest Certification in Brazil

*Peter May**

ABSTRACT

This case study reviews the Brazilian experience since the mid-1990s with certification of natural and plantation forests at corporate and community levels. Discriminating world markets, corporate social responsibility, and image concerns stimulated certification by the plantation segment. Initial certifications were carried out according to FSC standards, using criteria adopted by a national tripartite working group. A separate national certification scheme (CERFLOR) was recognized in 2002 by the PEFC. Over 1.2 million hectares (ha) in plantations and associated natural reserves had been certified by May 2004 under both schemes, of which about 80 percent was certified according to FSC criteria. Only about 500,000 ha of natural forests had been certified, although Brazil is simultaneously the world's largest producer and consumer of tropical timber. Deforestation and illegal extraction in the Amazon continue to flood the domestic market. Government policy affirms that voluntary certification is an important means to internalize socio-environmental costs but does not supplant national regulation, which in some local cases has imposed additional burdens on those who have adopted certification. Concessions in public forests and forest family partnerships may draw regulatory norms and certification criteria closer together. The case study concludes, however, that certification has made an impact in Brazil where it is perceived as being key to market access, even where there is no substantial price premium. Where certified firms must compete with rampant disorder and illegality, as in the Amazon region, certification's impact has remained limited and oriented toward specialized niches, and as such has not raised the bar on industry-wide practice. Future development of the certified forest industry in Brazil will depend on adoption of more flexible standards for certification of outgrowers and community forest managers, and on a more congenial accommodation of government regulators and certified enterprise.

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INTRODUCTION

This case study reflects on Brazil's experience with forest certification since the mid-1990s, at corporate, partnership and community levels, in natural and plantation forests, channeling wood and non-timber forest products (NTFP) to both the domestic and international markets.[1] Brazil's movement toward forest certification has been consumer-driven, corresponding to broader concern for sustainability as a new element in global competitiveness. A combination of access to discriminating world markets, corporate social responsibility and image concerns stimulated adoption of FSC forest management standards by leaders in the industrial forest plantation segment. Industrial associations developed a national certification scheme (CERFLOR: *Programa Nacional de Certificação Florestal*), recognized in 2002 by the Programme for the Endorsement of Forest Certification schemes (PEFC).

In comparison to the plantation segment, a relatively limited proportion of natural forests have been certified, even though Brazil is simultaneously the world's largest producer and consumer of tropical timber from natural forests. This is explained by the fact that a substantial volume of timber originating from deforestation and illegal extraction in the Amazon continues to flood the domestic market. In the future, regulation of private extraction and controlled governmental concessions, combined with sheer resource exhaustion in settled areas, are expected to limit access to formerly open access timber reserves. The hope of certification proponents is that certified natural forest management will then grow in relative importance, spurred by the creation of certified buyers' and producers' groups.

Government policy reflects the view that voluntary certification is an important means to internalize socio-environmental costs (Brazil 2003), but does not supplant national regulation. In some localities, regulators have imposed additional burdens on those who have adopted certified natural forest management (André de Freitas, personal communication). Such restrictions have sometimes extended to small-scale community-based forest management efforts, despite supportive official rhetoric and donor support. Current plans to grant timber extraction rights in public forests may draw regulatory norms and certification criteria closer together, although a proposed law for concessions does not require certification, but rather encourages external auditing.

This case study will argue that certification has made an impact in Brazil where it is perceived as key to market access, even where there is no substantial price premium. Where certified firms must compete with rampant disorder and illegality as in the Amazon region, its impact has necessarily remained limited and oriented toward specialized niches, and as such has not raised the bar on industry-wide practice. In the future, government and voluntary schemes for tracing timber origin should jointly ensure greater confidence in chains of custody. However, there remains quite a lot to be done to enhance the market share of certified timber and other wood products, both in Brazil and in positioning these products in international markets.

[1] The research on which this study is based combines results of prior field studies of the Brazilian forest-based industry by the author and other scholars with original data derived from interviews with key stakeholders in the certified forest segment, as noted in the text. The author also participated in seminars and discussed the experience of FSC-certified enterprises with executives and representatives during a trade fair organized by the Brazilian Certified Wood Buyers' Group, in São Paulo in April 2004. Valuable comments on a previous version by André de Freitas are gratefully acknowledged. Responsibility for further interpretation of the current status of the certified forest sector is the author's alone.

BACKGROUND FACTORS

Historical Context

Forestry Problems

Comprising the largest share of the Amazon forest and the largest remaining tropical forest biome, Brazil also holds the majority of the rapidly dwindling Atlantic Forest. The principal challenges of the Brazilian forest industry have been associated with (1) illegal logging, forest degradation due to selective but destructive extraction, and deforestation in the Amazon and (2) socio-environmental conflicts associated with aggressive expansion in plantation forests in the coastal zone. The impacts of eucalyptus plantations on watersheds and biodiversity, and of child labor and near slavery in plantations and in charcoal manufacturing have been associated with such conflicts.

Certification has primarily been sought to recognize good forest management in the Amazon[2] and environmentally suitable plantations in cleared areas in the Atlantic Forest.[3] As a voluntary approach to industrial regulation, it could not resolve land use conflicts between rural households and forest enterprises at a regional scale nor supplant public regulatory requirements. Rather, it was hoped that certification would raise the bar on industrial performance, and through enhanced competitiveness, encourage broader sectoral change.

The rationale for certification, besides assuring a potential price bonus, is to maintain markets conquered by progressive firms and to open up new market prospects, particularly in more demanding countries. Nevertheless, a price bonus has often not materialized, particularly in markets for Amazon timbers. An important stumbling block perceived by the market is the risk of accepting timber from illegal sources. A good share of wood marketed in Brazil actually originates from *legally permitted* deforestation activity by smallholders in the process of frontier expansion, while over half is estimated to arise from continuing illegal logging in parks and indigenous areas (Smeraldi 2002; André de Freitas, personal communication). The overall effect of readily available wood, whether of legal or illegal origin, whose extraction comes nowhere near the true stumpage value, is to depress prices. Some buyers have been able to offer more for certified products from a reliable source, which has sustained the attractiveness of the move toward certified forest management, but this is still chiefly directed at discriminating overseas markets.

Problems that have emerged in plantation forestry include impacts on water, soil and biological resources, property and land access constraints for smallholders caused by dominance by large-scale industrial monocultures, and conflict over indigenous lands. The industry has responded with actions to protect riparian areas with native species, beneficial also to the control of pests in large monospecific forest stands (blocks are often on the order of 1,000 ha in size) primarily formed of pine and eucalyptus. Yet organized opposition persists against further expansion of large sole owner holdings for forest plantations. Outgrower schemes with regional landowners have been able to supply a relatively small but growing share (approximately 20 percent) of the industry's raw material, leading to less animosity.

[2] The Amazon region is construed here to include the forested portions of the following states, collectively termed the "Legal Amazon" region: Acre, Amapá, Amazonas, Maranhão, Mato Grosso, Pará, Rondônia, Roraima, and Tocantins.

[3] The Atlantic Forest biome includes all or part of the following states: Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, Minas Gerais, São Paulo, Paraná, Santa Catarina and Rio Grande do Sul.

Policy Response

Brazil's regulatory structure affecting forest management is primarily the responsibility of the federal government. Brazil established its first Forest Code in 1934, which also created the Brazilian Forestry Service. This was the predecessor to the Brazilian Forestry Development Institute (IBDF; *Instituto Brasileiro de Desenvolvimento Florestal*), set up in 1965 through revisions to the Forest Code (Law No. 4,771/65), but subsequently absorbed by an environmental "super-agency," the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA: *Instituto Brasileira de Meio Ambiente e Recursos Naturais Renováveis*) in 1989. Natural forests are considered by the 1988 Constitution to be a national patrimony and therefore the domain of IBAMA. The federal government also licenses plantations, subject to environmental impact assessment requirements (EIA/RIMA) when they exceed specified size limits (over 1,000 ha).

While the Forest Code permits forests in the Amazon to be utilized for timber extraction, such extraction from the Atlantic Forest has been prohibited since the early 1990s, due to dwindling stocks. The Forest Code goes on to stipulate that natural forests should be subject to sustainable management, but does not clarify what this implies. Specific regulatory requirements for Sustainable Forest Management Plans (PMFS: *Plano de Manejo Florestal Sustentável*) were imposed in steadily more rigorous fashion over the ensuing decades through administrative regulations and norms (particularly Normative Instruction #80 from 1991, which specified required elements of a management plan, including 100 percent inventories and minimum harvest cycles). IBAMA enforces compliance with the Forest Code through its regional offices in each state, with the support of armed forest police battalions, since confrontations with illegal loggers have tended to be violent. On the other hand, lax enforcement of forest management criteria has often led to charges of bribery and corruption.

Although state governments have tended to be critical of IBAMA's forest enforcement role, this function has in general not been included in a broader trend toward federalization of enforcement functions to state environmental agencies. Several Amazon states, notably Acre, Amapá, and more recently Amazonas, have adopted pro-active forest policy strategies, including support to community forest management projects and pilot concessions. In some cases, their innovation extends to policy support toward forest certification.[4] However, this support is rarely echoed at the federal level. Such distinctions in development of forest policy are due to different perceptions of the aptitude of their states' economies on the part of regional political leaders and stakeholders, while the federal government maintains policy and implementation responsibility. No specific incentive exists for forest certification.

Non-governmental organizations, notably Greenpeace, WWF, Imazon, Imaflora and Friends of the Earth, have served as watchdogs of illegal timber extraction and trade, as well as promoting efforts toward good forest management. Social development NGOs such as FASE (Federation of Educational and Social Assistance Organizations/*Federação de Órgãos para Assistência Social e Educacional*) and the World Rainforest Movement on the other hand, have been deeply critical of the certification of monospecific forest plantations (Carrere 2004).

[4] For example, Acre governor Jorge Viana, himself a forester, is cited as having declared during the UNCTAD meetings in São Paulo in June 2004 that "the best way to conserve our Amazon forest is to make sustainable use of it, through certified products" (*Agência Brasil*, 2004).

Structural Features

Ownership and Tenure

Brazil's remaining natural forests suffer from severe problems of deficient, often overlapping, land tenure definition. Such deficiencies act as a deterrent to rational forest management and hence to certification. Property titles are often of spurious legality, due to the practice of "*grilagem*,"[5] particularly in the Amazon, where multiple tier property titling is common. Despite this, there is considerable public land in forests, in which potentially viable tracts for certified management concessions have been identified along with stakeholder consultation (Verissimo *et al.* 2000; Barreto and Arima 2003). These areas served initially as the basis for a governmental proposal for the creation of new national production forests covering about 10 percent of the Amazon region.

The continuing regulatory pressure on illegal forest operations near settled areas in the so-called Arc of Deforestation[6] has led to demands by the timber industry to regularize its access to use of these and other forests in the public domain under government-approved management plans. Such an approach could potentially legalize timber extraction in a considerably larger area of "*terras devolutas*" (unclaimed public lands) in the Amazon region. Governmental promoters of this policy anticipate that this process will increase demand for certification of sustainable origin, since its regulatory requirements emphasize socio-environmental care, although there is no requirement in the proposed law that concessions be audited by an accredited forest certification body.

In the Atlantic Forest region, which holds the majority of productive tree plantations, land tenure is better defined, after up to five centuries of occupation since colonization. In some cases of industrial forest establishment, companies have found it convenient to contract with their neighbors to produce trees as a way to diminish the need to purchase land, hence minimizing criticism of tenure concentration. However, rights over tree products arising from partnership schemes with independent outgrowers need to be better defined in such contracts. In FSC certification, clear land title is usually required as a precondition. The possibility of stable and permanent or long-term usufruct agreements[7] by third party forest managers should be compared with the relative socio-environmental desirability of distinct institutional and property rights structures.

A further issue associated with property rights in the same region has to do with the sustainable use of areas that by law should be left permanently intact for environmental protection (known collectively as APPs – *áreas de proteção permanente*). Such areas include steep slopes and hilltops, and riparian zones. According to the same law, 20 percent of private lands in the Atlantic Forest region must be dedicated to forest reserves. In practice, rather than obeying the forest code, agropastoral proprietors occupy these lands and cultivate them with annual crops or pastures rather than protecting them, while industrial forest plantations in general observe the Code. Revisions in the Forest Code under consideration in the Senate would permit small farmers to use part of these lands for agroforestry or small-scale tree lots for sustainable wood and NTFP production.

[5] Literally, "cricketing" (from *grilo*) – owing to the practice of fabricating false deeds and putting them in a box along with a few of these creatures, whose consumption and defecation age the papers.

[6] The Arc of Deforestation is a huge swath of originally forested land in the eastern and southern fringes of the Amazon basin that has been the target of much recent settlement and agro-industrial expansion pressure.

[7] "Usufruct" implies long-term rights to forest products but not ownership of the land on which forests are located.

Markets

Markets for Brazilian forest products are highly segmented by origin and type of timber as well as final demand segment. Brazil is simultaneously the world's largest producer and consumer of tropical timber. In fact, 86 percent of the 26.5 million m^3 of diverse timbers harvested annually from the Amazon is consumed internally (Smeraldi and Verissimo 1999). The populous industrial state of São Paulo alone consumes 5.6 million m^3/year (log equivalents), which outstrips the tropical timber volume consumed by France, Great Britain and Spain combined (*Ibid.*).

Though an avid wood consumer, most demand is in the construction sector, which places little emphasis on quality or sustainable supply. Owing to inferior and irregular quality of planed native lumber, variable mechanical characteristics of poorly delimited species, inadequate post-harvest treatment and other factors, Brazil's furniture and associated markets (flooring, doors, panels, etc.) are increasingly reliant on planted forests, agglomerates, and synthetics. Plantation-produced short fiber eucalyptus cellulose is a global market commodity that Brazil dominates, although domestic demand for pulp and paper is growing and supplies of pine and eucalyptus fiber are projected to be insufficient in the near term. Brazil has five million hectares in plantations, of which 95 percent are exotic eucalyptus and pines (FAO 2000).[8] Recognition of the need for long-term low interest capital for forest establishment has recently stimulated the offering of new credit lines by the national development bank and the family farm administration. Whether these initiatives will be sufficient in the near term to respond to growing demand, and whether such demand can be cajoled into being more insistent on socio-environmental criteria in the conditioning of this expansion, remain to be seen.

Forest plantations in Brazil supplied 102.9 million m^3 of industrial roundwood equivalent in 2001, of which nearly half was for renewable fuelwood and charcoal. Part of this plantation output was destined for the pulp and paper industry: Brazil produced 7.3 million metric tons of wood pulp in the same year (FAOSTAT 2002). The remainder was destined for national and international markets in the form of furniture, lumber, plywood and panels.

Exports of wood products, accounting for 14 percent of Amazon timber production (Smeraldi and Verissimo 1999), and as much as 40 percent of Brazilian wood pulp is destined primarily for Europe and Japan, while a larger share of paper exports is bound for the Southern Cone. Wood product exports from Brazil constituted around 2.7 percent of global exports of these products in the year 2000 (ITTO 2002).[9] Exports of wood and pulp and paper products brought in annual foreign exchange revenues of $3.2 billion in the year 2000 (FAOSTAT 2002), responsible for only around 0.5 percent of total Brazilian merchandise exports. In the same year, however, Brazil was the fourth largest global supplier of cellulose, accounting for 7.7 percent of world exports. Brazil also then occupied fifth place in exports of plywood, comprising 5.6 percent of global supplies (*Ibid.*).

[8] These official statistics reported to the United Nations Food and Agriculture Organization-FAO by the Brazilian government (FAOSTAT, 2000) are on the same order of magnitude of plantation area reported by national enterprise groups at around 4.8 million ha (André de Freitas, personal communication).

[9] ITTO reports exports in logs, sawnwood, veneer and plywood from Brazil totaling $928 million in 2000. Global exports in this year, according to the same source, totaled $34 billion.

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

The movement toward forest certification in Brazil began as a consumer-driven phenomenon, corresponding to a quest for competitiveness in the context of global sustainability. Northern consumers' willingness to pay for forest products of sustainable origin acted as an incentive, leading to differentiated access to increasingly segmented world markets (May 2002).[10] The emergence of a certified tropical timber segment in Brazil began with a combination of such niche consumer demands and the threat of environmental boycotts from the North as consumer perception linked deforestation to the tropical timber trade (Azevedo 2001).

In the case of the industrial forest segment, compliance with ISO 14,000 series in the cellulose processing stage to access a discriminating final demand segment in Europe was a first step toward adoption of complementary standards relating to planted forests. Industrial associations in this segment began to articulate an interest in standardization as early as 1991, when they first launched the idea of a national certification scheme (see Standards, below). Environmentalists raised consumer awareness of the controversial impacts of eucalyptus plantations on watersheds and biodiversity, and of child labor and near slavery in plantations and charcoal manufacturing (IIED 1996). Export of timber from Amazon deforestation also raised consumer alarm. Such concerns were dramatized by Greenpeace blockades of pulp exports by a leading Brazilian manufacturer and Amazon timber on its way to a regional plywood enterprise on the eve of the Rio Earth Summit in 1992.

Corporate response to societal demands for sustainable development has increasingly been to perceive this as a market convention, affecting the parameters for competition in an ever more global market. To effectively compete for market share in this globalized context, industries must pursue new technological pathways and seek mutually beneficial relations with neighboring communities (Vinha 2000). This emerging market convention has not gone unnoticed by the wood products industry in Brazil, which has gone out of its way to rebuild its image as environmentally and socially responsible. This is particularly true of the panel, pulp and paper and industrial charcoal segments,[11] which were the first to achieve certification according to FSC norms. Some firms in this group became interested in certification of their forests to enable them to more easily market sawn wood to diversify production (Tasso de Azevedo, personal communication).

Finally, the wood products sector now admits that it must reflect its sustainable image in tangible changes in production technology and particularly in sustainable forest management, and that a clear way to communicate such change to promote consumer confidence is through independent external audits and certification.[12] In response to consumer preoccupations and buyer pressures in importing nations, leaders in the Brazilian market pulp and plywood industries were quick to adopt FSC plantation forest management standards once market leaders took the initiative to raise the bar.

[10] Since exports of certified cellulose and wood panels have been rather small proportionate to total production, the export market may not have acted as the principal driver toward certification (André de Freitas, personal communication). However, most currently certified firms aim their products toward overseas markets.

[11] See www.bracelpa.com, www.abracave.com, and www.sbs.org.br, for expressions of environmental image construction in the Brazilian pulp and paper, charcoal-based pig iron and reforestation industries, respectively.

[12] This affirmation is based on a number of personal interviews with wood products manufacturers at the April 2004 Fair of Certified Forest Products in São Paulo.

Importing consumer preoccupations have been even more influential on producers in the Amazon region, as market drivers toward forest management certification are stronger than has been the case with the pulp and panel industries (André de Freitas, personal communication). The threat of boycotts against rare tropical timbers such as mahogany has been an additional spur toward adoption of certification.

During the 1990s, global trade in tropical timber products was still dominated by Southeast Asia. As the formerly abundant dipterocarp forests of Indonesia and Malaysia dwindled due to over-harvesting and settlement expansion, buyers began to shift to Amazon supplies. A number of Asian firms sought joint ventures or outright control over these supplies. Alarm in Brazil over the environmental effects of this global market shift led to congressional hearings on the purported "internationalization" of forest use and control in the Amazon (Viana 1998).[13] External, independent auditing by foreign certifiers of forest resource use and management was perceived to represent another related channel for foreign meddling, part of a protectionist backlash against growing Brazilian competitiveness.

[13] In retrospect, the Malaysian "sellout" turned out to be quite a bit less threatening than initially imagined, since the complexities of Brazilian bureaucracy and additional payoffs to permit timber extraction, transport and export proved to be beyond even the most savvy Asian timber company executives.

Institutional Design

Steps Toward FSC Brazil

Leading socio-environmental organizations joined forces with industry in 1997 to create an FSC Working Group to define nationally appropriate criteria for forest plantations and management of dryland forests in the Amazon. The Working Group was initially housed at WWF-Brazil, and relied upon international support channeled through the WWF networks to cover the development of nationally agreed-upon standards. National NGOs and certifiers were engaged in a protracted debate on the socio-environmental content of the standards, as well as in their field-testing.

With intense stakeholder involvement by industry, academia and NGO representatives, the group published its first operating norms for plantation forests in 1997 and for upland forests in 2000. FSC International recognized the latter in 2002, while it has not yet recognized the norms for plantations. The Working Group was later transformed into an FSC-affiliated National Initiative (see www.fsc.org.br). There is interest in Brazil in transforming FSC-Brazil to a national accreditation body, a role that has been retained by FSC-International. This could potentially augment the number of national certifiers, thus reducing costs (André de Freitas, personal communication).

Simultaneous with the elaboration of national indicators, several FSC-accredited forest certifiers had launched their activities in Brazil. Imaflora, a Brazilian NGO based in the state of São Paulo, had initiated forest and agricultural certification activities in 1995, seeking to establish a hitherto unavailable frame of reference for such activity in the southern hemisphere. Imaflora led the field in Brazil through its association with the Rainforest Alliance SmartWood program headquartered in the U.S., following a model combining certification with training and promotion of the newly certified industry. In its inception, support from the MacArthur and Ford Foundations, GTZ (German Organization for Technical Cooperation/*Deutsche*

Gesellschaft für Technische Zusammenarbeit) and NOVIB (Dutch Development Financing Agency/Oxfam Netherlands) were critical to successful launching of this endeavor.

Imaflora was soon joined by Brazilian affiliates of Scientific Conservation Systems (SCS), based in Oakland, California, and of the Societé Generale de Surveillance (SGS), whose Qualifor Program for forest certification is headquartered in South Africa. These three certifiers provide services both to native forest and plantation segments, and all certify both forest management and the chain of custody of forest products.

The CERFLOR National Standard

The reaction of some industry groups to what were deemed excessive and inflexible FSC norms spurred determination by industry associations such as the Brazilian Silvicultural Society (SBS: *Sociedade Brasileira de Silvicultura*) to work toward the creation of a national forest management standards-setting process parallel to FSC. This system, entitled CERFLOR, is administered jointly by the national standards and metrics institute INMETRO (National Institute of Metrology/*Instituto Nacional de Metrologia, Normalização e Qualidade Industrial*) and ABNT (Brazilian Association for Technical Norms, a quasi-private agency specializing in capacity-building and monitoring application of technical norms such as the ISO series throughout industrial segments in Brazil: *Associação Brasileira de Normas Técnicas*). INMETRO accredits and ABNT trains certifiers for forest management and chain-of-custody systems.

CERFLOR was initially proposed by industrial organizations as early as 1991, but its institutional structure only began to be defined beginning in the late 1990s, by which time the FSC Working Group had already advanced substantially in the definition of the national standards. Although the FSC process benefited from substantive involvement by industry, representatives of CERFLOR considered it desirable to create the parallel standard "to offer an alternative, and to stimulate the evolution of concepts." Furthermore, it represented a protective response on the part of the industry to international environmental groups' concerns regarding plantation certification by FSC-accredited organizations. By seeking approval of standards through a nationally accredited certification scheme, the industry sought to avert a threatened withdrawal of FSC certification from forest plantations altogether. Finally, CERFLOR proponents believe that its process promotes dialogue to improve regulatory procedures, by engaging government agencies directly in the discussion of standards and monitoring their application and compliance (Rubens Garlipp, SBS, personal communication).

After field tests, the CERFLOR standards have now been applied in practice on a trial basis in nearly 50,000 ha of pine plantations and interspersed native forests controlled by the International Paper subsidiary, INPACEL, in the state of Paraná, and more recently on a larger scale in eucalyptus plantations on a total forest area of over 166,000 ha in southern Bahia controlled by Aracruz Cellulose. These certification processes were carried out under contract to Bureau Veritas Qualifor International (BVQI), as yet the only accredited CERFLOR certifier.

Standards

The national FSC standards-setting process followed the overall structure of FSC principles and criteria, with the integration of national labor, indigenous peoples' and land tenure codes to complement forest management protocols and environmental protection features. These additional features reflect the specificity of Brazilian public policies and social concerns associated with informal and child labor, indigenous areas and societies, and the landless. The standards were subjected to a series of stakeholder consultations over several years, a time consuming and intensely participative process that was open to public discussion. They now constitute a broadly accepted set of indicators and criteria for forest management, environmental protection, and social relations of production (Walter Suiter, personal communication). Although FSC-International has endorsed application of the Brazilian forest management standards, it has not yet done so for plantations. Nevertheless, as previously mentioned, the area of certified forest plantations has grown apace, following the FSC criteria as interpreted by national certifying bodies.

Initially applicable only to plantations, CERFLOR has now adopted standards for natural forest management that are awaiting field testing. CERFLOR follows norms similar in name to those established by FSC in Brazil, but are considered more process-oriented than FSC, and more flexible as regards observance of international environmental norms, socio-cultural impacts, and labor relations with third party suppliers (Andre de Freitas, personal communication).

CERFLOR, listed as a national scheme by the Programme for the Endorsement of Forest Certification schemes (PEFC), became operational in early 2003 and now seeks international co-recognition as a forest management certification standard. In seeking such co-recognition, CERFLOR's standards-setting process has been placed under scrutiny for compatibility with international criteria. The certification process adopted by BVQI at INPACEL also involved participation by international monitors associated with the PEFC.

Some critics complain of lack of transparency in the CERFLOR process, absence of social and environmental groups on its technical panels, and unavailability of standards and certification process details to the public (Greenpeace 2002; Timmer 2004). Indeed, CERFLOR's scheme for stakeholder representation is markedly distinct from the tripartite structure of FSC, as it has panels of consumer groups, producers, regulators and "neutral" parties (academics, research institutions), while FSC has its tripartite set of panels representing the three pillars of sustainability (economic, social, and environmental concerns). CERFLOR's standards and certification procedures have been available for discussion on-line during their development, but standards documentation, once adopted, is only available to interested parties for a fee, on the grounds that the accreditation organization relies on such fees to cover its institutional maintenance costs.

Both FSC and CERFLOR certification requirements take as a starting point the forest management criteria defined in Brazilian regulatory law. Government officials welcome CERFLOR as part of a generalized move toward independent auditing of forest management (Nelson Barbosa Leite, National Forest Program/*Programa*

Nacional de Florestas, personal communication), and the role of government on CERFLOR's technical committees may improve harmonization. However, most Brazilian forest products manufacturers have opted for FSC certification as a more broadly accepted standard in the international market.

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

Debate continues in the policy community over a number of substantive issues associated with forest policies, with implications for certification. These include: large-scale forest concessions vs. settler-enterprise accommodation as alternatives for Amazon forest management; FSC vs. CERFLOR norms and certifiers (see Standards, above); and the relationship between governmental regulation and voluntary certification schemes (see Roadblocks and Challenges, below). Such debate has typically engaged non-governmental organizations and industry representatives with government officials responsible for forest policy implementation. Although initially adversarial, NGO engagement in national forest policy formulation has become steadily more substantive and influential, to the point that the corps of government officials now includes several former NGO specialists in forest management and certification.

For example, an innovative proposal by IPAM (Institute for Amazon Environmental Research/*Instituto de Pesquisa Ambiental da Amazônia*) for the integration of "forest families" with wood products enterprise, arose out of the MAFLOPS project in Santarém-Pará, in the Amazon basin (Forest Management for Sustainable Production/*Manejo Florestal e Prestação de Serviços, Ltda.*). Small farmers are legally permitted to deforest up to three ha annually for agricultural production. Some farmers have entered into a partnership with the local enterprise, which offers support toward land titling, farm-level and community forest management, and fair wood pricing. The local wood products enterprise is now seeking certification. This experience has now served as a model for conciliation and convergence of interests between what were until then mutually exclusive land users in frontier communities, called the "Forest Family" approach (Lima *et al.* 2003). Both this model and the proposal for forest concessions on public lands arose in response to a recognized need for greater regulatory control over illegal timber extraction in the Arc of Deforestation in the Amazon (see discussion under Ownership and Tenure, above).

Although a good part of the norms required by FSC go beyond the IBAMA forest management requirements,[14] certification may be perceived by local regulatory officers as an effort to facilitate licensing of forest management plans by IBAMA. In fact, however, experience suggests that efforts to achieve certification bring forest operations under more intense scrutiny. In some cases this has called attention to outstanding management or procedural deficiencies, resulting in fines and/or harassment. To some extent, IBAMA personnel view certification of forest operations as a ploy on the part of some firms to obfuscate their extraction of timber from other areas not within management plans nor titled to the forestry enterprise.

[14] For example, IBAMA requirements demand compliance with legal restrictions on land use such as permanent protection areas, but not the establishment of a permanently untouched forest area, for comparison purposes, of 5 percent of total managed area to assess management impacts on biodiversity. FSC standards are analytical and evolutionary, allowing for pre-requisites and progress over time, while IBAMA either approves or cancels a PMFS license. Furthermore, FSC standards apply to concerns beyond the management practices themselves, such as corporate/community relations, road-building, overall land use planning, etc., which are not incorporated in IBAMA requirements (André de Freitas, personal communication).

Forest Owners

There has been surprisingly little ex-post facto assessment of how forest owners have responded to their role in certification. In many cases of successful certified enterprise development, forest ownership or usufruct is usually closely tied to forest processing enterprise. However, Almeida and Uhl (1999) found that conventional logging enterprises in the eastern Amazon that purchase timber from third parties have higher returns on investment than similar vertically integrated enterprises. Industry incapacity or unwillingness to engage in sustainable forest management has led to the emergence in some areas of "forest owner-managers" not directly integrated with the timber enterprise. Such forest managers assume the responsibility of meeting federal regulatory requirements, thus reducing the onus on industrialists, who remunerate the timber extractor commensurately for this service. Industrial and community certification experience to date in Brazil helps shed light on the role of forest ownership as an option in certified forest production systems.[15]

[15] The following case study material is derived substantially from May (2002), with updates by stakeholders in each case.

Klabin Paper and Cellulose, S.A., a 100 year old company, is the largest integrated paper producer in Latin America. One of the first certified forest operations in Brazil, Klabin has 230,000 ha of certified pine plantations in Paraná in southern Brazil and is in the process of certifying other holdings in neighboring Santa Catarina. The company has a history of working with external wood suppliers. Outsourcing has been a problem for certified wood products manufacturers, who are often forced to obtain supplies from firms whose forests are not certified, thus making it necessary that they guarantee the integrity of the chain of custody of certified products. In the Klabin case, several large outgrowers also became certified as a group, thus guaranteeing a sufficient flow of certified raw material to meet demand. Because certification of surrounding forestlands also required that they be titled, pending land tenure disputes were resolved in the process, also ensuring that substantial areas of native forest were permanently protected as part of management plans.

In the case of certified management of native Amazon forests, where the great diversity of timbers and orders for wood from specific species fluctuate as tastes shift among buyers, the need to integrate with third party suppliers is also paramount. Some members of the still small group of certified forest enterprises in the Amazon have experimented with outsourcing and stimulation of certification among local forest owners. Cikel Brazil Verde S.A., the largest certified enterprise in the region, with 140,658 hectares under certified management, has initiated support to community-managed forests in its vicinity. Gethal, a plywood enterprise in the state of Amazonas, initially supplemented timber from its 40,800 hectare estate in Manicoré with supplies from a neighboring forest owner (uncertified) and from a complementary certified forest operation – Mil Madeireira (formerly Precious Woods) – in Itacoatiara, with which it swapped certified hardwood for the softer woods it requires for plywood manufacture. These arrangements have since been suspended for administrative reasons.

Small-scale community-based forest enterprise for timber and NTFP is often highlighted in the development literature, but it must be admitted that progress has been slow in certifying the 15 community forest management schemes that have

sprung up over the past decade throughout the Brazilian Amazon (Amaral and Amaral Neto 2001).

By late 2002, there were two certified community forest management enterprises near Xapuri, Acre, the home of Chico Mendes, but in 2003, another five community enterprises had either initiated or completed certification. (See data under Current Status, below).

Some of the difficulties faced by these enterprises include: a) greater transaction costs in provision of certification services to multiple smallholders; b) complexity of collective resource management; c) capital rationing for equipment acquisition and maintenance; and d) difficulties in community enterprise management and distribution of returns. One of the advantages of such enterprise within extractive reserves is the fact that families do not own the land – they have exclusive long-term usufruct rights, which are hereditary rather than transacted in the market, for land maintained under sustainable forest use. This removes the incentive to clear forest for other uses for perceived short-term gain.

Current Status of Forestland Certification

As of April 2004, Brazil ranked fourth among all nations in terms of the number of certified forests (42), and eighth in regard to area (slightly under 1.6 million hectares[16]), but remains the leader in terms of FSC certification in the tropics. Of its certified forest area, 529,079 ha are native forests of the Amazon and only 69 hectares in the Atlantic Forest. The latter are managed only for NTFP; native forest management for timber is no longer permitted in the Atlantic Forest as a conservation policy. There are over one million ha (including native forest reserves) of certified industrial plantations, nearly all in the Atlantic Forest biome.

[16] Certification figures include both FSC (41 forests and 1,547,719 ha) and CERFLOR (2 forests on a total of 216,020 ha), in both cases including both plantations and native forest reserves. Sources: FSC-Brasil. (2004); http://www.internationalpaper.com.br/docs/resumo.pdf; http://www.bvqi.com.br/bvqi/cerflor/cerflor_princ.asp.

Trends in FSC certification from 1997 to 2003 show a steady exponential increase in the number of certified operations, with a considerably larger share arising from plantation sources. The growth in certified area was on the order of 10percent in 2003 (FSC-Brasil 2004). While the area in certified plantations was substantially greater at the outset of the certification process in the mid-1990s, in 2003, for the first time, newly certified natural forests (54 percent) outstripped plantations (46 percent).

Imaflora had been responsible for certifying 53 percent of operations, monitoring the majority of Brazilian certified forests. The two other Forest Stewardship Council (FSC) accredited organizations that have certified operations in Brazil are SCS, Inc (30 percent) and SGS Forestry, Ltd. (13 percent) (Jones 2003).[17]

[17] Although this source lists Skal as a forest certifier in Brazil, its only certification there has been suspended (Andre de Freitas, personal communication).

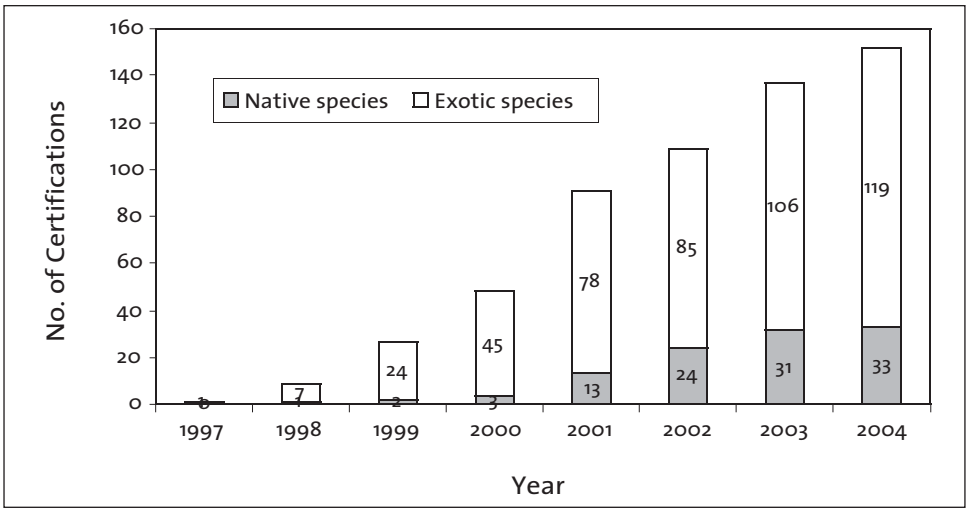
Current Status of the Certified Marketplace

Figure 1 below traces growth in the number of products from chain of custody certifications originating from natural forest management and plantations under FSC criteria.

The data show a nearly exponential rise in number of certified products and chain-of-custody certifications over the years. The role of export markets is important in stimulating adoption, but with the creation of the Certified Wood Buyers'

Group in 2000 – which now includes 64 Brazilian wood-using corporations, retail outlets and institutions – more domestic users are demanding certified raw materials (Amigos da Terra 2003). The vast majority of such products are still being derived from planted eucalyptus and pine, but a significant effort has now begun on the part of Amazon timber enterprises to expand their numbers and output so as to meet the expanding demand for certified native timber species. These goals are being pursued through expansion in the number of enterprises associated with the Certified Wood Producers' Group, created in mid-2003 and as yet only loosely linked with the Buyers' Group, under the guidance of a consortium of national NGOs.

Figure 1 Chain of custody certifications, in cumulative number of products certified, by year, in Brazil. Note that 2004 includes certifications only up to April.



Source: FSC-Brasil (various years)

One tactic for enhancing the number of certified forest managers in the Amazon is to seek out those enterprises which are engaged in medium quality forest management (about 10 percent of all timber extraction area in the region) and could be recognized as meeting (necessarily more flexible) criteria for both regulation and FSC certification and to work with them to progress toward certified status. Such a proposal, formulated by Imazon and other NGO partners, will face hurdles in the regulatory bureaucracy, but it offers the opportunity to incorporate new areas, with the potential to more than triple the area under certified management in the medium-term (Adalberto Veríssimo, personal communication).

Although summary statistics on certified wood production and exports are lacking in Brazil, it is clear from interviews conducted for this study that the majority of such products are still destined for overseas markets. Despite non-binding commitments by a number of wood buying industries and government agencies to purchase certified products for domestic consumption (see below), the volume of certified native timbers destined for these buyers is estimated to account for only 1 percent of

overall supply. Certified wood products manufacturers rarely concede that they have obtained a price advantage, but most affirm that certification has assured them access to more discriminating markets. Most domestic demand for certified wood is met by plantations, of which approximately 20 percent by area are certified, rather than from managed native forests. This situation reflects the continued state of disorganization reigning in the wood industry in the Amazon, where even recent expansion in certified area represents a drop in an ocean of illegal and nominally legal extraction from deforestation.

EFFECTS OF FOREST CERTIFICATION

This section provides greater detail on the effects of certification along the variables of power and sustainability (see Table 1 below).

Power

As mentioned above, the external bargaining chip of certification is not readily parlayed into greater acceptance on the part of national regulators. An exception is related to community forest management enterprises, which are explicitly dedicated to improving socio-environmental conditions of forest product extraction (both timber and NTFP). Alliances with progressive Amazon state governments such as Acre and Amapá, and promotion by international and regional NGOs, coupled with efforts to forge links with local processing enterprises, have fortified community enterprises' bargaining power in their respective market niches.

With regard to plantation operations, industry leaders have readily adopted certification as part of a series of societal demands for corporate responsibility. Yet certification norms have not been without contention, leading to development of a competing set of national standards through the CERFLOR process, initially focused only on plantations. The effect of certification has enhanced the market power of those firms that have assumed leadership in the global market. The consolidation of such power may have promoted a greater degree of concentration in the industry over the past few years.[18]

Land concentration has served as cannon fodder for critics of large-scale plantation enterprise, making the movement toward outgrower partnerships more attractive to the industry. These arrangements may, however, subliminally reinforce the power of the contracting enterprise, since these arrangements typically leave control over the technical parameters and seedling provision up to the industrial partner, while land costs, planting, and maintenance are left to the private landowner. In some cases such arrangements also establish that all or most trees produced must be sold to the industry at a preset price. Certification of outgrower operations has not yet extended to smallholder *fomento* tree production, but rather to larger properties on lands neighboring certified plantations.

[18] Mergers and acquisitions of forest assets and industries by leading national pulp and paper manufacturers such as Klabin and Aracruz responded more to a decision by Cia. Vale do Rio Doce to get out of the forest sector, and to their exceptional profits from overseas sales than any benefit derived from certification. Aracruz as yet has no certified plantations, except for one purchased from Klabin in southern Brazil. However, it cannot be ignored that the largest five or so pulp and paper companies in Brazil control over half of their respective markets.

Table 1 Effects of certification along sustainability and power dimensions by enterprise type in Brazil

Enterprise Type/Effects	Power	Social	Environ-mental	Economic
Managed Terra Firme [Amazon]				
– Corporate	Enhanced competition, some local regulatory problems persist	Improved labor and community relations	Considerably improved through reduced impact logging	Enhanced access to markets
– Community (timber, NTFP)	May fortify political alliances	Improved associates' welfare	Very low extraction impact	Access to credit and markets
*Plantation [Atlantic Forest] **				
– Corporate estate	Certification may increase competitiveness	Improved labor relations	Not substantial improvement over ISO series criteria	Some markets require certification
– Estate / Outgrower partners	Buyer defines technical parameters; monopsony	Reduces land tenure concentration	Lower scale impacts on landscape homogeneity	High transactions costs of group certification

* There is only one community NTFP enterprise certified in the Atlantic Forest, an erva-mate producer on 69 ha in southern Brazil. It is hence difficult to assess the relationship between certification and improvements along these lines specific to this biome.

Social

Social accommodation with neighboring communities has tended to be a favorable result of certification, although there are few cases to date of communities becoming partners or suppliers of certified timber or NTFP to corporations. The small number of certified community enterprises and their insignificant management scale minimizes their overall impact on the socio-environmental sustainability of Amazon forest peoples. The "forest family" approach to partnership between small forest landowners and medium timber enterprises (see discussion above) may offer greater opportunities than community enterprise development for incremental scale in certified forest management in the Amazon. However, community management tends to focus on traditional communities rather than farmers at the frontier; thus both approaches are needed.

Social benefits of certification in the case of plantation forests have been fairly modest, though direct employees have been assured access to health and education. The role of certification with regard to labor relations practiced by third-party service providers (such as charcoal kiln operators) is not always sufficient to promote a change in labor practices, although some progress has been made in reducing child

labor in such activities. Accusations of land concentration and expulsion of smallholders have continued in some cases. Plantation forest enterprises have embarked on outgrower schemes such as the "*fomento florestal*" system in Espírito Santo and Minas Gerais in part as a response to such criticism. Overall, the social impacts of certification have been the most uneven among the enterprises appraised (André de Freitas, personal communication).

Environmental

Environmental benefits of reduced impact logging are substantial, despite the fact that any human intervention in natural forests is likely to result in biodiversity loss, either directly or indirectly (Putz *et al.* 2000). In adopting extremely low impact timber extraction (employing animal traction rather than machines and very low extraction rates) combined with multipurpose management objectives, the biodiversity impacts of community forest enterprises can be considered the lowest among firms engaged in sustainable management.

With regard to environmental performance, certification has made it imperative that plantation enterprises observe land use codes, thus ensuring maintenance or recuperation of riparian areas and hillside vegetation. This has led to some alleviation in criticism of the environmental impacts of monospecific plantations.

Economic

Although demand is growing for certified tropical timbers both within Brazil and overseas, the intensity of investment, continued difficulties in licensing and transport, unclear land tenure as well as conflict with competing land uses at the frontier, imply that the overall effect of certification has not been to dramatically enhance sustainability at a sectoral level, especially in the Amazon. Nevertheless, embarking on a certification strategy in most cases can consolidate the bargaining position of certified timber enterprises with their buyers, as well as provide potential economic advantages. However, up-front costs are significant and not readily financed by national development banks or other rural credit lines. Private bankers such as ABN-AMRO/Banco Real and the Amazon regional development bank, BASA, are now beginning to close this gap in available financing by offering investment credit to firms that commit themselves to attaining certification.

With regard to community forest enterprises, they now effectively compete in markets that have been monopolistically controlled by intermediaries or by timber companies, or have launched new product lines in which larger firms have no comparative advantage (marquetry, musical instruments, design furniture). Partnership approaches such as the "forest family" proposal are not without dangers. First of all, partnership typically involves families in exclusive sale arrangements for timber, which can result in monopsonic relations with a timber enterprise. Prices will undoubtedly be higher, however, than those offered for timber currently obtained from clear-cutting for agricultural conversion. The question is whether family forests may indeed become economically viable as production units. There will be need for

investment of returns from timber sale in perennial species and agroforestry systems that will only prove their capacity to provide for household necessities in the medium-term. If these returns are not capitalized and are simply liquidated in consumption, leading to continuing frontier migration of forest families, this approach will not substantially affect the currently unsustainable process of legal wood extraction for permanent conversion to agropastoral production in the Amazon.

Diversification by leading pulp and paper enterprises into the wood panel industry has also enhanced the stability of profits and built new market channels for plantation products, adding value to certified plantations. It is also fairly evident that involvement with outgrowers can reduce the enterprise's own land acquisition requirements and may be more economically efficient, since labor costs are at least partially absorbed by farm households. Data from Minas Gerais suggest that the costs of eucalyptus under farm forestry per m^3 are on a par with those in the industry, and yields are only slightly lower (Bacha *et al.*, 2000). Outgrower schemes have thus far rarely been subject to certification, due to the incremental transactions costs involved and the fact that stands are rarely contiguous, making monitoring more difficult.

There is very little in the way of certified community forest management in the Atlantic Forest, due to legal strictures against timber exploitation, which also extend to most NTFP extraction. Yet the option for certified agroforestry and NTFP enrichment in secondary forests is one of few means of fortifying the economic value of the highly fragmented remaining forest along the Atlantic coast. These land use alternatives are expected to substantially grow as demand increases globally for organic shade coffee, "*cabruca*" cocoa and products such as certified hearts of palm and native fruit juices derived from exotic species (some successfully transplanted from the Amazon). These socioeconomic options for smallholders are being linked with markets for ecosystem services such as terrestrial carbon storage, water resource protection, ecotourism and biodiversity conservation, all within a framework of certification, validation and monitoring, offering attractive opportunities for "green" finance (May *et al.* 2003). Nevertheless, cases of successful implementation of such options are still few and far between, diluting their effects on the behavior of most economic actors, whose activities continue to degrade the scarce native forest remnants.

CONCLUSION

Summary

The potential for forest certification to play a role in development of the Brazilian forest sector has never been as great as it is today, with recognition by key federal and state officials of certification as a means to motivate compliance with legal provisions for sustainable forest management. Nevertheless, the discussion above has made clear that certification had an initially more rapid uptake covering a larger proportion of suppliers in Brazil's considerable plantation segment, while the natural forest industry lagged far behind both in proportion of managed area and supply.[19] This has disappointed industry participants in the Brazilian Buyers' Group and led to a

[19] Since the Yale symposium on which this case study is based, two additional forest areas certified in the Amazon totaling over 750,000 ha put Brazil over the top in terms of Latin American natural forest certification area, exceeding that of Bolivia (WWF 2004). However, since Brazil holds over two-thirds of the Amazon basin, its proportional share of certified area remains low.

relaxation of purchase commitments. The greatest challenges still remain in securing and maintaining adhesion to certification standards by a larger number of Amazon forest managers, given the open season on legal deforestation by smallholders and rampant illegal extraction still prevalent in the region. A relatively small number of Amazon forest enterprises have committed themselves to forest and chain-of-custody certification, in exchange for differentiated market access. But by and large, certification has not made a substantial impact on the problems of forest protection and sustainable use in the Amazon, which continue unresolved.

Roadblocks and Challenges

One of the challenges to success in natural forest certification is to overcome resistance on the part of some elements in the national forest regulatory agency, IBAMA, toward independent voluntary certification. The proposal regarding concession of public forests for sustainable management responds in part to the scarcity of titled, accessible, and productive forestland in areas of sufficient scale to enable long-term wood production and forest rejuvenation (Nelson Barbosa Leite, PNF/MMA, personal communication), but also in some measure to the inefficacy and corruption associated with federal regulation in this industry. Current government intention to establish mandatory chains of custody using satellites to trace the origin of timber from natural forests may build greater confidence and mutual support between members of the certified segment and local IBAMA officials (Barreto 2004). Without improvement in regulation and a decline in illegal logging, the certified segment will remain limited in scale and prices throughout the industry deflated.

Other areas constituting important challenges include financing of the costs of conversion to certified standards, labor and managerial training, organizational capacity building for community management projects, and community-enterprise interfaces, such as partnerships with outgrowers and partner enterprises. Conversion costs to certified standards in tropical forest management typically include the fairly modest costs of certification itself (estimated at around 0.4 percent of average wood sales value) (May *et al.* 2000). More significant is the investment in skidders to replace outmoded bulldozers, as well as other equipment necessary to undertake reduced impact logging (geographical information systems, for example). Labor costs and preparation time involved with inventories, felling and road-building plans, vine cutting, and block demarcation add to the equation. Practical training of field crews is essential to avoid needless felling of non-merchantable trees and destruction of adjacent juveniles, as well as reduced impacts of skidding and storage patios and the local road network.

Transactions costs relative to land acquisition, community relations, and compensation tend to be relatively insignificant in monetary terms but are time consuming and can impede implementation of management plans if not carried out sensibly. Overall, these costs can add significantly to timber extraction operations and can affect the "social license to operate." Yet those who have embarked on such practices have found that price premiums (to the extent these exist), and access to

niche markets have compensated for additional costs. In a growing number of cases, access to financial markets has become a determining factor in pushing enterprises toward certification, as banks and other creditors increasingly demand certification as a condition of investment.

Future Developments

To allow certification procedures to reach the greatest number of enterprises and forest areas, it will be necessary to continually adjust certification procedures and norms to allow greater flexibility, particularly with regard to outgrower and community partnerships with industry. Whether such flexibility will arise from the creation of national norms such as CERFLOR and a greater number of national certification bodies, thus bringing prices down, or by making FSC norms more flexible to variations and complexity in the industry, remains to be seen. Conciliation between public regulation and voluntary certification standards is called for, while partnerships among corporate and community enterprises and forest families will add synergy to the growing process of certified forest-based production.

Future Research

There is clearly a strong continuing need for further research and monitoring of the effects of certification on the sustainability of local, enterprise and sectoral development in Brazil's forest sector. Such research should focus in part on the intangible benefits obtained from certification processes, such as enhanced administrative capacity and forest management skills as well as social capital derived from the recognition of community forest enterprises as players at a policy level.

It is also important that groups engaged in promoting certification establish an ongoing and easily accessible database of statistics associated with the certified forest segment, since there is no ready source of data in Brazil on the volume of certified forest production, its destination, and the relationship of this production to the respective non-certified segments in terms of average value and access to markets. Regularly updated listings of forest area and products certified, provided by FSC Brazil, must now be supplemented with data on CERFLOR certifications and by comparable sectoral statistics. Only then will it be possible to formulate a well-informed plan for development of the certified forest sector in Brazil.

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Organization	Date	Location
Araupel, S.A.	April 15, 2004	São Paulo
Brazilian Certified Wood Buyers' Group	April 15, 2004	São Paulo
Brazilian Silviculture Society/ CERFLOR	May, 2004	São Paulo
Cikel, S.A.	April 15, 2004 and previous	São Paulo and Belém
Floresteca, S.A.	April 15, 2004	São Paulo
Friends of the Earth-Brazilian Amazon	various contacts	São Paulo
Ervateira Putinguense Ltda.	April 15, 2004	São Paulo
FSC-Brasil	April 15, 2004	São Paulo
Fundação Floresta Tropical	April 15, 2004 and previous	São Paulo and Belém
Gethal, S.A.	April 15, 2004 and field visit	São Paulo, Itacoatiara and Manicoré, Amazonas
Imaflora	various contacts	São Paulo
Imazon	various contacts	Belém
Leo Madeiras / EcoLeo	April 15, 2004	São Paulo
Ministry of Environment	various contacts	Brasília
Plantar, S.A.	May, 2004 and field visits	Belo Horizonte and Curvelo, Minas Gerais
Rohden Lignea, S.A.	April 15, 2004	São Paulo, Juruena-Mato Grosso

ACRONYMS

ABNT	Brazilian Association for Technical Norms/*Associação Brasileira de Normas Técnicas*
APP	Permanent Protection Area/*Área de Proteção Permanente*
BASA	Development Bank for the Amazon Region/*Banco de Desenvolvimento da Amazônia*
BVQI	Bureau Veritas Qualifor International
CERFLOR	Brazilian National System of Forest Certification/*Programa Nacional de Certificação Florestal*
EIA/RIMA	Environmental Impact Assessment and Report/*Estudo de Impacto Ambiental/Relatório de Impacto ao Meio Ambiente*
FAO	Food and Agriculture Organization of the United Nations
FASE	Federation of Educational and Social Assistance Organizations/*Federação de Órgãos para Assistência Social e Educacional*
FSC	Forest Stewardship Council
GTZ	German Organization for Technical Cooperation/*Deutsche Gesellschaft für Technische Zusammenarbeit*
IBAMA	Brazilian Institute for the Environment and Renewable Natural Resources/*Instituto Brasileira de Meio Ambiente e Recursos Naturais Renováveis*
IBDF	Brazilian Forestry Development Institute/*Instituto Brasileiro de Desenvolvimento Florestal*
IMAFLORA	Institute for Forestry and Agricultural Management Certification/*Instituto para Manejo e Certificação Florestal e Agrícola*
IMAZON	Institute for Man and Nature in Amazonia/*Instituto do Homem e Meio Ambiente da Amazônia*
INMETRO	National Institute of Metrology/*Instituto Nacional de Metrologia, Normalização e Qualidade Industrial*
INPACEL	Industry of Paper and Cellulose (International Paper Corp. subsidiary)/*International Paper do Brasil, S.A.*
IPAM	Institute for Amazon Environmental Research/*Instituto de Pesquisa Ambiental da Amazônia*
ISO	International Standards Organization
ITTO	International Tropical Timber Organization
MAFLOPS	Forest Management for Sustainable Production/*Manejo Florestal e Prestação de Serviços, Ltda.*
MMA	Ministry of Environment/*Ministério do Meio Ambiente*
NGO	Non-governmental Organization
NOVIB	Dutch Development Financing Agency/Oxfam Netherlands
NTFP	Non-timber forest products
PEFC	Programme for the Endorsement of Forest Certification schemes
PMFS	Sustainable Forest Management Plan/*Plano de Manejo Florestal Sustentável*

PNF	National Forest Program/*Programa Nacional de Florestas*
SBS	Brazilian Silvicultural Society/*Sociedade Brasileira de Silvicultura*
SCS	Scientific Conservation Systems
SGS	Societé Generale de Surveillance
UNCTAD	United Nations Conference on Trade and Development
WWF	Worldwide Fund for Nature and Natural Resources

Forest Certification in Guatemala

Fernando Carrera Gambetta, Dietmar Stoian,** José Joaquín Campos,*** Julio Morales Cancino,**** and Gustavo Pinelo******

ABSTRACT

The forest certification process in Guatemala has largely been confined to the forest concessions in the Maya Biosphere Reserve (MBR), representing 95 percent of the country's certified forest area. Forest certification in Guatemala is unique in that certification in accordance with the scheme of the Forest Stewardship Council (FSC) is mandatory in order for both communities and industrial groups to obtain and maintain forest concessions in the MBR. Unlike other countries where forest certification has almost exclusively been advanced in a joint effort between non-governmental organizations, development projects and the private sector, the case of Guatemala shows the important role government agencies can play as agents backing the process. Despite initial resistance, the National Council for Protected Areas (CONAP), as the state agency in charge of the Maya Biosphere Reserve in the Petén region of northern Guatemala, permitted forest management in the MBR provided that it was subject to FSC certification. Sixteen forest management units covering close to half a million hectares of broadleaved forests have since been certified, including 10 community concessions, four cooperatives or municipal *ejidos* and two industrial concessions. In addition, two forest plantations outside the MBR have been certified. Notwithstanding the considerable progress towards sustainable forest management in the MBR, economic benefits as returns on certification investments have generally not lived up to expectations. Moreover, forest certification has yet to gain momentum outside the Maya Biosphere Reserve where the process is voluntary. Increasing the benefits of certification and expanding its coverage would require a concerted effort between the various stakeholders involved, thorough cost-benefit analysis in each individual case, and the development of integrated supply chains of certified forest products. Toward this end, we suggest creating learning alliances between key actors in the certification process, such as managers from certified management units and processing plants, non-governmental and governmental organizations, certification and accreditation bodies, donor agencies, research institutions, and business development service providers.

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INTRODUCTION

The following case study presents an analysis of the forest certification process in Guatemala,[1] focusing on the forest concessions in the Maya Biosphere Reserve (MBR) where 95 percent of the certified forest area in Guatemala is located (see FSC 2004).

The case of forest certification in Guatemala is unique in that forest certification in accordance with the Forest Stewardship Council (FSC)[2] scheme is mandatory in order for both communities and industrial groups to obtain and maintain forest concessions in the MBR. Unlike other countries where forest certification has almost exclusively been advanced in a joint effort between non-governmental organizations (NGOs), development projects and the private sector, the case of Guatemala shows the important role of government agencies as agents backing the process. Given that non-timber forest products (NTFPs) have yet to gain certification, the Guatemalan case centers around the certification of wood-based forest products.

Unlike other countries in Latin America or elsewhere in the tropics, albeit similar to Mexico, community forestry groups figure prominently among the certified forest operations in Guatemala. In most cases, forest certification would not have been possible without advocacy and intense support from NGOs and development projects, providing both technical and financial assistance. Certification bodies were also instrumental in raising awareness of the potential benefits of certification and the procedures involved. Industrial operations have largely been excluded from external support, explaining to a large extent why certified community forest concessions by far outnumber certified industrial concessions. Mandatory forest certification played a key role in the strategies of NGOs and development projects seeking to convince the National Council for Protected Areas (CONAP)[3] to allow forest management in the MBR. Forest certification thus evolved as the *sine qua non* for advancing sustainable forest management in the multiple use zone (MUZ) of the Maya Biosphere Reserve. However, it has yet to emerge as an important instrument promoting sustainable forest management outside the MBR where forest certification is voluntary and, for the time being, largely absent.

In this case study we will argue that forest certification can be instrumental in promoting sustainable forest management in areas subject to restrictions in natural resource use, such as multiple use zones of biosphere reserves. Independent third party certification can build confidence in sound forest management and thus ensure support from both government agencies and environmental NGOs. We will further argue that confidence in its ecological soundness is a necessary but not a sufficient step towards sustainable forest management. Only when certified operations are both environmentally sound and economically viable, will they receive the social and institutional support required to ensure sustainability. This holds particularly true for the certified community operations, where subsidized forest certification is yet to give way to a self-sustaining process with an overall favorable cost-benefit ratio of certified forest management. Towards this end, it will be necessary to develop integrated supply chains of certified forest products and to establish learning alliances among the various stakeholders involved.

[1] Analysis was based on personal experiences (three of the five authors have intimately been involved in the certification process in Guatamala from its very beginnings), personal interviews, literature review and analysis of primary documents such as reports of certifying bodies, governmental and non-governmental organizations, and development projects.

[2] As elsewhere in Latin America, forest certification has exclusively been implemented according to the FSC scheme. To date, competing certification schemes have not made significant efforts to undercut this *de facto* monopoly and carve out their share in the market.

[3] CONAP is in charge of administering Guatamala's protected areas, while the National Forestry Institute (INAB) administers all forest areas outside the protected areas.

BACKGROUND FACTORS

Despite its relatively small land surface of 108,889 km², Guatemala reveals high natural and cultural diversity. Due to its location at the isthmus between two large land masses, topographical and edaphic variation, and broad rainfall, thermal and altitudinal ranges, Guatemala is home to a large variety of ecosystems and species. The country's strategic position between two oceans with access to international ports[4] both on the Atlantic and Pacific coasts greatly facilitates international trade.

[4] Puerto Barrios, Santo Tomás de Castilla and Puerto Quetzal.

Historical Context

Forestry Problems

The country's broad ecological variation leads to a wide variety of forest ecosystems, which in turn are subject to a complex pattern of access to and ownership of forest resources. For most users, though, forests are a source of firewood rather than construction wood or valuable timber. To date, these features have hindered the development of a national-level approach to sustainable forest management. In the southern region, principal forestry problems include small-scale landownership, pressure to convert forests into agricultural lands, and low productivity of coniferous and mixed forests along with their overexploitation for firewood. In the Petén, on the other hand, overall conditions are more conducive to sustainable forest management, although this northern region suffers from poor access and a long trajectory of forest fires and illicit logging of valuable species, particularly mahogany (*Swietenia macrophylla*).

Given the vast tracts of forests remaining in the Petén and their high levels of biodiversity, one of the key issues has been how best to conserve these principal forest resources of the country. It is in this context that forest certification has emerged as a policy tool. Rather than seeking to promote sustainable forest management on a national scale, advocates of forest certification asserted that it would bring the following benefits:

- *Assure government agencies that the public forests in the MUZ of the Maya Biosphere Reserve are well-managed.* Distrust was related to the industrial concessions in the MBR, rather than the community concessions that were backed by various kinds of NGOs.
- *Avoid criticism from conservation groups opposing extractive activities in any part of the Maya Biosphere Reserve.* Similar to government agencies, several environmental NGOs initially opposed timber extraction in the MUZ. Forest certification was believed to lend credibility to the forest concession process.
- *Promote sound forest management.* Mandatory certification was assumed to improve forest management in the MUZ by making both industrial and community concessions comply with basic principles of sound forest management as reflected in expert recommendations and the conditions imposed by them.

- *Improve prices of certified wood and obtain access to niche markets.* Although at the time of stipulating mandatory certification, improved prices and access to niche markets were not regarded as the principal objectives, it was expected that certification would bring about significant improvements in these respects.

Policy Responses

Between the 1960s and 1980s, the forests in the Petén were subject to indiscriminate exploitation of mahogany. A total of 13 logging companies operated under the supervision of Fomento y Desarrollo de Petén (FYDEP), a state enterprise administrated by the military. Use rights were granted as renewable logging contracts for periods of three to five years. Companies with such contracts legally extracted as much mahogany as possible. Without any provision for management plans, they simply were required to pay a volume-based tax. At that time, the concept of forest conservation through sustainable development did not rank high on governmental agendas. Rather, the policies in place sought to colonize the so-called jungles, i.e., sparsely populated, forested areas including parts of the Petén, as part of the overall goal to boost agricultural production and productivity.

In the second half of the 1980s, agricultural policies based on the advances brought about by the green revolution and biotechnology gradually experienced a "greening," i.e., environmental issues found their way into rural development agendas, reflecting the emerging paradigm of sustainable development. In addition, the public administration system in Petén underwent a general overhaul. In 1989, FYDEP was succeeded by CONAP and the following year saw the creation of the Maya Biosphere Reserve[5] and, consequently, all logging contracts in the reserve were revoked. Covering 2.1 million hectares, the MBR was divided into three zones: the core zone, consisting of national parks and biotopes; the multiple use zone, where the forest concessions are located; and the buffer zone, where the cooperatives and municipal *Ejidos* are located and where land use is generally restricted, also on private property.

The creation of the MBR in 1990 can be seen in light of the overall pursuit for sustainable development in the context of the pre and post-Rio process. The reserve was essentially the outcome of successful lobbying by environmental NGOs, along with interventions from donor agencies. In particular, the USAID-funded Maya Biosphere Project proved to be instrumental for promoting the conservation and sound use of natural resources in the region.[6] Initially, however, the creation of the reserve resulted in a series of conflicts with logging companies and local populations who saw their livelihoods severely restricted. In the course of time, and after amendments to the regulations and through projects involving the affected groups, acceptance has risen and major conflicts have been settled.

The shift from the "jungle clearing" policy to the "tropical forest conservation" policy in the Petén was anything but a smooth transition in view of changing development paradigms. The legal framework related to the MBR, for example, allowed for granting concessions in the multiple use zone, but CONAP initially revealed little political will to promote such a complex process. Earlier experiences

[5] National governments nominate areas as biosphere reserves which then are designated under the Man and the Biosphere (MAB) program of the United Nations Educational, Scientific, and Cultural Organization (UNESCO). One of the key challenges faced in biosphere reserves is the reconciliation between the conservation of natural resources and their sustainable use. As of July 7, 2005, UNESCO has designated 482 biosphere reserves in 102 countries, two of which in Guatemala (UNESCO 2005).

[6] The USAID-funded Maya Biosphere Project turned out to be the principal source of technical and financial assistance for the development of activities related to the conservation and management of the forests in the MBR.

with largely uncontrolled logging in the Petén and its negative repercussions on forest conservation did not convince CONAP that sustainable forest management could be ensured by granting concessions. Against this backdrop, the OLAFO community development project, executed by the Tropical Agricultural Research and Higher Education Center (CATIE), facilitated an extensive process of conceptualization and negotiation, but it was not until 1994 that the first concession (San Miguel La Palotada) was granted. It was anticipated that now the concession process would rapidly gain momentum. Yet CONAP continued to be concerned about the potentially adverse effects of forest management, slowing down the granting of further concessions in the MUZ.

Finally, the process was revitalized in 1996 on the basis of the positive forest management experiences gained in the San Miguel concession in the MUZ and the community forest of the Bethel Cooperative in the buffer zone. In the same year, CONAP entered into a collaborative project with CATIE (funded by USAID) to streamline the concession-granting process. As a result, less bureaucratic regulations for granting the concessions in the MUZ were promulgated in 1999. In addition, mandatory forest certification was established as a formal requirement for both industrial and community concessions.

Structural Features

Ownership and Tenure

The name Guatemala derives from *guauhtemallan* in the Nahuatl language, meaning "Land of Trees." Forests cover 3.90 million hectares or 35.7 percent of the land surface, including 2.24 million ha of broadleaved forests (57.6 percent), 1.07 million ha of fragmented forests associated with agricultural land (27.6 percent), 459,960 ha of mixed forests (11.8 percent), 101,650 ha of coniferous forests (2.6 percent), and 17,730 ha of mangrove forests (0.5 percent) (FAO 2003).

Guatemala is a centrally organized, constitutional democratic republic, with its forest resources being administered by CONAP and the National Forestry Institute (INAB). CONAP is in charge of the protected areas, which harbor 51.4 percent of the remaining forests (Figure 1), including most of the country's broadleaved forests (71.5 percent). The majority of coniferous forests, mixed forests, and forests associated with agricultural land (75.6 percent) are found outside protected areas and, hence, are administered by INAB.

An estimated 700,000 hectares are subject to some type of forest management scheme. Two thirds of this area is under concession or licensed by CONAP, and the remaining area is controlled by operations with permits or licenses granted by INAB or delegates in the municipalities. Some 265,000 hectares of coniferous and mixed forests are considered as having productive potential (FAO 2003).

Forest ownership types in Guatemala are (in order of descending area): private, national, and municipal-communal. Notably, recent figures derived from the National Forest Inventory Pilot Project 2002-2003 (FAO/INAB 2004) show marked differences in terms of total forest area as compared to earlier assessments by FAO (2003) (Table 1).[7]

[7] It remains unclear to what extent this variation is due to real changes in area and/or to differences in the methodological approaches.

Table 1 Forest cover in Guatemala according to ownership type

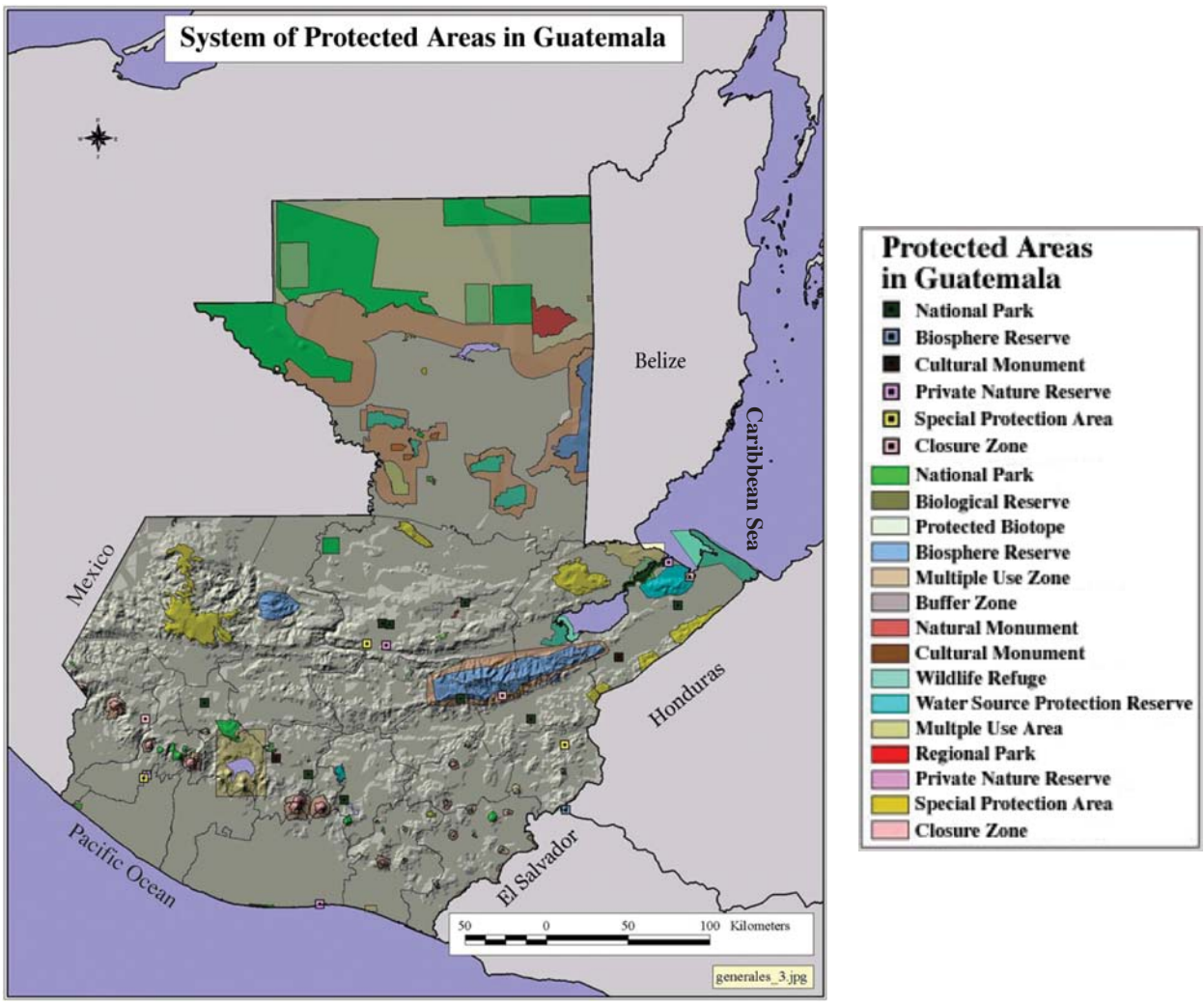
Type of ownership	Area (ha)	Percentage (%)
Private	1,531,133	38
National	1,367,732	34
Municipal-Communal *	934,630	23
Other **	212,521	5
Total	3,111,386	100

Source: Preliminary results of the National Forest Inventory Pilot Project 2002-2003 (FAO/INAB 2004)

* Includes registered communal and municipal farms, non-registered communal farms, and farms encroached on by communities

** Areas lacking clear ownership rights due to conflicts or encroachment

Figure 1 Map of forest cover in Guatemala (INAB 2004)



Close to half a million hectares of broadleaved forests were awarded as forest concessions in the multiple use zone (MUZ) of the MBR. These concessions constitute the largest forest management units in the country. Of the 16 units established, 10 are community concessions, four are cooperatives or municipal *Ejidos* and two are industrial concessions. According to Guatemalan regulations, all concessions are required to obtain certification under the FSC scheme within three years of their establishment.

Forest Plantations

The principal objective of plantations in Guatemala is wood production for sawmilling. According to INAB's statistics, during the 1980s and 1990s a total of 78,909 hectares were reforested; however, there is little up-to-date information on the current situation (FAO 2003) and the extent to which these plantations accomplish their objectives. Four coniferous species (*Pinus maximinoi, Pinus oocarpa, Pinus caribaea* and *Cupressus lucitanica*) and two broadleaved species (*Tectona grandis* and *Gmelina arborea*) represent 70 percent of all plantations in the country.

Deforestation

Annual loss of forest cover is estimated at 50-60 thousand hectares, equivalent to 1.3-1.5 percent of total forest cover. In recent years, deforestation has largely been concentrated in coniferous forests (FAO 2003). This is largely due to the fact that the coniferous forest zone is characterized by higher population density, better road infrastructure and soils which are more suitable for agriculture, as compared to the broadleaved forest zone. In addition, conifer wood fetches good prices in the national market, providing incentives for unsustainable forest utilization.

Timber Production

The principal forest products are logs for sawn wood production and fuelwood. The average volume of harvested timber destined for the national forest industry is 575,000 m^3 $year^{-1}$. However, illegally harvested timber is estimated to be an additional 30 to 50 percent of the volume reported, amounting to a total of between 748,000 and 862,000 m^3 $year^{-1}$ (FAO 2003).

Annual consumption of firewood has decreased from 15.8 million m^3 in 1990 to 13.8 million m^3 in 1999 (INAB 2001; FAO 2003). However, firewood will continue to be the principal source of heat and lighting (currently used by 60 percent of the population), unless energy consumption patterns change significantly, and electric energy and propane gas supplies are increased (IDC 1999).

There is no reliable information regarding primary and secondary processing in the timber industry. According to INAB (2001), 1,054 forest product processors are officially registered. However, the true number of sawmills, secondary wood manufacturers (furniture-makers, woodworkers, among others) is thought to be significantly larger. The majority are small enterprises processing softwood and being characterized by low technical and technological capacities and unstable flows of raw

materials. As a result, product quality is low, waste is high and little value is added. At the same time, there are a few large enterprises that meet high-quality standards and export a good part of their production. Except for the industrial concessions, the wood-based industry does not manage its own forests and, consequently, depends on third parties for its raw material supplies.

Markets

Around 90 percent of harvested timber is destined for national markets, which absorb mostly low quality products, while the remaining high quality products are exported. It is estimated that 68 percent of the processed volume is marketed as sawn wood, 14 percent as manufactured goods, 8.6 percent as plywood and wood-based panels, and 9.4 percent as miscellaneous products. It is estimated that 70 percent of the processed wood originates from coniferous forests (FAO, 2003). This shows that despite the limited area covered, coniferous forests are by far the most important source of industrial round wood.

A total of 66,857 m^3 of sawn wood was exported in 2001, of which 78.0 percent was pine (*Pinus* spp.), 11.4 percent mahogany (*Swietenia macrophylla*), 2.9 percent santa maría (*Calophyllum brasiliense*), 2.1 percent palo blanco (*Cybistax donnell-smithii*), 1.7 percent tropical cedar (*Cedrela odorata*) and 1.5 percent castilla (Castilla elastica); 12 other species made up the remaining 2.4 percent (INAB, 2001). Exports are destined mainly to El Salvador and USA, while imports originate principally from Costa Rica and Mexico (Table 2).

Table 2 Export and import values of wood products in Guatemala, broken down by principal trade partners in 2001

Principal export destinations			Principal import origins		
Country	**Value (US$)**	**%**	**Country**	**Value (US$)**	**%**
El Salvador	9,068,078	39.1	Costa Rica	3,213,110	31.0
USA	6,162,927	26.6	Mexico	1,470,825	14.2
Dominican Republic	2,494,152	10.7	USA	1,133,816	10.9
Honduras	1,634,934	7.0	Nicaragua	1,094,688	10.6
Mexico	1,460,784	6.3	Chile	887,422	8.6
Costa Rica	780,757	3.4	Honduras	523,122	5.1
Italy	778,919	3.4	El Salvador	432,168	4.2
TOTAL (33 countries)	**23,209,381**	**100.0**	**TOTAL (47 countries)**	**10,357,443**	**100.0**

Source: PAFG 2003

Non-Timber Forest Products

Chamaedorea palms (*Chamaedorea* spp.), locally called xate, chicle gum (*Manilkara zapota*), and allspice (*Pimenta dioica*) are the country's commercially most important non-timber forest products (NTFPs). According to CONAP statistics, 4.2 million lbs. of xate and 300,000 lbs. of chicle are produced annually, worth US$660,000 and US$309,000, respectively (FAO 2003). Similar to other countries, NTFP use and commercialization largely escape official statistics. Nonetheless, NTFPs do play a critical role in household economies, in particular in the broadleaved forest zone. The fibre of bayal (*Desmoncus* spp.), for example, serves as a substitute for cane, palm leaves from guano (*Sabal* sp.) and escobo (*Cryossophylla argentea*) provide roof thatch, and a wide variety of forest plants serves as source of local medicine or food. In the Carmelita concession, NTFPs like xate, chicle and allspice account for more than 50 percent of the household income in individual cases; in addition, wildlife constitutes an important source of protein and income (Mollinedo *et al.* 2002). For the time being, NTFPs have not been subject to forest certification. Currently, however, the US-based SmartWood Program of the Rainforest Alliance is elaborating certification standards for NTFPs.

General Forest Sector Statistics

According to the Bank of Guatemala (BANGUAT), the forest sector contributes approximately 2.5 percent of the GDP. An estimated 37,000 jobs are generated by the sector, corresponding to 1.1 percent of the economically active population (PAFG 2000). Forest sector statistics are summarized in Table 3.

Table 3 Forest sector statistics in Guatemala

		Surface Area	
1	**General statistics[a]**	**ha**	**%**
1.1	Total land surface	10,888,900	100
1.2	Land with forestry land use capability	5,570,000	51.1
1.3	Protected areas	3,098,700	28.5
2	**Forestry statistics[b]**	**ha**	**%**
2.1	Forest cover area (total)	3,898,600	100
	• Broadleaved forest	2,244,400	57.6
	• Coniferous forest	101,600	2.6
	• Mixed forest	460,000	11.8
	• Forest associated with agricultural land	1,074,800	27.6
	• Mangrove forests	17,700	0.5
2.2	Forest plantation area (total)	71,155	100
	• Fiscal incentives	19,337	27.2
	• Programa Nororiente	5,492	7.7
	• Forestry incentives (PINFOR)	25,565	35.9
	• Voluntary plantations (Simpson)	8,842	12.4
	• Area earmarked for reforestation	11,719	16.5
2.3	Annual deforestation rate[c]	53,700	1.4
3	**Forest industry[a]**	**Number**	
	• Registered forest product processors	1,054	
	• Forest product retailers	1,097	
4	**External timber trade[d]**	**US$**	
	• Exports	23.2 million	
	• Imports	10.4 million	
	• Balance	12.9 million	
5.	**Macro-economic indicators**		
5.1	Percentage of GDP[d]	2.5	
5.2	Direct employment (jobs)[e]	36,878	

[a]INAB (2001)
[b]FAO (2003)
[c]FAO (2001, cited in FAO 2003)
[d]PAFG (2003)
[e]PAFG (2000)

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

Sparking Interest in Certification

Two incidents gave a decisive impetus to the certification process in Guatemala: a capacity-building event and the granting of forest concessions in Petén. In April 1996, the SmartWood Program organized in Petén the second "Training Workshop in Evaluation, Monitoring and Forest Certification",[8] co-funded by the United States Agency for International Development (USAID) through a joint project between CATIE and CONAP. This workshop kicked-off the certification process in Guatemala by training technical personnel that later on would be available as potential SmartWood assessors. It aimed at building local capacities as a way to lower certification costs. Field assessments were conducted in several community management units in the MBR (San Miguel, La Técnica, Bethel) that received technical support from various NGOs and projects. These community forestry operations were considered certifiable according to FSC standards. The technicians left the workshop convinced of the advantages of certification, particularly with regard to allegedly higher prices for certified wood. It should be mentioned that there was little experience in the marketing of certified forest products at that time and, consequently, such assumptions were based on well-intended advice and positive expectations rather than sound market analysis.

[8] The first "Training Workshop in Evaluation, Monitoring and Forest Certification," also organized by SmartWood, had been held in Mexico the year before.

The second incident giving rise to certification in Guatemala was the establishment of forest concessions in the multiple use zone of the MBR for which certification was stipulated as a mandatory requirement.[9] The key actors in this process were CATIE as CONAP's assessor, USAID as donor agency, and CONAP as the body responsible for awarding the concessions. In the preceding section, we outline the circumstances that led CONAP to make a voluntary tool like forest certification mandatory in the MUZ of the Maya Biosphere Reserve. Apart from two industrial concessions, the related concession process has mainly strengthened forest-based communities who obtained usufruct rights to a large portion of forest resources in the MUZ.

[9] The regulations for awarding and managing the forest concessions stipulate: "... obtain FSC certification within the first three years after being awarded the concession and maintain it valid during the term of the concession contract ..." (CONAP 1999).

Nowadays, all communities located in the MUZ belong to one of the 10 community concessions. In its initial phase, several communities were concerned about potential adverse effects of the concession process. As the first concessions developed successfully, resistance to the concession process ceased and gradually all communities in the MUZ became involved, not least because this was the only way to obtain legal use rights over the forest resources. Even outside the MUZ, communities approached CONAP to obtain a concession, arguing that their livelihoods depend on the extraction of timber and non-timber forest products. CONAP granted these concessions under the restriction that agricultural activities were not permitted.

These community concessions are frequently confused with private property of forested areas belonging to community groups legally organized as cooperatives. As these communities are located in the buffer zone of the MBR close to the

Usumacinata River and, hence, outside the MUZ, they are not subject to mandatory forest certification. In these cases, voluntarily forest certification was successfully promoted by a local NGO called Centro Maya.

Inclusion of Certification in the Concession Regulations

During the consultative phase for the development of the concession regulations, environmental NGOs showed aversion towards the industrial loggers but supported community concessions. As the discussion centered on the issue of whether or not concessions should be awarded to the industrial sector, the proposal for certified concessions was first introduced as an assurance of sound forest management. From a legal point of view, mandatory certification could not be confined to the industrial concessions and, consequently, was extended to the community concessions. The CATIE-CONAP project[10] played a key role in the consultation process and elaborated a proposal for the rules and regulations governing the forest concessions and stipulating mandatory certification. The principal objective was to ensure a secure process towards sustainable forest management in the MUZ, taking into account CONAP's institutional weaknesses. Mandatory forest certification requiring annual audits was considered crucial to reduce the incidence of political interference and corruption. Due to its established presence in the region, forest certification was to be obtained according to the FSC scheme.

[10] The CATIE-CONAP Project, funded by USAID within the framework of the Maya Biosphere Project, aimed at making the forest concessions viable through technical assistance provided to CONAP.

Curiously, there was little discussion regarding the mandatory certification clause. From CONAP's perspective, the fact that the forests in the MBR are state property sufficed to justify imposing all the rules and regulations deemed necessary to ensure that these are managed and monitored in a manner that fully accomplishes the objectives of a biosphere reserve. Neither FSC as accreditation body nor the certification bodies were consulted or took an active stance regarding mandatory certification. While environmental NGOs expressed doubts or overtly opposed forest management in the MBR, most stakeholders agreed that mandatory certification was an appropriate mechanism to ensure sound management of the forest resources under concession. At the same time, most stakeholders had little knowledge on the practical implications of forest certification. But even private companies accepted mandatory certification, on the premise that this would speed up the process of granting concessions. It should be borne in mind that they had waited more than ten years to be granted a forest concession.

The First Certified Forest Management Units

The certification process in the forest management units in the MBR began prior to the official approval of the new concession regulations, in both the concessions and the private communally managed units in the MBR's buffer zone. As of 1996, NGOs that supported the community organizations motivated them to subject their management systems to certification assessments given their advanced state of forest management. Costs associated with certification assessments were covered by international donor agencies, particularly USAID through its Maya Biosphere Project.

Certification soon became a question of prestige for both the community groups and the NGOs supporting them. Due to the large areas of the first concessions to be certified, varying between 7,000 and 53,000 hectares, Guatemala temporarily harbored the world's largest area of certified community forests. Once the mandatory certification regulation was approved, the number of assessments rose concomitantly with an increasing understanding of the different aspects of sustainable forest management and certification by technical personnel in NGOs and government agencies.

The industrial concessions took their time to become certified as they were not clear about the process and not least because they needed to become certified only within three years of formalizing the concession contract. Nonetheless, their principal concern was related to the transition from a conventional exploitation system to sustainable forest management with its economic, social and environmental implications.

Institutional Design

Guatemalan National Council of Forest Management Standards (CONESFORGUA)

The forest certification process in Guatemala has largely been a result of successful campaigning by development projects and NGOs seeking to provide an impetus to sustainable forest management in Petén. Despite the unique stipulation of mandatory certification in the MUZ of the Maya Biosphere Reserve, the FSC has played a rather passive role in the process to date. It may therefore not come as a surprise that it was not until 2002 that the Guatemalan National Council of Forest Management Standards (CONESFORGUA)[11] was formally set up to define the national forest management standards and that, as of mid 2004, it has not been endorsed as a national initiative by FSC.

The emergence of CONESFORGUA needs to be seen in the context of recent changes in Guatemala's forest policy. The formulation of the national forest action plan (PAF-G) in 2000 required that relevant government agencies, such as the Ministry of Agriculture, Livestock and Food (MAGA) and in particular the National Forestry Institute (INAB), provide a clear strategy for the sustainable management of the country's forest resources. This action plan would provide the basis for a working group established to develop national standards. During the initial stages, there was some doubt as to whether these should follow the stipulations of the Lepaterique Process[12] or the FSC system. Following a series of consultations, it was agreed to opt for the FSC system, taking into account its predominance throughout Latin America, a factor believed to greatly facilitate its adoption.

Due to slow progress, the development of national standards was commissioned to a national council in 2001. But it was not until 2002 that it became formalized as the Guatemalan National Council of Forest Management Standards (CONESFORGUA). In 2003, CONESFORGUA carried out a series of consultations throughout the country to define the criteria for creating the social, environmental and economic chambers of the national initiative. At present, CONESFORGUA is working jointly

[11] CONESFORGUA has established its administrative headquarters at the Chamber of Industry in Guatemala City and maintains a technical office in INAB. Its current members include representatives from INAB, CONAP, Gremial Forestal (Forestry Board), the Forestry Chamber, the Dutch-funded PROCUCH project and NPV, among others. CONESFORGUA is yet to be endorsed by FSC.

[12] Central American government initiative to formulate regional criteria and indicators for sustainable forest use.

with INAB, PAF-G and WWF to develop draft national standards (covering natural and plantation forests) to be circulated among the various actors concerned.

In this context, forest certification was seen as a vehicle that could promote sound forest management not only in Petén but elsewhere in Guatemala. Non-governmental organizations also had a stake in this recent move towards a national-level approach to promoting sustainable forest management, with WWF providing financial assistance to CONESFORGUA for developing a workplan.

In addition to CONESFORGUA, and preceding its foundation, a considerable number of institutions and projects promoted certification in Guatemala, including the Rainforest Alliance, CATIE, CONAP, USAID/Maya Biosphere Project, and Centro Maya.

Rainforest Alliance

Through its SmartWood program, Rainforest Alliance was one of the most active organizations in promoting certification in Guatemala. It was particularly successful among NGO-supported community groups. This is reflected in the fact that four community management units became certified even before certification became mandatory, among them two community operations under a private property regime where even today certification is voluntary. A huge impetus to forest certification was the willingness on part of the Maya Biosphere Project to cover the costs incurred in the certification process. In this context, the following factors underlay the project's decision to contract SmartWood for the assessments:

- SmartWood became involved in the concession process by providing training on forest certification in the Petén.
- SmartWood's track record in the region provided NGO personnel with greater confidence in the expertise required for the process.
- Being a US-based organization, SmartWood was more acceptable to the principal donor (USAID).

CATIE

CATIE[13] played a fundamental role by organizing, in collaboration with SmartWood, the first local certification events, and became the principal advocate of the concession process and sound forest management in Petén. Through the projects CATIE-CONAP and CATIE-OLAFO, CATIE provided technical assistance and training to CONAP staff and community groups working toward sound management of the forest concessions in Guatemala.

CONAP

CONAP was the principal decision-maker for applying a forest management system to the forest resources in the multiple use zone of the MBR and opting for certification as a supervision mechanism, as proposed by CATIE. It is worth mentioning that

[13] Based out of Costa Rica, the Tropical Agricultural Research and Higher Education Center (CATIE) is committed to research, postgraduate education and outreach in ecological agriculture and sustainable management of natural resources in tropical America. Its mission is to foster the conservation and sustainable management of natural resources and to reduce poverty in its 13 member countries, including all Mesoamerica, the Dominican Republic, Colombia, Venezuela, Bolivia, and Paraguay.

there was no agreement on collaboration between CONAP and the SmartWood Program with respect to forest certification.

USAID/Maya Biosphere Project

USAID emerged as the principal donor that covered the major part of costs related to the provision of technical assistance and conducting baseline management studies, as well as covering direct certification costs of community operations and those related to complying with conditions. Financial support was channeled through implementing organizations such as CATIE, Chemonics, Centro Maya, ProPetén and the Fundación Naturaleza para la Vida (NPV).

Centro Maya

Centro Maya (CM) acted as an implementing organization of the Maya Biosphere Project, providing technical assistance to privately-owned community cooperatives and several community concessions. From the outset, CM was in favor of certification, persuading even those community groups that were not legally required to get certified.

Standards

In the absence of national certification standards, all certification assessments in Guatemala were based on the certification body's generic standards. Since 2004, SmartWood has used standards that were developed specifically for the Selva Maya regions of Guatemala and Belize. To a certain extent, these standards are the result of an initiative that arose in Petén in 1997. It aimed at developing regional standards for the entire Selva Maya, including Petén, the states of Chiapas, Campeche and Quintana Roo in southern Mexico, and Belize.

The national standards currently being developed by CONESFORGUA are expected to be adapted to the heterogeneous reality of forest management in Guatemala, thus facilitating its field application. The duration of the related process underlines the difficulty of this undertaking. Potentially contentious issues include high conservation value forests and the development of a generic standard for the management of both natural forests and plantations. Additional challenges are posed by the heterogeneous nature of natural forests, in particular marked differences between broadleaved and coniferous forests. It remains to be seen how this heterogeneity and the expectations of the respective stakeholders will be addressed by the national standards.

At present, efforts are also being made to develop standards for the certification of NTFPs. SmartWood is working on internal NTFP standards to be applied as long as national standards are not available. In addition, the University of Minnesota, jointly with the Commission for Environmental Cooperation (CEC), NGOs and research institutions, is developing an alternative certification mechanism to promote the export of Chamaedorea palm fronds to the United States. Various US-based religious

congregations are willing to pay price premiums for this NTFP, provided that environmental and social standards of sound management and fair commercialization are met. In order to ensure that the economic benefits for small producers are not reduced, a certification scheme is being sought that does not result in additional costs for the producers (see Current *et al.* 2003).

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

Reactions to forest certification in Guatemala have principally been positive, although the visions of the different stakeholders have varied according to their particular vested interests, as well as over time as the process moved forward.

Public Sector

Guatemala's forest policy explicitly considers forest certification as a political tool, as reflected in an excerpt from a forest policy document: ". . . the State, through the Ministry of Agriculture, Livestock and Food (MAGA) and its affiliates, shall promote certification as a mechanism to facilitate the insertion of the country's forest products in the international market. This shall be promoted through the wide dissemination of the certification process, as well as by complying with the subsidiary and facilitating roles that correspond to MAGA, in line with the agrarian and sectoral policy 1990-2030" (MAGA *et al.* 1999).

Two government agencies are in charge of the administration of national forests: the National Council for Protected Areas (CONAP) and the National Forestry Institute (INAB). CONAP staff views forest certification as an important step in raising CONAP's institutional image. As of mid 2004, almost all certified areas in Guatemala are located in forests administered by CONAP, largely due to mandatory certification in the forest concessions of the MBR. Nowadays, CONAP staff views both forest management and certification positively, notwithstanding its critical stance in the initial phase of the process.

Over time, INAB became gradually more involved in the certification process, and now serves as the headquarters of CONESFORGUA, together with the Forestry Board. An example of INAB adopting certification as a policy instrument is that certified forests on private lands may gain access to forest incentives without any additional administrative requirements. INAB also co-sponsored several certification events and, jointly with PAF-G, has actively been supporting the development of the national standards.

Non-Governmental Organizations (NGOs)

NGOs that were originally pro-certification have remained so. After SmartWood introduced Centro Maya's technical personnel to the benefits and procedures of certification in 1996, Centro Maya went on to play a key role in promoting certification in community groups who are not subject to mandatory certification.

Although the Worldwide Fund for Nature (WWF) was not present during the initial phase of the certification process, its participation has gradually increased over time. In 2001, WWF implemented a pilot project together with the Fundación Naturaleza para la Vida (NPV) to assist a number of forest management units to comply with conditions. Additionally, WWF has attempted to promote business round tables and has supported the development of national standards.

Conservation International's (CI) initial position was against forest management in the MBR; however, in 1995, through ProPetén, CI began to provide technical and financial support to forest management and to assist the Carmelita and San Andrés community groups to comply with conditions. CI presented a proposal to CONAP in 2000 to compensate community groups for not harvesting a significant part of their forest areas. The lack of clarity of this proposal caused a certain level of controversy between CONAP, various NGOs and several community leaders, as well as the scientific community (see Southgate 2002).

Forest Owners

Certified community concessions viewed certification as yet another requirement to gain access to the forest resource and maintain their concessions. The fact that accompanying NGOs supported the process with external funding did not help to internalize its significance. Frequently only the community leaders understood the conditions, and in many cases the NGOs were more committed to complying with them than the communities themselves. Awareness raising campaigns have been conducted by various local NGOs and development projects, but for the time being they have met with limited success in terms of creating a broad sense of ownership among community groups.

The situation is similar for certified private and municipal community forests. The Cooperatives of Usumacinta and the Municipal Ejido of Sayaxché gained certification as a result of the influence of NGOs and the subsidies they provided. But, as is the case for the majority of the community concessions, they have not been able to internalize the significance of certification, nor sell their certified wood in niche markets with price premiums. Both in the community concessions and other community forests, forest certification has largely been perceived as being imposed or induced by external actors. Subsidies granted by NGOs and development projects have not permitted the creation of a sense of ownership, putting at risk the sustainability of the certification process among community groups.

Certified industrial concessions, on the other hand, recognize certification as a good investment through gains in security, recognition and market opportunities, despite their initial reservations and fear that the process would be imposed on them rather than the community operations. The two certified industrial concessionaires have said that they would maintain their certificates even if mandatory certification were revoked, but at the same time express their concern with conditions sometimes perceived as being too demanding.

Primary and secondary processing enterprises have shown little interest and understanding of certification. Those operations with more knowledge on the subject

have rejected certification as long as real market possibilities still appear tenuous. To date there are only seven chain of custody certificates in Guatemala, three of which are held by the industrial concessions. The majority of private forest owners is unaware of the certification process. Nevertheless, interest in certification is mounting, principally by plantation forestry owners.

Associations

The Association of Community Forests of Petén (ACOFOP), a second-tier organization consisting of 22 organizations from 30 local communities, has been recognized for the good forest management practiced by its associates, which came to light through forest certification. ACOFOP, at the same time as expressing negative opinions regarding mandatory certification, is also proud of the various prizes received for its achievements. ACOFOP also views certification as an opportunity to obtain external technical and financial support for the community forestry process.

Most of the members of the Forestry Board (Gremial Forestal) have poor knowledge of the certification process. Recently, however, they showed increased interest in the certification of forest plantations and conifer forests.

Current Status of Forestland Certification

Forest certification in Guatemala is relatively recent, with the first forest having been certified in 1998. By the start of April 2004, this had risen to 18 FSC certified forest management units (515,023 ha), of which 16 are natural forest (511,661 ha) and two plantations (3,362 ha). All the certified natural forests are located in Petén, where community forestry predominates with 14 certified units (380,334 ha), and only two industrial management units (131,327 ha). SmartWood has recently taken the decision to suspend the certificates of two community management units (La Pasadita and Bethel) due to poor management and non-compliance with conditions. The fact that two community certificates have been suspended owes to serious administrative deficiencies on part of new community leaders in one case, and failed implementation of the management plan (abandonment of timber extraction) in case of the other (Table 4).

Of the 18 certified management units, 17 were assessed by SmartWood and one tree plantation by SGS. The owners of the latter, however, have recently opted for SmartWood to conduct the certification audits.

Table 4 Certified forest management units in Guatemala, as of February 2004

	Organization	Area (ha)	Population benefiting	Year of certification	Certification status
Community concessions	Suchitan	12,217	191	1998	Certified
	San Miguel	7,039	145	1999	Certified
	La Pasadita	18,217	386	1999	Suspended
	Carmelita	53,797	388	2000	Certified
	Uaxactún	83,558	688	2001	Certified
	San Andrés	51,940	1,015	2001	Certified
	Arbol Verde	64,973	7,452	2002	Certified
	Laborantes del				
	Bosque	19,390	392	2003	Certified
	El Esfuerzo	25,328	250	2004	Certified
	Custosel	21,176	423	2004	Certified
	Sub-Total	**357,635**	**11,330**		
Industrial concessions	GIBOR	64,869	n.a.	2001	Certified
	Baren Comercial	66,458	n.a.	2003	Certified
	Sub-Total	**131,327**			
Cooperatives and municipal *Ejidos*	La Técnica	4,607	298	1999	Certified
	Bethel	4,149	523	1999	Suspended
	Unión Maya Itzá	5,924	1,059	2001	Certified
	Ejido Sayaxché	7,419	5,000	2002	Certified
	Sub-Total	**22,099**	**6,880**		
Plantations	Ecoforest S.A.	2,242	n.a.	2003	Certified
	Los Alamos	1,120	n.a.	2003	Certified
	Sub-Total	**3,362**			
	Total	**514,423**			

Source: Author's elaboration based on FSC (2004)
Note: n.a. = not applicable

Additionally, seven chain-of-custody certificates have been granted, three of which belong to the two certified industrial concessions. However, these enterprises buy only small volumes of certified wood from the community concessions, due largely to problems with quality, prices and timely delivery.

Current Status of the Certified Marketplace

For the time being, demand for certified wood on the domestic market is virtually nonexistent. Almost the entirety of certified wood is exported to the USA, Mexico, and to a lesser extent, Europe. All exports of certified products must go through the handful of enterprises that have chain-of-custody certification. Despite the large area certified, annually harvested volume is low. The annual harvested area is less than 10,000 ha, with less than 2.5 m3 harvestable volume per hectare. In 2002, this translated into an annual cut of approximately 20,000 m3 (CONAP 2003). Less than half of this timber is being sold as certified sawn wood, principally mahogany (*Swietenia macrophylla*) and some secondary species such as santa maría (*Callophyllum brasiliense*), manchiche (*Lonchocarpus castilloi*) and pucté (*Bucida buceras*) (Table 5). Based on timber extraction in ten community concessions in 2000, Ortiz et l. (2002)

conclude that mahogany was by far the most important species (49.6 percent of extracted volume), followed by tropical cedar (12.8 percent), manchiche (12.3 percent), santa maria (10.3 percent), and pucté (5.5 percent).

Table 5 Timber sales by certified community forest management units, 2003

Sawn wood (board feet)				
Management Unit	**Mahogany**	**Secondary species**	**Total**	**Distribution Channel**
Arbol Verde	331,003	178,200	509,203	With chain of custody
Uaxactún	105,559	92,938	198,497	With chain of custody
San Andrés	96,639	199,340	295,979	With chain of custody
Carmelita	195,740	61,382	257,122	With chain of custody
Sub-total	728,941	531,860	1 260,801	
Suchitecos	145,340	192,203	337,543	Without chain of custody
Laborantes del Bosque	156,000	135,750	291,750	Without chain of custody
Custosel	183,470	125,882	309,352	Without chain of custody
El Esfuerzo	231,868	283,411	515,279	Without chain of custody
Sub-total	716,678	737,246	1 453,924	
Total	**1 445,619**	**1 269,106**	**2 714,725**	
Logs (Doyle feet)				
Management Unit	**Mahogany**	**Secondary species**	**Total**	**Distribution Channel**
La Pasadita	75,000	68,668	143,668	Without chain of custody
San Miguel	9,926	152,530	162,456	Without chain of custody
La Unión Maya Itzá	n.a.	n.a.	n.a.	Without chain of custody
Bethel	n.a.	n.a.	n.a.	Without chain of custody
La Técnica	n.a.	n.a.	n.a.	Without chain of custody
Sayaxhe	n.a.	n.a.	n.a.	Without chain of custody
Sub-total	≥ 84,926	≥ 221,198	≥ 306,124	

Source: Unpublished data provided by Chemonics
Note: n.a. = not available

The majority of certified timber entering the market was purchased by the US-based company Rex Lumber involving a local broker. The UK-based company John Bode Timber purchased Carmelita's production in a transaction mediated by the NGO Mundo Justo. A smaller portion was purchased by the Guatemalan company CAOBA S.A., which manufactures doors and windows for Home Depot in the United States.

Apart from low production levels, it is evident that the distribution channels through which community groups sell their wood are not operating adequately, due mainly to the following factors:

- The supply of certified timber is not efficiently reaching the demand due to a lack of communication mechanisms. Several initiatives are in place to mitigate this, for example by creating regional networks of certified timber. Organizations promoting trade in certified timber include the CATIE-based Center for the Competitiveness of Ecoenterprises, with its bilingual website "EcoNegocios Forestales – Forest Eco-Business" (www.catie.ac.cr/

econegociosforestales), and WWF Central America who also offers a web-based platform (www.maderacertificada.com).

- Advance sale to buyers who provide credit and not necessarily to those who pay the best price. The lack of working capital along with inadequate administration of the community enterprises frequently forces the enterprise to resort to advance payments with an inherent penalty in terms of prices below the current market rate.
- Lack of entrepreneurial capacities of community groups. Some timber buyers have complained about non-compliance with contractual arrangements. In some cases, community groups have accepted advance payments from several sources without delivering the volume stipulated.
- Poor product quality. In most cases, sawn wood enters the market without being properly dried. As a result, most wood is warped, in particular mahogany. Many buyers request pre-dimensioned timber, but many community groups do not have the conditions to meet this specific demand.
- Low supply volumes. Despite the large area certified, harvested volumes are strikingly low due to the inherent high diversity of trees in tropical forests of which only few are currently marketable. In addition, most producers tend to sell their timber individually, despite recent efforts to realize joint sales.

Many producers claim that there is no significant difference between the prices paid for certified and uncertified wood. Others, however, have managed to receive price premiums by complying with the factors described above (see Table 6). Sales managers and intermediaries have pointed out that, in the case of certified mahogany, a premium of US$0.05-0.10 per board feet, equivalent to less than 10 percent of the sales price, may be obtained. Typically, however, prices for non-certified wood soon catch up with the prices for certified wood. Price premiums are therefore difficult to be maintained in an environment where competing buyers of non-certified wood match prices in order not to lose access to raw material suppliers.

Table 6 Sales prices of sawn mahogany in certified and non-certified markets fetched by eight management units in Petén, 2003 (US$/bft)

Management unit	Certified		Management unit	Non-certified	
	High grade	Low grade		High grade	Low grade
A	3.10	1.10	E	2.15	1.10
B	2.65	1.25	F	2.22	1.10
C	2.70	1.10	G	2.20	1.10
D	2.65	1.10	H	2.60	1.10
Mean price	**2.77**	**1.14**		**2.29**	**1.10**

Source: Unpublished data provided by Chemonics

Table 6 shows that sawn wood of certified mahogany fetched higher prices than non-certified mahogany. In 2003, the industrial producers (not included in Table 6) achieved prices of up to US$3.15/bft of high-grade mahogany. However, this price can

be attributed not only to certification, but also to the high quality of the product, confidence in the producer due to a record of compliance, and the fact that the suppliers did not require advance payments.

EFFECTS OF FOREST CERTIFICATION

The forest certification process has brought about numerous effects, the most significant of which have been experienced at the level of the management unit, in particular in the Petén region of Guatemala. It needs to be stressed, however, that advances towards sustainable forest management in Petén were well underway when certification emerged in Guatemala. Related processes were supported by various governmental and non-governmental organizations that realized that forest certification might help strengthen forest management on the ground. While government agencies were primarily concerned with forest conservation, many NGOs put emphasis on technical rather than social aspects of forest management.

Power

Improving the Image of the Forest Sector

The forest sector has traditionally been considered the enemy of forest conservation. With more than half a million hectares certified, the image of the forest sector has considerably improved, bringing together representatives from conservation groups and forest management operations. Given that almost all the areas certified are located in protected areas, a shift in attitudes has been witnessed in the government agency administering these areas (CONAP) as well as in environmental NGOs, such as Conservation International. Their initial opposition towards any intervention in the forest gave way to a supportive attitude reflected in technical and financial assistance provided for the certification of community operations.

Greater Security in the Concession Granting Process

Certification has significantly increased acceptance of the concession process in the MBR. Recent efforts to create a national park in the concession areas would probably gain momentum if these areas had been degraded by forestry activities. But forest certification has lent credibility to the sustainable forestry movement, rendering it very difficult for the government to revoke the forest concessions and establish a national park. In fact, the very existence of forest concessions is the main argument for rejecting this proposal.

Greater Participation by Community and Private Users in Decision-making

Both individual forest users and the organizations they represent are very active in certification decision-making fora, thereby gaining momentum in a process to which until recently they had limited access.

Greater Understanding of Forest Management Issues

Certification has raised the understanding of the significance and implications of forest management. Both the certification and standards development processes have offered discussion fora, enabling a variety of actors to become informed and enrich their understanding of good forest management.

Social Effects

Improved Health and Labor Security

Certification has had a positive effect regarding health and safety, especially during harvesting operations, which are considered the potentially most hazardous activities. Improvements were made in three main aspects:

- *Use of safety equipment.* Before becoming certified, forest workers often had inadequate footwear, clothing, or protective headwear. Through certification, the use of minimum safety equipment became mandatory.
- *Availability of first-aid kits in logging camps.* The vast majority of logging camps had no first aid kits or basic medicine available in the event of accidents or common illnesses. The certification standard required this equipment be available and personnel be trained in basic first aid techniques.
- *Life insurance.* To protect the security of workers and their families, certification standards require that the forest workers be covered by some system of insurance, at least during the period of forest harvesting. While Guatemala's social security system is not ideal, by law it is mandatory for all enterprises with more than five workers to be affiliated with it. Additionally, the assessed operation can consider a private scheme or the creation of a contingency fund by the community enterprise itself.
- *Improvements in working conditions.* Certification has had a positive impact on working conditions, in particular regarding:
- *Improvements in camp conditions.* One of the most important discernable impacts brought about by certification has been the improvement of logging camps. This is a prominent example of low-cost improvements induced by the conditions imposed through the certification process. In most cases improved spatial arrangements of the camps, including the establishment of latrines and the spatial segregation of dining space and minimally comfortable sleeping quarters, can make a significant difference.
- *Labor contracts.* Before certification, many enterprises informally contracted their workforce. The certification standard requires formal labor contracts between employer and employees, irrespective of the communal or private nature of the operation. This resulted in fairer payments, access to credit, and other social benefits as stipulated by the law.

Improvements in Community Organization

In the absence of baseline data, it is difficult to provide clear evidence for improvements in relatively complex processes such as community organization. Nonetheless, the fulfillment of several corresponding conditions can be seen as an indicator for unmistakable progress in this respect. In particular, forest certification helped to improve the level of community organization in some of the certified concessions by requiring:

- *Development of a strategic plan, internal regulations, operations manuals.* The aim of many of the conditions assigned during the assessment process was to clarify the mission and objectives of the community organization. Some salient issues were: the definition and prioritization of the work guidelines, the evaluation of the economic and social viability of projects, improvement of the current organizational structure and regulations, greater participation by different stakeholders, improved definition of the criteria in order to define benefits, among others. However, while the documents required by the certification assessment are available, their application is often lacking.
- *Organization of production structures.* Certification stimulated the creation of various committees responsible for specific tasks, such as forest extraction, supervision of logging operations, forest fires, women, control of illegal logging, among others.

Conflict Management

Certification assessments have generally identified a lack of conflict management mechanisms regarding organizational, managerial and administrative aspects of forest operations. By promoting the establishment of clear rules and regulations, forest certification has made a significant contribution to manage and, wherever possible, mitigate conflicts.

- *Land use mapping and planning.* In this aspect, the main contribution of certification was to promote land use mapping and planning initiatives begun by NGOs and CONAP. This is particularly critical in some concessions in order to define land tenure in areas where agricultural activities are practiced on an individual or household level. Greater clarity and stability in terms of land use has been gained by spatially defining the agricultural production areas on a management unit level, and specifying these in the management plan. In other cases, the certification assessment has required that existing land use mapping and planning be respected.
- *NTFP extraction.* The relationship between traditional harvesters of NTFPs (principally of Chamaedorea palm, chicle gum, and allspice) and the new concession-holders has not always been entirely clear. The certification assessments detected this weakness and required the establishment

of a consensual set of procedures and regulations for all forest resource users.

- *Consolidation of the relationship with other community groups.* Certification has stimulated the exchange of experiences with other users and the establishment of agreements for the collaborative use and maintenance of infrastructure (such as access roads and boundaries), as well as undertaking actions for the common good (e.g. forest fire control).
- *Socialization of actions within community groups.* It is fundamental that the members of the community groups understand the activities undertaken and the benefits gained. Several conditions have required the managers or community leaders to present periodic reports to members' assemblies in order to provide greater transparency to the forest management activities and the processing and marketing of the forest products.

Increased Technical Capacities

Forest certification has raised the technical and administrative capacities of the involved groups. This has been achieved through the implementation of capacity-building plans, the exchange of experiences with other management units, the direct execution of management on the ground, and compliance with conditions. All these factors have stimulated administrators, technicians and organizations to improve their technical abilities, particularly with respect to reduced-impact logging (directional tree felling, construction of logging roads and skid trails), primary processing (by exploring value-adding options, such as drying, wood-working, residue use, etc.), sustainable timber extraction (by establishing an annual allowable cut), management of NTFPs, and administrative and financial control (application of common and relatively automated tools for financial control).

Increased Understanding of the Regulations for Natural Resource Management

In general, certification has helped stakeholders to better understand regulations on natural resource management, for example those referring to species listed by CITES or species protected by national legislation. However, in the majority of cases this information has been confined to the leaders or other persons who participate in workshops and courses, and may not reach the workers in the field. Similarly, responsibilities and recommendations related to certification are frequently not transferred during leadership changes. This is partly due to the fact that, in community operations, the council of directors is created to deal with social and economic problems of the population rather than with setting up a community enterprise.

Economic Effects

Improved Administration of Community Enterprises

To become certified, many operations were required to improve their financial, administrative and management systems. Many of the conditions were focused on establishing a transparent financial system to evaluate and monitor costs and incomes. In some cases, it was required that the enterprises hire a manager, and information on the financial aspects be divulged at members' assemblies or even among the entire community.

Increased Timber Prices

Temporarily, certified wood has fetched higher prices. This, however, has not always been perceived by the sellers, as buyers of non-certified wood have frequently undercut the price advantage of certified wood by offering the same price for non-certified wood. This is a clear example of skewed benefit capturing among the first links of supply chains of uncertified tropical timber, illustrating that there is scope for paying higher prices to small-scale wood producers irrespective of forest certification. Despite the generally low, if not absent, willingness-to-pay higher prices for certified wood, forest certification has contributed to increased transparency surrounding the wood prices paid to log and sawn wood producers.

Access to Incentives

INAB awarded management incentives to certified cooperatives or municipal *Ejidos*, such as Bethel and La Técnica, because of increased confidence regarding the sustainability of their forestry operations.

Access to Niche Markets

Certification has attracted new buyers searching for certified wood. However, a large proportion of certified wood continues to be sold through traditional distribution channels, which show no preference whatsoever for certified products. In some cases, certification has required communities to prepare a business plan, including a marketing strategy to fully take advantage of their certified status. It remains yet to be seen whether this translates into concrete advantages in terms of market access.

Environmental Effects

Improved Management Planning

Part of the improvement in management planning lay in improving weak areas of the management plans, as follows:

- *Improved estimations of harvesting intensity*. In many cases, cutting cycles were proposed which did not correspond to the harvested volume and the regeneration rates of the species concerned. To avoid forest degradation

and obtain certification, length of cutting cycles and logging intensities needed to be revised and adjusted according to local growth conditions and the general context of the management unit (regional and local growth and mortality patterns, diameter distribution of commercial species, among others). This led to the redefinition of the annual harvesting area and/or logging intensities in several management units.

- *Five-year management plans.* Certification requires five-year management plans. Thus the "creaming" of the most productive forest stands has largely been avoided, giving way to a long-term vision of the impacts of forestry operations on forest dynamics and structure.
- *Inclusion of NTFPs.* Although the harvesting of NTFPs is socially one of the most important activities in the Petén region, this aspect was generally not included in the management plans before certification.
- *Financial analysis.* In many cases, certification required the inclusion of financial analyses in order to determine the financial viability of the proposed management.

Improved Resource Management

Forest management as practiced by the community groups had been adequate even before certification. Nevertheless, compliance with pre-conditions and conditions improved forestry operations, in particular through the application of instruction manuals for resource management, better planning, infrastructure construction, and improved tree harvesting. In some cases, implementation of silvicultural treatments was required, though these are not always considered beneficial by the people in charge of forestry operations.

Species Protection

The certification standards have emphasized the protection of threatened species according to CITES, and the protection of seed trees, residual trees and those reserved for future harvests. Additionally, certification has required that defective trees not be harvested, and that fauna be protected through habitat conservation, hunting regulations, listing prohibited species, among others.

Protection of Conservation Areas

Aspects of forest management related to the protection of water bodies, soil, and archeological sites were improved. In some cases, forestry operations were required to improve demarcation of protected zones along rivers, lagoons and wetlands.

Plan for Prevention and Control of Forest Fires

In a number of management units, a plan for the prevention and control of forest fires was required, including: a monitoring and patrol program, a system of fines for

those responsible for forest fires, organization of brigades, fire fighting strategies, training of personnel, and acquisition of equipment.

More Efficient and Integrated Management of Forest Resources

Certification has promoted the use of forest residues and the integration of NTFPs in some forest management plans. Most concessions, however, still rely on the extraction of only a few commercial tree species.

Improvements in Annual Operational Plans

Certification required the hiring of resource managers, the installation of offices to administer forestry operations, the use of technical documents, and capacity-building in forest management.

CONCLUSION

Summary

Certification in Guatemala emerged as a result of the forest concession process in the Maya Biosphere Reserve (MBR). The main factors promoting certification were 1) the existence of relatively large and technically well-managed management units with technical assistance from NGOs; 2) the financial support provided by international donor agencies to finance the certification process; and 3) the government's decision to make certification mandatory for concessions in the MBR. Most of the positive and negative impacts of forest certification therefore apply to the Petén region of Guatemala, and not the country as a whole.

Certification of the first management units improved the overall understanding of the process and helped with the replication of the experience in community areas where certification was voluntary and where technical and financial assistance from donor agencies facilitated its adoption. Certification soon became a question of status for the NGOs or projects and the community groups involved.

The industrial concessions, as well as those communities with a greater entrepreneurial vision and endowed with larger volumes of high-value timber species, will continue to be committed to certification even if mandatory certification should be suspended. However, communities with fewer advances towards sustainable forest management rather view certification as a burden, particularly as they are increasingly required to absorb the associated costs. It is especially here where unfulfilled price premium expectations, nurtured for many years by NGOs, development projects and certification bodies alike, have turned into a disincentive to continued certification.

The principal *positive* impacts brought about by certification include:

1) prestige and security in the process of concession granting in the MBR and forest management in general (e.g. national and international prizes awarded);

2) improvement in the organization and administration of forest resources by community groups and private owners;

3) improvements in safety aspects and general well-being of forest workers;

4) improvements in the conservation of forest resources;

5) greater understanding of good forest management through the standards development process;

6) access to certified product markets for some certified enterprises; and

7) increased understanding of good forest management by technical and professional personnel.

The chief *negative* impacts include:

1) increased costs of forestry operations in order to comply with certification requirements, not all of which help increase the economic benefits of forest management;

2) disappointment among some community groups as a result of false expectations regarding price premiums for certified timber;

3) a sense of abandonment by community groups with low returns from forest management once they no longer receive subsidies from support organizations and do not have the financial resources to pay for re-assessments, audits and compliance with conditions in order to maintain their certificates;

4) a sense of exclusion among members of community groups as there is a general lack of awareness and understanding of what is certification. As a result, many certification requirements are not fully internalized;

5) subjective assessments. There is a clear variation in the assessment criteria between different assessment teams, who often lack an understanding of the local conditions;

6) excessively demanding standards. With dwindling support from NGOs, many conditions are difficult to comply with. In some cases, conditions are not practical.[17] In other cases, technically appropriate conditions elevate costs and alienate those who consider entering the certification process;

7) weak audits with a strict focus on compliance with outcomes. Disregarding gradual improvements in forest management can result in discouragement and frustration of those involved in the process;

8) mistaken notion that only certified forest management stands for sound forest management. Development interventions should not focus exclusively on certified operations, but acknowledge and support non-certified examples of sound forest management; and

[17] For example, the condition to carry out biological studies calls for the involvement of specialized research centers, but forest-based communities do not dispose of funds to finance such studies.

9) certification should not be seen as an end in itself, as the target of 200 million hectares of certified forests by 2005 suggests (see World Bank and WWF 1997). Rather, it is a means to promote sustainable forest management, provided that a cost-benefit analysis for each particular case results favorably (Stoian and Carrera 2001).

Roadblocks and Challenges

The major challenges to forest certification in Guatemala are high costs as compared to relatively low monetary benefits, low access of small producers to certification, lacking access to niche markets for certified forest products, incipient community-based forest enterprise development, and heterogeneous application of assessment criteria. Most of these factors, if not all, are not confined to Guatemala but are shared by other countries of the tropical belt.

High Costs

Certification costs not only include the direct costs of assessments, audits and membership, but also the costs incurred in complying with preconditions and conditions. In the case of community groups, the majority of these costs were covered by development projects and NGOs funded by the international donor community. Though there has been a gradual shift to costs being absorbed by the concessionaires, many communities still lack sense of ownership of the process and find costs prohibitive in the absence of tangible monetary benefits.

Table 7 presents a sample of certification assessment costs in Petén. Fixed costs are independent of the size of the area to be assessed. Costs of annual audits ranging between US$1,000 and US$2,000, as well as the annual FSC membership fee of US$ 250 are included as fixed costs.

Table 7 shows that despite low variation in total annual cost between the different management units, there is a considerable difference in terms of cost per certified area (US$0.10-1.90 ha^{-1} $year^{-1}$), annually harvested area (US$8-107 ha^{-1}), and the volume of harvested round timber (US$4.2-52.9/$m^3$). These figures show that, in certain cases, costs of certification are very high, if not prohibitive. This fact has often been concealed by the considerable subsidies granted to community groups by external organizations.

Evidently one of the greatest challenges facing the certification process is reducing its costs and increasing its monetary benefits. Towards this end, FORESCOM S.A. was set up in 2003 as a company representing various community forest concessions. Establishing this company in collaboration with ACOFOP is part of the exit strategy of the Maya Biosphere Project, in its last phase executed by Chemonics. FORESCOM S.A. has recently been assessed as a resource manager under a group certification scheme. This response to various community groups allows the dilution of certification costs, the strengthening of community operations through mutual support networks, and increased access to technical assistance and niche markets. FORESCOM S.A. currently represents nine community concessions, including some of the least consolidated ones.[18]

[18] More consolidated groups, such as Carmelita y Suchitán, have avoided the group certification scheme as they prefer to maintain their own identity and not incur membership costs.

Table 7 Estimated costs of certification for community forest management units in Petén, Guatemala

Forest management unit	Area		Annually harvested volume (m./yr.)[c]	Costs							
	Total (ha)[a]	Harvested (ha/yr.)[b]		Assessment (US$/5 yrs.)[d]	Annual audit (US$/yr.)[e]	Annual FSC membership (US$/yr.)[f]	Compliance with conditions (US$/yr.)[g]	**Annual total (US$/yr.)[h]**	By total area (US$/ha/yr.)[i]	By harvested area (US$/ha/yr.)	By harvested volume (US$/m³)
A	4,149	112	911	5,750	1,500	250	5,000	**7,892**	1.90	70	8.7
B	4,607	262	683	5,750	1,500	250	5,000	**7,892**	1.71	30	11.6
C	5,924	117	559	9,000	1,500	250	5,000	**8,550**	1.44	73	15.3
D	6,484	252	371	13,350	1,500	250	5,000	**9,420**	1.45	37	25.4
E	7,039	74	250	5,750	1,500	250	5,000	**7,892**	1.12	107	31.6
F	18,215	295	344	5,750	1,500	250	5,000	**7,892**	0.43	27	22.9
G	51,940	1102	2102	9,990	1,500	250	5,000	**8,748**	0.17	8	4.2
H	53,793	402	1487	8,424	1,500	250	5,000	**8,435**	0.16	21	5.7
J	83,558	382	393	9,794	1,500	250	5,000	**8,709**	0.10	23	22.2
Average	26,190	333	789	8,173	1,500	250	5,000	**8,380**	0.94	44	16.4

[a]CONAP (2003)
[b]Area cut annually, using as reference the annual harvesting area for 2002 (ibid.)
[c]Annual harvested volume, using 2002 as reference (ibid.)
[d]Cost of the certification assessment (every 5 years) (own elaboration; WWF 2004)
[e]An average of 4 audits over 5 years
[f]Annual FSC membership fee
[g]Exact information is not available regarding the cost for complying with conditions, but a conservative estimate is US$ 5,000 a year. This amount varies over time and has in the past been absorbed by supporting NGOs.
[h]The annual cost was obtained from the sum of the assessment cost divided by 5, plus the cost of annual audits, membership and compliance with conditions
[i]The cost per hectare certified is relatively low and inversely proportional to the total size of management unit, varying between US$ 0.10 and US$ 1.90 ha-1 year-1

Costs of complying with (pre-)conditions may be significantly higher than direct assessment costs. Exact information regarding these costs is not readily available. A project executed by WWF, though, can serve as a point of reference: it invested around US$110,000 to assist six management units in complying with conditions arising from the certification assessment (WWF 2004). According to Soza (2003), the annual cost of complying with conditions can be as high as US$12,000. In view of the large variability of the conditions in different management units and the general dearth of pertinent studies, it is difficult to determine the exact amount of indirect certification costs. Annual indirect costs of US$5,000 as presented in Table 7 are considered a conservative estimate.

Predominance of Small Producers Outside the MBR

The predominance of small producers, who generally face difficulties in covering the cost of certification and complying with its rigid standards, is a considerable challenge for the future of forest certification in Guatemala. Large forest management units are concentrated in the MBR, with their majority being certified or in the process of certification. Outside the MBR, however, most of the forests are managed by small producers without access to viable mechanisms, such as group certification, strategic alliances between small producers and processing companies, preferential purchase policies by the government, among others. Small producers outside the MBR thus constitute the most disadvantaged group in Guatemala's certification process.

Lacking Access to International Niche Markets for Certified Wood

To date, demand for certified wood products has largely been concentrated in industrialized countries. The corresponding niche markets require high product quality, minimum volumes and timely delivery. However, the current conditions in Guatemala permit only a small minority of enterprises to comply with these requirements. A major obstacle is poor product quality due to limited technical skills, obsolete production technologies and financial constraints to invest in these.

The domestic market for certified wood products is still in its infancy. To date, the public sector has not given any preference to wood originating from certified sources in Guatemala. As a result, most certified wood is being exported to USA, Mexico, and, to a lesser extent, Europe. One of the few domestic companies purchasing certified wood is CAOBA S.A. This company, however, obtains most of its certified wood supplies from the USA. Curiously, timber imports include not only temperate wood species but also tropical timber such as mahogany. This exemplifies a general dilemma facing domestic wood manufacturers interested in certified wood: working with the community concessions in the Petén which have problems with timely delivery of the qualities and volumes needed, or importing high-grade mahogany originating from Brazil with on-time delivery ensured by U.S.-based import-export companies.

Incipient Community-Based Forest Enterprise Development

As the aforementioned examples demonstrate, left to their own devices small producers cannot easily access niche markets for certified wood. Their training and technical assistance needs are huge, and community enterprise development processes take decades rather than years. In this context, it remains to be seen how rapidly FORESCOM S.A. will gain momentum and what kind of assistance will be needed to consolidate the process on the long run. One opportunity to gain short-term access to international markets is the establishment of strategic alliances with technologically advanced industrial partners that are certified for chain of custody. Such community-enterprise links require careful selection of the strategic allies, fair and equitable negotiations of the "rules of the game," and probably some kind of stewardship in their initial phase. This role could best be assumed by business development service providers, i.e., NGOs, projects and consulting firms specialized in rural enterprise development. While current certification standards for forest management units do address social issues, chain-of-custody certification is mainly concerned with traceability. Equitable decision making and fair benefit sharing between wood-producing community enterprises and wood-processing industries thus easily escape independent third-party evaluation. This underscores the need for supply chain stewardship by business development service providers.

Differences in the Application of Criteria

Despite the fact that certification assessments were conducted by the same certification body (SmartWood), emphasis and rigor in assigning conditions varied significantly depending upon the assessment team and the certification standard used at the time of assessment. Table 8 shows the scope and number of conditions, ranging from 13 to 64 per management unit. The largest number of conditions was assigned to silvicultural and organizational/administrative issues. Based on the authors' experiences talking to assessors in various opportunities, differences in the application of certification criteria became manifest. These were identified by requesting assessors to determine the weight of personal criteria when imposing a condition. Additionally, different standards have been used over time, as reflected in SmartWood's shift from generic standards to its own standards for the Selva Maya Region. Variations in the number of conditions are also due to varying progress towards sustainable forest management among the management units.

Table 8 Number of conditions in natural forest management units in Guatemala

Management unit	Social	Economic	Organization and Administration	Silviculture	Environmental	Monitoring	Research	Total
A	1	–	3	4	1	1	3	13
B	–	1	2	7	3	–	2	15
C	1	1	5	9	–	3	2	21
D	1	1	10	5	2	3	2	24
E	1	1	3	6	1	1	1	14
F	1		3	6	1	1	2	14
G	2	1	7	2	6	4	2	24
H	4	7	16	16	13	7	2	65
I	2	–	10	9	4	4	–	29
TOTAL	13	12	59	64	31	24	16	

Source: WWF (2004)

In some cases, conditions have been perceived as too demanding and with little practical relevance for improving forest management. In this context, the formulation of national standards is important as it seeks to adapt the certification process to local conditions, thus facilitating access of non-subsidized producers to certification.

Future Developments/Scenarios

It is anticipated that the area of certified natural broadleaved forests in Guatemala will increase by around 90,000 ha in the near future, as several community management units are in the process of certification. However, the total area certified is not expected to increase significantly in the years to come, due to the following reasons: 1) Management units of broad-leaved forests outside the MBR are relatively small, with low volumes of commercially valuable species; 2) The cost of certification and compliance with conditions is prohibitive for small-scale producers seeking individual certification; 3) Low integration between the primary and secondary processing industry; 4) Industrial processing is of poor quality and mainly destined for domestic markets that do not reveal any significant demand for certified wood products.

The potential for certification of natural coniferous forests is relatively low given that: 1) most of these forests are small in scale and located in areas with steep slopes and relatively high human populations; 2) the domestic softwood industry is generally uncompetitive, with products of poor quality and enterprises lacking vertical integration; 3) low domestic prices of softwood and high production costs result in low competitiveness as compared to producers of certified softwood in countries like Canada or Chile; and 4) the major part of production is currently destined for the domestic market, while exports are largely destined for the construction sector in El Salvador that does not demand certification.

Certified products from forest plantations in Guatemala face more positive perspectives in light of the national program of forestry incentives. As of June 2004, two plantations had been certified and further plantations are in the process of certification. It remains to be seen to what extent plantation products will meet the demand for certified forest products in the national and international marketplace.

It needs to be reemphasized that in the absence of tangible monetary benefits for certified forest management operations the future of forest certification is bleak. However desirable non-monetary benefits, such as the increased dialog between forest users, the wood-based industry, development professionals, scientists and political decision makers may be, it can no longer be ignored that these largely accrue to national and international societies. From the perspective of wood producers and processors, however, monetary benefits are the *sine qua non* to spark and maintain interest in forest certification.

In the case of Guatemala, the future of the certification process will depend on the ability to

1) demonstrate that certification can bring significant competitive advantages in the medium term, such as access to niche markets;

2) promote certification beyond Petén, for example through the consultation process related to the development of national standards;

3) improve product quality through demand-oriented design and development of certified wood products;

4) develop integrated supply chains of certified timber and non-timber forest products. There is ample scope for better coordination between producers, processors, traders and their respective business development service providers. Forging strategic alliances between producers and processors, for example through community-enterprise links, can bring about mutual benefits. Well-designed marketing campaigns need to reach to the final consumer as a key actor of the future certification process;

5) implement strategies to incorporate small and medium producers in the certification process through innovative group certification schemes;

6) craft policies for preferential purchase of certified products by governmental institutions;

7) adapt standards to the national and regional reality, allowing for minimum levels of compliance and strengthening CONESFORGUA as the national initiative in charge of them;

8) evaluate the suitability of the Small and Low Intensity Managed Forests (SLIMF) guidelines, which are currently being developed by FSC; and

9) homogenize the application of certification standards (generic or national) to the extent possible. The outcomes of certification assessments should not be dependent on individual assessors' views and preferences.

Future Research

Despite the investment of millions of dollars in forest certification over the past decade, surprisingly little is known on a number of key variables that will determine the future of the certification process. It is recommended that future research focus on:

- The role of certified forest management in rural livelihood strategies;
- Mechanisms for adapting the forest certification process to the needs and realities of small producers;
- Cost-benefit analyses of certification, taking into account the direct and indirect costs of certification as well as monetary and non-monetary benefits;
- Community-enterprise links along certified chains of custody, including institutional arrangements of collaboration, benefits sharing and conflict resolution;
- Political and legal arrangements to promote certified forest management;
- Analysis of supply chains for certified wood products, with emphasis on transaction costs, institutional arrangements and interactions between the different actors, product flow, information and capital (including the distribution of benefits);
- Application of national standards and application of standards in the field by different certification bodies and professional assessors;
- Analysis of alternative certification schemes for NTFPs;
- Trends in national and international markets for certified wood products;
- Environmental, social and economic performance of certified forest operations vs. non-certified ones;
- Ecological monitoring of certified forests.

Research needs not only to be applied and applicable, but requires innovative approaches such as participatory action research and multi-stakeholder analyses. Research needs to be coupled with a concerted effort to develop integrated supply chains of certified timber and non-timber forest products. The *sine qua non* for the future certification process is a favorable cost-benefit ratio for both forest management and chain-of-custody certificates. Research and development efforts need to become subject to structured learning processes. This requires the establishment of learning alliances between key actors in the certification process, including managers from certified management units and processing plants, non-governmental and governmental organizations, certification and accreditation bodies, donor agencies, research institutions, and business development service providers.

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LIST OF ORGANIZATIONS CONSULTED

Organization	Date	Location
Rainforest Alliance, SmartWood Program	22 February 2004	Guatemala City
Rainforest Alliance, TREES Program	22 February 2004	Guatemala City
CONESFORGUA	22 February 2004	Guatemala City
Gremial Forestal	23 February 2004	Guatemala City
INAB – Instituto Nacional de Bosques	23 February 2004	Guatemala City
Empresa Caoba S.A.	24 February 2004	Antigua, Guatemala
WWF Centroamérica	25 February 2004	Petén, Guatemala
CATIE/MIF Project	25 February 2004	Petén,Guatemala
CONAP – Consejo Nacional de Áreas Protegidas	25 February 2004	Petén, Guatemala
ACOFOP	25 February 2004	Petén, Guatemala
Alianza para un Mundo Justo	26 February 2004	Petén, Guatemala
Sociedad Civil Arbol Verde	26 February 2004	Petén, Guatemala
Cooperativa Carmelita	26 February 2004	Petén, Guatemala
Sociedad Civil Impulsores Suchitecos	27 February 2004	Petén, Guatemala
Empresa Baren Comercial	27 February 2004	Petén, Guatemala
Empresa Gigor	27 February 2004	Petén, Guatemala
Fundación Naturaleza para la Vida	27 February 2004	Petén, Guatemala
Chemonics/Biofor	28 February 2004	Petén, Guatemala
FORESCOM	28 February 2004	Petén, Guatemala

ACRONYMS

ACOFOP	*Asociacion de Comunidades Forestales de Petén* – Association of Forest Communities of Peten
CATIE	Tropical Agricultural Research and Higher Education Center
CONAP	*Consejo Nacional de Areas Protegidas* – National Council for Protected Areas
CONESFORGUA	*Consejo Nacional para la Generacion de Estandares Forestales de Guatemala* – National Council of Forest Management Standards
FAO	Food and Agricultural Organization of the United Nations
FSC	Forest Stewardship Council
FYDEP	*Fomento y Desarrollo de Petén* – Promotion and Economic Development of Peten
GDP	Gross Domestic Product
INAB	*Instituto Nacional de Bosques* – National Forestry Institute
MAB	Man and the Biosphere
MBR	Maya Biosphere Reserve
MIF	Multilateral Investment Fund
MUZ	Multiple use zone
NGO	Non-governmental organization
NPV	*Naturaleza para la Vida* – Nature for Life Foundation
NTFP	Non-timber forest product
PAF-G	*Plan de Accion Forestal Guatemala* – Forestry action Plan for Guatemala
PROCUCH	"Sustainable Management of Natural Resources in the Sierra de los Cuchumatanes" Project
SLIMF	Small and Low Intensity Managed Forests
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
WWF	Worldwide Fund for Nature

APPENDIX: QUANTIFYING THE EFFECTS OF CERTIFICATION

It is by no means easy to quantify the effects of forest certification, and to separate these from the progress towards sustainable forest management that otherwise would have been achieved through the support by NGOs and development projects beyond certification. Nevertheless, the fact that three of the five authors of this chapter have intimately been involved in the certification process in Guatemala from its very beginnings provided the basis for valuing certification effects quantitatively. Based on social, economic and ecological aspects at management unit level, the authors developed a scoring system to compare changes in performance before and after certification (Table 9).

Table 9 Scoring of performance level

Scoring	Level of performance
1	Very poor
2	Poor
3	Regular
4	Good
5	Very good

It needs to be stressed that the scoring system has been developed according to what we perceive a sustainable forestry ideal for Central America, taking into account the peculiarities and advances towards sustainable forest management in the region. "Very good" (5) thus denotes a very positive outcome in the given regional context, whereas in regions with a far longer trajectory in sustainable forest management, such as Central Europe and parts of North America, this score might well translate into "good" or "regular". It is also worth mentioning that the certified operations did not depart from the same level, and that in the course of time the units have undergone different developments. The valuation presented in Table 10 thus reflects advances at aggregate rather than individual level.

Table 10 Scoring of performance level (before and after certification)

			Before	After
Social Effects	Improved Health and Labor Security	Use of safety equipment	2	4
		Availability of first-aid kits in logging camps	2	4
		Life insurance	1	4
	Improvements in Working Conditions	Improvements in camp conditions	2	5
		Labor contracts	1	5
	Improvements in Community Organization	Development of a Strategic Plan, Internal Regulations, Operations Manuals	2	3
		Organization of production structures	1	4
	Conflict Management	Land use mapping and planning	2	4
		NTFP extraction	1	3
		Consolidation of the relationship with other community groups	3	4
		Socialization of actions within community groups	2	4
	Increased Technical Capacities		3	4
	Increased Understanding of the Regulations for Natural Resource Management		2	3
Economic Effects	Improved Administration of Community Enterprises		2	3
	Increased Timber Prices		2	3
	Access to Incentives		3	4
	Access to Niche Markets		2	3
Environmental Effects	Improved Management Planning	Improved estimations of harvesting intensity	3	4
		Five-year management plans	2	5
		Inclusion of NTFPs	2	3
		Financial analysis	2	4
	Improved Resource Management		3	4
	Species Protection		3	4
	Protection of Conservation Areas		3	4
	Plan for Prevention and Control of Forest Fires		3	5
	More Efficient and Integrated Management of Forest Resources		2	3
	Improvements in Annual Operational Plans		3	5

Forest Certification in Mexico

*Salvador Anta Fonseca**

ABSTRACT

Forest certification has become well established in Mexico and has obtained the recognition of government forestry institutions, forestry professionals, the forest export industry, and many forest *ejidos*[1] and communities. The combination of early NGO involvement in funding and promoting certification, market demand for FSC-certified products from industry, and federal and state-level government incentives has been key in promoting certification. As of July 2004, there were 32 FSC-certified forestry operations covering nearly 600,000 hectares in Mexico, which is nearly 7 percent of Mexican forest area with a federal forestry permit. Where implemented, FSC certification in Mexico has had an array of effects: it has increased the use of forest inventory and monitoring, recognized the silviculture developed by forest communities and *ejidos*, and facilitated these groups' access to national- and state-level resources that promote sustainable forestry and adaptive management. At the same time, certification has not changed important problems such as illegal logging. And recently, leading members of certified *ejidos* and communities have begun to question the importance and advantages of forest certification, as long-promised economic benefits have failed to materialize in many cases. While a number of initiatives are being undertaken to help strengthen markets for Mexican certified products, it appears that economic incentives will have to increase if forest certification is to have an enduring impact on conservation efforts.

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[1] *Ejido* refers to a form of land tenure in Mexico that emerged with revolutionary agrarian reform. It recognizes individual land ownership with the possibility of collective administration and management.

INTRODUCTION[2]

Forest certification emerged in Mexico in 1994 following an alliance between two non-governmental organizations, the Mexican Civil Council for Sustainable Silviculture (CCMSS/*Consejo Civil Mexicano para la Silvicultura Sostenible en México A.C.*), and the SmartWood Program of the Rainforest Alliance. The CCMSS was interested in promoting sustainable forest management through community forestry and SmartWood was interested in using its new role as an auditor for the Forest Stewardship Council (FSC) to promote sustainable forestry in developing countries.

Initial efforts to promote certification were facilitated by the CCMSS's longstanding and earnest efforts to promote meaningful stakeholder participation over forest resource use, which resulted in a high degree of trust with local populations, NGOs, and other governmental agencies

The emergence of forest certification in Mexico has followed two distinct pathways. The first path, followed by forest owners primarily in the northern part of the country, was initiated in response to market pressures from U.S. and European clients to produce FSC-certified wood. This has generated economic benefits from forest certification for private wood by-products and charcoal industry firms in Durango. The second pathway was sparked not by market signals per se, but by the Mexican federal government, in conjunction with the World Wildlife Fund (WWF), in an effort to strengthen community forestry processes and preserve biodiversity rich forests in the state of Oaxaca. Owing to limited resources and capacity, the Mexican government has come to see forest certification as providing a powerful instrument with which to stimulate forest conservation, generate revenue for local communities, and protect forest ecosystems. For these reasons the Mexican federal government developed policies, including economic incentives, designed to promote forest certification.

The cumulative impact of these two pathways, to date, is promising. As of July 2004, in Mexico there were 32 FSC-certified operations covering nearly 600,000 hectares, or nearly 7 percent of Mexico's forestland with a federal forestry permit. In addition, certification has increased understanding and discussion of what constitutes sustainable forestry, both within the private and public spheres. However, the market benefits of certification have yet to reach the stage that the original initiators had envisioned. In the absence of increased international incentives, it seems clear that maintaining existing levels of forest certification will require maintaining ongoing donor and government support.

One of the greatest challenges for forest certification in Mexico will be to develop a plan for strengthening production and commercialization capacities among certified communities and organizations, to improve their ability to access international and domestic markets for FSC-certified products. Important innovations might include promoting a market for forest-certified products under a "fair trade" model and improving prices paid to *campesino* and indigenous community forest operations.

[2] To prepare this document, the author reviewed a series of studies and documents related to the forest sector and forest certification in Mexico, carried out interviews with representatives of the principal institutions promoting certification in that country, and drew upon his personal experience.

BACKGROUND FACTORS

Historical Context

Forestry Problems

In terms of the forest environment, Mexico's most prominent forestry problems are legal and illegal deforestation. Of Mexico's 127.6 million hectares of forest and other vegetative area, only 19.6 million hectares are officially designated for forestry (8.6 million hectares) or protection (11 million hectares). This lack of oversight has led to the loss of much ecologically important forest area through conversion to agriculture (at a rate of 600,000 hectares annually) and illegal logging activities. In addition, it has led to extensive forestry areas with governance problems. Mexico's Federal Office for Environmental Protection (*Procuraduría Federal de Protección al Ambiente*) has identified one hundred critical zones where illicit forest activities are a serious problem (PROFEPA 2004).

Mexico's lack of suitable policies and programs to protect and sustainably manage the forest environment is due in part to the historically low importance of the forestry sector to Mexican society, and the weak institutional structure for evaluating, issuing directives and monitoring management programs and harvest authorizations. The authorization of forest harvests by the federal government has several reliability problems. Its personnel are not well trained to review forest management plans and, because of limited economic resources, it is not always possible to verify forest inventory and stocking data in the field.

An additional problem lies in the implementation of existing forest management policies, particularly by forest communities and *ejidos*. The limited number of forest technicians with sufficient capacity and quality to manage forests sustainably, and the lack of technical and organizational capacity among most forest owners, often leads to poor forestry practices. In the case of forest communities and *ejidos*, a fundamental problem is the lack of permanent organizational and administrative frameworks with a management focus. Every three years, it is customary to change community and *ejido* authorities. In similar fashion, those responsible for the forest operations in the field and in the processing sites are changed. Also, the lack of infrastructure related to roads and to community industry is a severe limit and increases the costs of production for community forest enterprises.

For its part, private industry has maintained a level of secondary processing involving a low level of value-added. Only a few firms, principally located in Durango and Chihuahua, have managed to develop and modernize their industrial infrastructure and maintain certain levels of competitiveness. By contrast, there are processing entities, such as those in Michoacán and Guerrero, that have an industrial infrastructure that surpasses the production capacity of those states, thereby creating incentives for illegal and clandestine extraction of forest resources.

Policy Responses

In Mexico, forest-related activity is regulated by the recently passed *Ley General de Desarrollo Forestal Sustentable* (Law on Sustainable Forest Development), which lays out the jurisdictions and competencies of the three branches of Mexican government: federal, state, and municipal. This law details the institutional framework of activities related to regulation, protection, promotion and forest law enforcement and monitoring, as well as the diverse government forestry programs. It describes the requirements necessary for obtaining authorization for forest use, as well as the commitments and obligations of forest landowners and the Mexican government to conserve, protect, use sustainably, and restore forested areas of the country.

Other laws that complement the above-mentioned law include the *Ley General del Equilibrio Ecológico y Protección del Ambiente* (Law on Ecological Equilibrium and Environmental Protection). This law focuses on the protection of biodiversity and prevention and mitigation of environmental impacts of forest activities on forestlands and tropical areas. A law on wildlife (*Ley de Vida Silvestre*) regulates the use of plant and animal wildlife. A law on agriculture (*Ley Agraria*) establishes the legal framework in which landowners carry out activities to use their forest resources. The *Ley General de Desarrollo Rural Sustentable* (Law on Rural Sustainable Development) establishes the general framework for activities that protect and restore forest cover within rural development programs.

In an effort to partially address forestry's problems, CONAFOR (*Comisión Nacional Forestal*/National Forest Agency) provides technical assistance and training programs for communities and *ejidos*, financial support for silvicultural activities and recently has taken on the support of road construction and maintenance. To promote industrial development, it has established a government department within the Forestry Commission to stimulate the creation of productive chains. At the same time, it has coordinated with programs such as PROCYMAF (*Proyecto de Conservación y Manejo Sustentable de Recursos Forestales en México*/Conservation and Sustainable Forest Management Project) to establish continuing education programs in some Mexican states to improve and expand training of forestry technical service providers.

Nevertheless, these indicators of progress are still in an incipient stage. Government programs have not attained the scope and scale that Mexico's forestry sector requires. Non-governmental organizations are also important in understanding policy responses, as they are increasing in number, resources and expertise. They have become an important link between professional foresters, forestry communities and *ejidos*, and the government. Nonetheless, similar to government interventions, the scope and impact of civil society organizations are limited to a few forest regions in the country.

Structural Features

Ownership and Tenure

Mexico has a vegetated area of 127.6 million hectares, of which 63.5 million hectares are forest, and 64.1 million hectares are xerophyte scrubland and other types of vegetation. This vegetated area represents 66 percent of its national territory (SEMARNAT 2002). Of total forest area, 80 percent is social property (belonging to *ejidos* and communities), 15 percent is private property (small-scale landowners), and the remaining 5 percent is government property. Mexico is one of the few countries in the world in which property rights to forestlands were given to agrarian communities and *ejidos* subsequent to the revolutionary struggle of 1910 (Bray 2004). In Mexico, three types of property are recognized: communal property where communities (typically indigenous communities) own the territory; *ejido* property (a form which emerged out of post-revolutionary agrarian reform and which refers to property owners, *ejidatarios*, who received land grants for individual use, but under community administration); and finally, small property, which refers to privately owned forestlands.

Presently, twelve million people live in the forest areas of Mexico, most of them affected by extreme poverty, which has led to high levels of outward migration to larger cities for many years (CONAFOR 2001).

The federal government has primary jurisdiction for regulating forest resources. SEMARNAT (*Secretaría de Medio Ambiente y Recursos Naturales*/The Secretariat of the Environment and Natural Resources) is the agency charged with administering policy and with delegating key aspects of forest management responsibility to the 32 federal entities.

In contrast, the National Forest Agency (CONAFOR) is the agency in charge of promoting activities related to sustainable forest use, forest protection, plantation development and restoration. CONAFOR provides economic resources to forest owners, which are allocated as subsidies. The Federal Environmental Protection Office (PROFEPA/*Procuraduría Federal de Protección al Ambiente*) is the institution in charge of enforcing the law and carrying out inspection operations and forest surveillance, with state governments and municipalities collaborating and carrying out development, restoration, and forest surveillance programs.

Before forests can be used for commercial purposes in Mexico, SEMARNAT must grant authorization. Interested parties must present the following documents: a Forest Management Report, legal documentation that safeguards property rights within the forest site, and, in the case of communities and *ejidos*, an assembly act granting use of the forest site and proof of tax payments to the federal government for the use of these resources. Communities and *ejidos*, like private individuals, must also make tax payments for the right to access the forest resource. Permits for the use of forest sites are generally issued for a period of ten years.

In 2000, 2,616 permits were registered at SEMARNAT. The states with the most permits are shown in Table 1.

Table 1 Forestry permits in Mexico

States	Number of Forest Permits
Puebla	448
Chihuahua	278
Durango	272
Oaxaca	220
Michoacán	219

Source: SEMARNAT 2000

Meanwhile, the states with the highest timber volumes under permit are shown in Table 2.

Table 2 Authorized volume per state entity in Mexico

States	Authorized Volume (thousands m^3)
Oaxaca	1,069
Guerrero	1,038
Michoacán	972
Chihuahua	857
Durango	711

Source: SEMARNAT 2000

In Mexico, the chain of production starts with the forest owners who, depending on their organizational and technological level, either a) rent their forest to intermediaries, b) sell their wood in log form, c) process chip and fibre and sell it as mulch, or d) make products of greater value-added.

Mexico's forest industry is composed principally of sawmills, box factories, carpentry workshops, and to a lesser extent, of plywood, veneer and finished lumber factories. Sawmills make up 60 percent of Mexican forest industry operations; box factories represent 15 percent; and carpentry workshops represent 15 percent.

Industries with greater value-added such as plywood, veneer, finished lumber and furniture factories represent less than 4 percent of the total. In general, Mexico's forest industry is technically obsolete and not competitive, which explains in part the sector's deficit trade balance. The states of the Republic where forest industry is concentrated are Michoacán, Durango, Chihuahua, Oaxaca, Guerrero, México and Jalisco.

The main silvicultural techniques for coniferous forests are selective treatments such as the Mexican Method for Forest Management (*Método Mexicano de Ordenamiento de Bosques*) and other treatments such as pre-thinning, thinning and reforestation, such as the Silviculture Development Method (*Método de Desarrollo Silvícola*), and the SICODESI (*Sistema de Conservación y Desarrollo Silvícola*), which includes leaving "father trees" and pruning techniques (i.e., *cortas de regeneración,*

cortas de liberación), clearing and pre-clearing. For tropical rainforests, the principal selection methods focus on rare species. In some cases, forestry procedures seek to promote the development of commercial species.

Markets

According to the National Forest Inventory, Mexico has 21.6 million hectares of forest with commercial potential. Of this area, 8.6 million hectares, or 40 percent, are utilized (CONAFOR 2001).

In 2000 registered forest production in Mexico was 9.4 million m^3. The Mexican states with the most timber production for that year are presented in Table 3.

Table 3 Volume produced by the main forest operations in Mexico

States	Volume Produced (thousands of m^3)
Durango	2,371
Chihuahua	2,091
Michoacán	1,394
México	604
Oaxaca	578

Source: SEMARNAT 2002

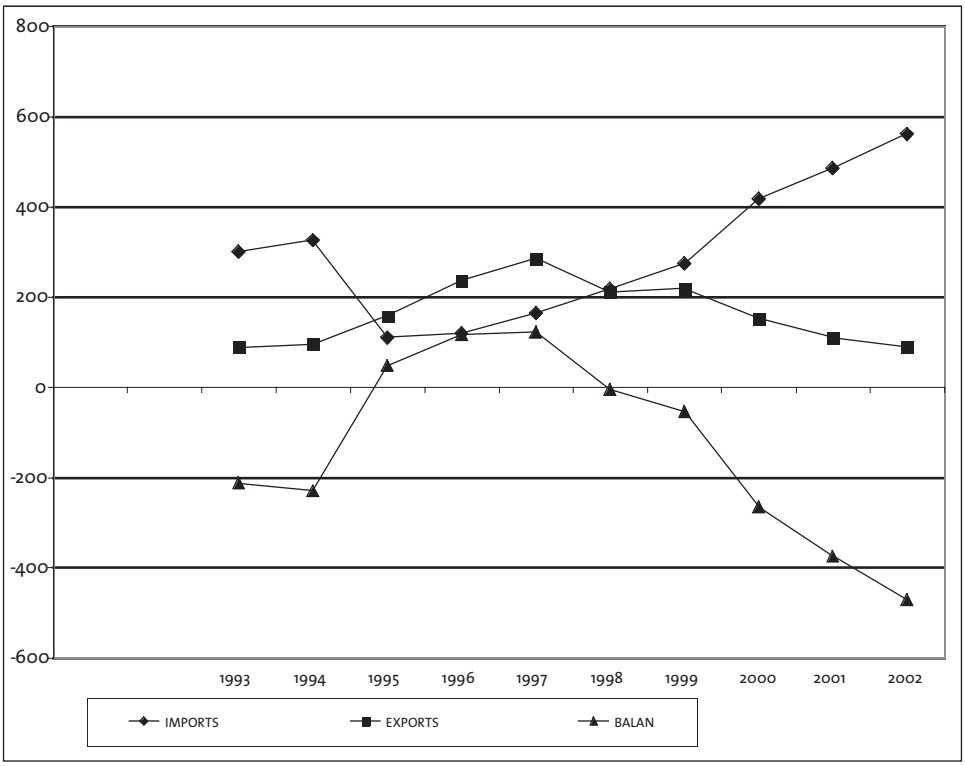
Tables 2 and 3 show that there are discrepancies between the volume authorized and the actual volume harvested. This could be due to the forest-use registry that assigns the lots annually, which can sometimes include the volume for two years as one year, as is the case of Durango and Chihuaha, which report a greater volume than that authorized for one year. On the other hand, there are states, such as Oaxaca and Guerrero, which only remove a portion of their authorized volume. These data reflect the level of efficiency in each federal entity's production. For example, more efficient production will be reflected in higher authorized volumes than actually harvested in a state. Some states have high authorized volumes but do not manage to harvest them all (like Oaxaca and Guerrero). By contrast there are others (such as Durango and Chihuahua) that harvest almost all of their authorized volume. This highlights the higher level of infrastructure and efficiency among raw material providers and industry in those states.

The forest sector's contribution to the Gross Domestic Product (GDP) for 1987 was 1.3 percent; in 1996 it fell to 0.5 percent, and in 1999 it rose again to 1.2 percent of the GDP (CONAFOR 2001). Exports of forest wood products in Mexico fluctuate. Since 1995, exports have increased due to the devaluation of the Mexican *peso*, explaining a jump in exports from US$96 million in 1994 to US$286 million in 1997. After 1998, exports began a steep decrease that would plunge to US$89 million in 2002. During the past ten years, Mexico exported timber at a total net value of US$1,647 million. Sawn wood, plywood and molding exports comprised 65 percent of the total amount.

With respect to wood imports, during the past five years sawn wood imports have seen a dramatic increase, moving from US$49 million in 1998 to US$172 million in 2002. There has been an ever-increasing influx of Chilean, Peruvian and Brazilian timber to the Mexican market. Imports have increased for plywood and medium density fiberboard (MDF), which are used in the furniture industry but not produced in Mexico. This timber mainly originates in the United States, Chile, Peru, Canada, and Brazil. Brazil has been able to increase its presence in the Mexican market by 450 percent over the last ten years. In two years, Chile has increased its presence in the market by 360 percent, while Peruvian timber has done so at 900 percent. Plywood also increased by 269 percent; the main countries that sell these types of products to Mexico are the United States, Chile, Malaysia, and Indonesia. The increase in plywood imports is basically due to the entry of Malaysia and Chile into the Mexican market during the past four years, and the increase in imports of 850 percent and 433 percent from these two countries, respectively.

Figure 1 shows timber import and export trends and their impact on the balance of payments for forest products.

Figure 1 Trade balance of forest products in Mexico



Source: Pineda 2003

During the last ten years, total imports of forestry products totaled US$2,973 million and exports US$1,647 million, giving a negative account balance of US$1,326 million. US$1,110 million or 84 percent of that negative trade balance occurred during the past three years. We must also add to this figure the commercial deficit generated from the imports of cellulose and paper, which during this same period totaled US$4,544 million, making the accumulated trade deficit in Mexico's forest sector US$5,654 million.

This increased competition from relatively cheap imports has put Mexican producers of forest products in a financially difficult position, and has led them to search for ways to reduce their production costs. In this fiscal environment, the direct and indirect costs of certification are even more often out of reach for many producers than they would be in the absence of foreign competition.

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

Forest certification began in Mexico in 1994 with the active participation of the Advisory Council for the Mexican Civil Council for Sustainable Silviculture (CCMSS), whose membership includes a variety of people interested in promoting sustainable forest management, including individuals from academia and non-governmental organizations. The CCMSS members have a great deal of experience in the forestry sector, principally in advising and supporting forest communities in various states of the Mexican republic. The CCMSS has developed into the most important non-governmental forestry sector network in Mexico and represents many NGOs in the National Forestry Council, the most important policy development arena. The CCMSS believed that the forest certification process could be an important instrument for promoting sustainable forest management, and thus led the effort to promote certification and establish relationships and links with the Forest Stewardship Council (FSC) and accrediting agencies such as SmartWood.

Pathway One: Enhancing Governmental Goals

In 1994, CCMSS, along with SmartWood, began promoting forest certification in forest *ejidos* and communities from Quintana Roo and Oaxaca. (Previous to this time, several members of CCMSS had participated in SmartWood training courses). SmartWood and CCMSS put together three pilot certification projects with forest *ejidos* from the following groups: *Sociedad de Produccion Forestal de la Zona Maya, la Sociedad de Productos Forestales del Sur de Quintana Roo*, and member communities that are part of a pioneer indigenous peoples organization with the acronym UZACHI, composed of Zapotecas and Chinantecos. These pilot certification assessments were carried out with funding from SmartWood and CCMSS. Subsequently, a collaborative agreement was reached between these two organizations so that CCMSS would be the partner agency in charge of the forest certification assessments in Mexico with support and accreditation from SmartWood.

The forest certification process was initially promoted as one of CCMSS's objectives. CCMSS believed that this activity could guide the improvement of forest management in Mexico. The initial reaction from government institutions, businesses, forestry experts and the community in general was general scepticism and poor understanding regarding the importance and scope of forest certification in Mexico.

Subsequently, the establishment of the Secretariat for the Environment, Natural Resources and Fishing (SEMARNAP/*Secretaría de Medio Ambiente, Recursos Naturales y Pesca*) in 1995 created space in the Mexican forest sector for local organizations associated with forestry issues to participate in forest-related policy processes. With the creation of SEMARNAP and under the leadership of Director Julia Carabias, M.S., more openings developed for NGOs and forest community and *ejido* organizations in the National Forestry Council (CONAFOR) and the State Forestry Councils. Previously, these councils had been controlled by forestry professionals and politicians.

Another initiative that has increased the options available to community forestry operations and *ejidos* was the innovative Conservation and Sustainable Forest Management Project (PROCYMAF), which was initiated in 1996 and operated by the World Bank in collaboration with SEMARNAP to support and promote community forestry and certification in Mexico. A pilot project was established in the state of Oaxaca. Since 1998 the project has financially supported forest certification assessments in the state of Oaxaca in collaboration with the regional World Wildlife Fund office. PROCYMAF contributes 70 percent of forest certification assessment costs and WWF contributes the remaining 30 percent. With their support, four communities have been certified, UZACHI has been re-certified, and the certification of four member communities of IXETO, an organization comprised of Ixtlan, Etla, and Oaxaca, has been strongly encouraged. All certification assessments were carried out by CCMSS.

In its consolidation phase (1996-2002), CCMSS received financial support from various foundations such as the Ford Foundation, the Inter American Foundation, and the Packard Foundation. Subsequently, CCMSS's Certification Administration unit was maintained through payments derived from certification assessments. Recently, CCMSS has withdrawn from the certification assessment business and SmartWood will be directly managing assessment and audits out of a new Mexican office and taking on the challenges of keeping up with growing certification demands and alliance-building with the communities and *ejidos*.

In addition, a new certifying agency has begun operations in Mexico. The VIVO Foundation, an agency composed of Mexican professionals from Durango, has recently been accredited by the FSC. It originated and currently has its headquarters in the state of Durango, where the largest number of certified operations and the second largest certified area is located. Certified operations in Durango rely on state-level government support through the fund created to promote certification. The creation of this new certifying agency in Mexico provides an alternative to the approaches taken previously by the CCMSS and currently by SmartWood. The success of certification in Durango illustrates the second pathway that promoted certification in Mexico: market incentives.

Pathway Two: Responding to Market Potential

Since 1999, in the northern part of the country, specifically in the state of Durango, private industries have been promoting certification. In 1999, NORAM of Mexico, a firm that processes and packages oak charcoal, had a European client that requested FSC-certified charcoal (Ludvic, A., 2002, personal communication). Since the *ejidos* that provided the raw materials to the firm were not certified, NORAM looked to CCMSS to encourage certification of their raw material providers, and thus the assessment of the supplier *ejidos* began. The cost of assessment was taken care of mainly by NORAM, with WWF covering a smaller portion.

In addition, forest industries established in Durango such as the Pirelli Group, *Forestal Lider* and Halcon Industries, which had contracts to supply to several markets in the United States, began to receive requests for certified sawn wood from their buyers. Once again, market demand obligated these companies to ask CCMSS to assess and certify the *ejidos* that provided them with raw materials and sawn wood (Robinson 2000).

This market demand was supported by reforms to the institutional and legal framework related to national forestry activity in 2000. What was formerly SEMARNAP became the Secretariat of the Environment and Natural Resources (SEMARNAT). The National Forest Council (CONAFOR) was created and spun off from SEMARNAT, with the goal of carrying out functions related to forest enhancement and protection. SEMARNAT was now exclusively in charge of regulatory procedures.

With the creation of CONAFOR, forest certification in Mexico acquired greater status and importance, since the decision to support forest certification evaluations was taken on by the most important forestry subsidies program in the country: the Forestry Development Program (PRODEFOR/*Programa de Desarrollo Forestal*). The responsibility for this program was shifted from SEMARNAP to CONAFOR. The CONAFOR support was designed on the basis of years of PROCYMAF experience with forest certification.

Prior to the publication of PRODEFOR's regulations for 2001, Mexico's Strategic Forestry Program 2000-2002 (*Programa Estrategico Forestal para Mexico 2000-2002*) made explicit reference to the federal government's interest in encouraging and supporting forest certification-related activities in Mexico (CONAFOR 2001). Within this context, CCMSS established an agreement with CONAFOR in 2001 to promote forest certification in several states of the country, and to carry out assessments of the communities, *ejidos*, and small-scale landowners that requested them. Subsequently, in 2003, when the prior Forestry Law was reformed and the General Law for Sustainable Forestry Development (*Ley General para el Desarrollo Forestal Sustentable*) was created, the latter established in Article 114 the federal government's commitment, through CONAFOR, to support forest certification with economic resources from PRODEFOR (SERMANAT 2003).

There are two main reasons that the federal government took such an active role in promoting forest certification in Mexico. First, the government was interested in the credibility that third-party certification would give Mexican forest management and the possible rewards it would bring to the *ejidos* and communities that had undergone extensive changes to achieve certification. Second, it fit with the new

vision of the federal public administration, which involved certification of a range of processes (in addition to forest practices), such as institutional performance, governmental services, technical operations, etc.

With this development of public policies related to forest certification, CONAFOR decided that forest certification assessments should be solely supported with resources from PRODEFOR, while PROCYMAF would support the studies and forestry improvements required by the conditions and recommendations of the certification assessment. In addition, the state government of Durango and some other states adopted policies and established special funds to support and promote forest certification within the state. These state-level incentives in Durango were inspired by a desire to build on the momentum and trust that arose from the early FSC certification of several *ejidos*, communities, and small landowners in that state.

As a result, with support and incentives provided by federal agencies and some state governments, the largest increase in the number of FSC-certified forestry operations in Mexico took place between the years 1999 and 2002.

Institutional Design

The institutional design established through the certification process began with the efforts of CCMSS to promote certification within communities and *ejidos* exhibiting good forest management. Subsequently, non-governmental organizations such as the WWF and governmental programs such as PROCYMAF joined this effort.

In 1997 the FSC commissioned the agency *Estudios Rurales y Asesoría Campesina A.C.* (ERA) to initiate the process of preparing national standards for Mexico. When these standards were not accredited by the FSC (see below), in 1999 the CERTIFOR initiative was created and mandated by the FSC to analyze and agree upon a final version of the national standards. CERTIFOR had active participation of CCMSS and representatives from all groups involved in the certification process in Mexico (Madrid, S., 2004, personal communication).

Despite the lack of standards, the forest industry in Durango pursued certification and turned to CCMSS to carry out the certification assessments of the *ejidos* that supplied its raw materials. The same occurred with Mexican firms that needed the chain of custody certification in order to export their products to clients requiring certified wood. In all these cases, CCMSS and its consultants carried out the evaluations in the forests and within the firms. After reviewing the reports, SmartWood subsequently issued the certificates.

Because of the confidence and reliability inspired by forest certification in Mexico, the federal government decided to promote economic policies and incentives to strengthen it. The certification process allowed the incorporation of several members of the Civil Council, of other non-governmental conservation organizations, and of researchers from academic institutions who began to view this process favorably. The same occurred with a number of forestry professionals and industrialists. Lastly, the new federal administration incorporates the certification process as part of its public policies, making mention of it in the new law, and supporting certification evaluations with government resources.

Despite this action by the government, the lack of approved Mexican FSC standards and the lack of a common strategy among the Mexican government and those actors promoting certification (CCMSS, NGOs, etc) has meant that no integrated framework for monitoring and strengthening certified communities, *ejidos* and industries has been established.

Standards

Mexico does not yet have a national standard for forest certification. The first national standards draft, written by ERA A.C., was presented for discussion at several regional forums between 1997 and 1998. However, this standard was not accredited by the FSC; although the proposed standards retained the FSC principles, certain modifications were made to the FSC criteria that made approval by the FSC more difficult.

The draft begun by ERA A.C. in 1997 and discussed in 1998 was revaluated subsequently by the director of CERTIFOR. Their intention was to encourage revision of the ERA A.C. standard, based on consultation with the chief parties interested in certification in Mexico. However, due to various difficulties, such as the lack of economic resources and lack of continuity among the group that had worked on national standards, the final draft of Mexican certification standards was not completed.

SmartWood and CCMSS decided to readdress the standard development efforts initiated by ERA A.C., and in 2000 they contracted the organization *Tropica Rural Latinoamericana S.C.* from Quintana Roo to propose Mexican national standards for forest management evaluation (*Normas Mexicanas Internas para la Evaluacion del Manejo Forestal*). It was hoped that these standards could be used by CCMSS and SmartWood for their certification assessments in Mexico. At the time of this writing, consultants hired by CCMSS had tested the second version of this standard in several certification processes in Mexico. This proposed standard upholds the principles and criteria stipulated by the FSC, but modifies certain criteria, and develops indicators and verification mechanisms.

The criteria were modified in an attempt to adapt the FSC standards to the function and organization of community and *ejido* management entities and the practical implementation of management plans. Specifically, the modified criteria were: 5.7 (related to the organization of the forest company), 5.8 (related to commercialisation), 6.11 (related to forest fires), 7.5 (related to application of the management plan), and 7.6 (related to the technical organization of the forest management operation). In general, the lack of approved FSC standards continues to be a serious concern.

Important progress has been achieved by the *Unión Nacional de Organizaciones de Foresteria Comunal A.C.* (UNOFOC), which has proposed instituting the concept of "pre-evaluation" in Mexico. A pre-evaluation is a more generic and preliminary assessment that is less costly than a full assessment and determines whether the operation is ready to be evaluated using a full assessment (CCMSS and SmartWood 2003).

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

Forest certification has become established in Mexico. Measured in terms of recognition by the government institutions dedicated to forest enhancement and forestry norms, by forestry professionals, the forest export industry, forestry NGOs and forest *ejidos* and communities, it could be called a success. This was due to the combination of early NGO involvement in financing and developing certification, the emergence of some certified markets (particularly for producers in the north of Mexico) and federal and some state-level government incentives to promote certification. However, the prominence of certification in the public eye and the ability of certification to make the public less negative about forestry practices have remained weak.

The reaction to forest certification differed across stakeholder groups, but in general what was important was the efforts that its initial supporters made to develop market incentives. Currently, the forest policy community appears to be working to increase market benefits for certified producers and to bring certification into its next phase in Mexico. With the support of the Rainforest Alliance TREES Program, the Pueblo Nuevo *ejido* in Durango established a contract with Sitwell Industries, an IKEA supplier, to sell furniture components made from certified timber. These components are value-added by-products from the sawmill industry. Due to the large quantity of timber that this *ejido* produces and the presence of an operating kiln, it is possible for it to produce a significant volume to attract international buyers.

In the same vein, a new initiative has been developed by CCMSS, ERA A.C. and CONAFOR in the state of Oaxaca called the "Certified Community Forestry Company" (*Empresa Integradora de Comunidades Forestales Certificadas*). This project has the goal of establishing a strategic alliance that will help market members' products, offer a greater volume of products, and create designs for products (furniture, boxes, moldings, etc.) that can be offered to potential buyers of certified products. The project, which is financed by the Inter American Foundation and PROCYMAF, involves creating an alliance between nine already certified communities and three communities with certification in progress. These initiatives, as we show below, were important in understanding the current status of market demands for forest certification.

Revealing the Mexican government's proactive response to certification, they were, as of the summer of 2004, considering a policy of "green purchases" to supply the needs of government offices. While this concept is still in the early stages and has not yet been clearly defined as an official policy of the Mexican government, it would provide a large market for certified furniture if formalized. In general, the institutional incorporation of a sustainable development philosophy as a government strategy began with the creation of SEMARNAP.

Forest Owners

The response of many forest owners (particularly communities and *ejidos*) to certification after its introduction was positive. Currently, however, certified forest

communities and *ejidos* in Mexico have begun to question the usefulness of remaining certified, given that the costs of audits, of meeting the certification requirements and recommendations, and of re-certifications are not covered by the surplus generated by their certified timber sales (see Roadblocks and Challenges section). This factor will undoubtedly be of great importance in maintaining the forest communities' and *ejidos*' interest in certification.

Current Status of Forestland Certification

As of July 2004, there were 32 FSC-certified operations in Mexico, totalling nearly 600,000 hectares, or 7 percent of Mexico's forest area with a federal forestry permit. At that time, at least 15 operations totalling over 200,000 hectares were poised to undergo certification assessments in the upcoming year (Eva Fernandez, SmartWood, personal communication 2005). Most of the 13 chain-of-custody certified processors (as of July 2004) were located in the state of Durango (Table 4).

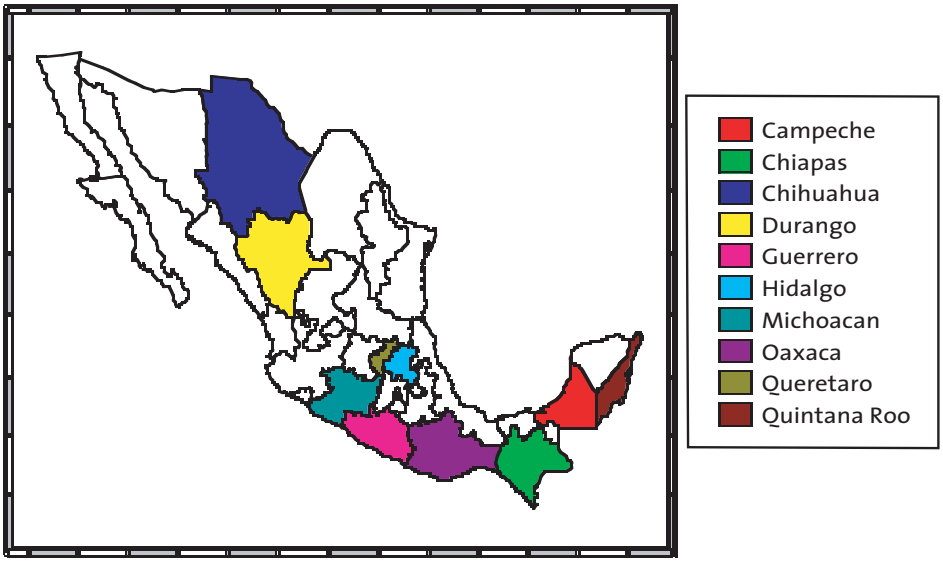
Table 4 Number and area of FSC-certified forestry operations in Mexico (as of July 2004)

State	Number of Chain-of-Custody Certified Processors	Number of Certified Forestry Operations	Total Area Certified (hectares)
Durango	8	21	276,741
Oaxaca	4	6	79,960
Quintana Roo	0	2	18,750
Chihuahua	1	2	209,495
Guerrero	0	1	10,968
TOTAL	**13**	**32**	**595,914**

Source: Eva Fernandez, SmartWood 2005; www.certifiedwood.org

Of the 32 operations described in Table 4, 26 were "social" property (community and *ejido*-owned). The states with the largest number of evaluated forestry operations are Durango (21) and Oaxaca (6). While an exact number of community forests and *ejidos* in Mexico is uncertain, their numbers are estimated at nearly 800 (Bray and Merino 2004). This means that around three percent of communities and *ejidos* in Mexico are certified.

Figure 2 Mexican states containing FSC-certified forestry operations

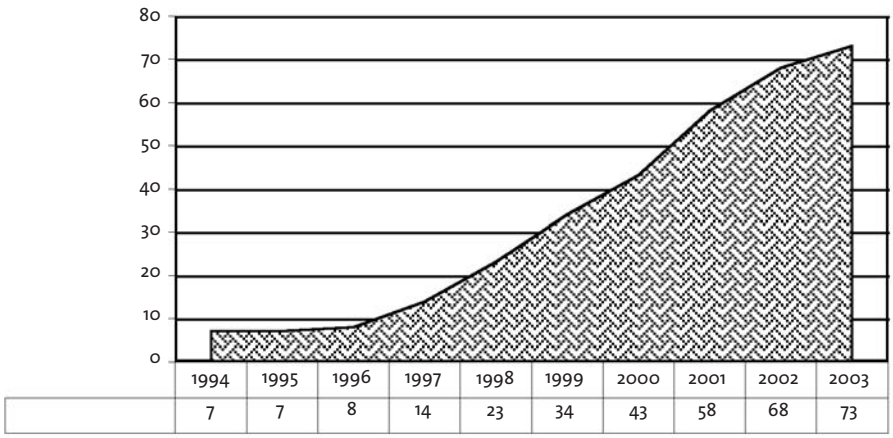


Source: Alatorre 2003

Durango is the state with the most certified forest area, at 276,741 hectares and 21 forestry operations. Next is Chihuahua with 209,495 hectares and Oaxaca with 79,960 hectares. With the exception of Quintana Roo, which is made up of rainforests, all of the country's certified forests are temperate coniferous or oak-dominated forests.

A large increase in number of evaluated and certified operations occurred between 1998 and 2002. This increase coincides with the demand for certification by the forest industry in Durango and the introduction of government assistance and subsidies for certification, first through PROCYMAF and subsequently through PRODEFOR (see Figure 2).

Figure 3 Number of assessed forest management operation sites in Mexico (1994-2003)



Source: Alatorre 2003

As of 2003, Mexico made up 44 percent of the total number of certified community forest sites and half of the certified community forest area worldwide (Alatorre 2003).

Current Status of the Certified Marketplace

With the exception of some forest industries in the northern part of the country, very few certified forestry operations have been able to sell their products into the certified marketplace. There are numerous reasons why this is so. A serious problem is the disconnected supply chain. For example, some private forest industries in the southern part of Mexico, specializing in the production of certified doors and moldings, do not purchase certified timber from certified Mexican forests. Rather, they buy certified raw materials from Brazil, Bolivia, and several Asian countries, as well as pine from certified forest plantations in Chile. An alliance or chain of production has not yet been established between certified forest firms and certified industries via a certified chain of custody in Mexico.

In many cases, it has not been made clear to certified communities and *ejidos* that access to international and preferential markets requires that the forest operation improve its industrialization process, develop a management framework, and offer large volume sales with high quality product characteristics. In general, community and *ejido* operations tend to be inefficient producers with high costs (R. Butterfield, Rainforest Alliance TREES Program, 2005). Forest *ejidos* and communities need to promote the development of products with a higher added value, be it by producing finished products or by-products.

This lack of access to certified markets is also due in part to the lack of a national strategy to create access to foreign markets and promote better sale prices of certified forest products for the communities and *ejidos*. As described in the previous section, new NGO and government initiatives are underway to tackle this problem. For example, to date the "Certified Community Forestry Company" alliance has received orders for 1,000 boxes made from certified timber from an industry that produces natural and organic products in Mexico and has made contacts with Mexican and American firms interested in producing moldings and purchasing wood panels that are FSC-certified.

THE EFFECTS OF FOREST CERTIFICATION

FSC certification in Mexico has brought about much change: it has improved forest management, provided independent recognition of the silviculture developed by forest communities and *ejidos*, and facilitated these groups' access to national and state-level resources that promote sustainable forestry and adaptive management.

According to several commissioners and technical directiors of community forestry operations and *ejidos*, forest certification has had the greatest impact in forest operation sites that are relatively large in area (more than 5,000 hectares), and in communities and *ejidos* with relatively solid internal organizational procedures.

Operations with large wood volumes were best able to allocate revenue towards improving their forest management processes.

These operations have experienced improvements in forest monitoring, protection of high conservation value forests, and the strengthening of social and administrative aspects of their operation. However, the effects of forest certification will be seen more clearly in the medium term, over the next five years, after most operations have gone through at least one re-certification process.

Power

Forest certification has caused the institutions of the federal and state governments to view forest communities and *ejidos* as deserving special and preferential attention, from a legal standpoint as well as from a public policy development standpoint. Forestry operations are now in the advantageous position of receiving economic resources from government programs such as PROCYMAF and PRODEFOR. Also the regional managers of CONAFOR have developed a strategy to economically support certified communities and *ejidos* in complying with requirements established by the evaluators, for example, through studies of flora, fauna, monitoring of silviculture procedures, feasibility studies, strengthening administrative and factory units, silviculture management practices, management development, and business/marketing studies.

Forest certification has also been important to the forest communities and *ejidos* because it has granted them a certain prestige with respect to other agrarian activities, and a defense against extremist positions of environmentalist and political interest groups that could negatively affect the image of community and *ejidos* forestry operations. This impact was observed in the state forests of Oaxaca and Guerrero (interviews with the commissioners of the *ejidos* of Capulalpam, Santiago Xiacu, Santa Catarina Ixtepeji, San Pedro El Alto, and Santiago Textitlán, 2002, and Sergio Madrid, personal communication 2004).

Forest certification in Mexico has obtained a prominent position as a socially credible instrument for sustainable forest management of commercial and non-commercial forests (Robinson 2000; Madrid and Chapela 2003). Several certified communities have been recognized with the Forest and/or Ecological National Merit in Mexico prize. In 2003, six certified communities of the North Mountain Range of Oaxaca received the "Gift of the Earth" prize for their good forest management and conservation activities.

However, there are still sectors within the urban population of Mexico that view forestry activities unfavourably (Eva Fernandez, SmartWood, personal communication). For most of the last fifty years, private and parastate industries have controlled the greater part of the forests in Mexico, leading to serious negative environmental impacts, a reduction of natural capital, the use of forest resources without the consent of its landowners, and unfavorable economic conditions for the forest landowners and proprietors. This remains the prevalent situation in most parts of the forested areas of the country. This situation has reinforced the public perception that forestry activities are by definition destructive to ecosystems and

natural resources, have generated enormous revenue for a minute sector of society, and are linked to corruption in legal and governmental circles. Critics such as Quadri (2004) consider biodiversity conservation combined with sustainable forest management to be impossible, due to the problems associated with collective property management (e.g. that found in *ejidos* and communities) and poverty.

This perception of forestry activities is without a doubt the result of a lack of awareness within Mexican society of the important progress communities and forest *ejidos* have made in Durango, Oaxaca, Guerrero, Michoacán and Quintana Roo since the 1970s and 80's. During this period, they successfully fought for the elimination of the federal forest concession grants to private and parastatal industries. Since this struggle, the federal government has modified the Forestry Law to recognize the rights of landowners to manage their forest resources, and to encourage the development of a new model of community silviculture. This model has social and environmental objectives that seek to preserve forest resources, make proper and adequate use of forests, and evenly distribute the collectively generated forest-related revenue. The awareness of this model has been strengthened recently due, in great part, to the decision made by forest communities and *ejidos*[3] to certify their forest management procedures according to the FSC standards. It is in this way that forest certification has made its greatest contribution in Mexico (Madrid and Chapela 2003; Robinson 2004).

[3] For example, communities from the Zapoteco-Chinantecas Forest Communities Union (UZACHI), San Pedro el Alto, Ixtlán, Ixtepeji and Textitlán in Oaxaca, Nuevo San Juan Parangaricutiro in Michoacán, Noh Bec in Quintana Roo, Pueblo Nuevo in Durango, and El Balcón in Guerrero.

Social

Through certification, many labor regulations for forest management operations, processors, and forest administration units have improved, and with this, the efficiency and productivity of these same groups have increased. This is one of the effects of certification that is rarely identified. Certification has also contributed to strengthening community organization processes such as sawmill administration and gender equity in the forestry sector, and readdressing organizational procedures that have become weakened.

Illegal wood extraction has developed in areas with weak local government enforcement, weak local community governance structures, and where local groups with economic and political power are allowed to access natural resources through violence and illegal manoeuvres. Forest certification has not contributed to a decrease in the illegal extraction of timber, since certified forest operation sites distinguish themselves by working within a specific legal framework. Given this focus, forest certification cannot be considered an economic tool for discouraging inappropriate and illegal forest practices. Federal, state, and municipal government agencies are responsible for providing the legal framework and economic incentives for the protection and proper management of forest resources. Significantly, a case has been reported of a certified *ejido* in Durango that was illegally extracting timber and was penalized immediately by CCMSS and SmartWood, which withdrew the *ejido's* certificate.

Economic

Economic advantages of certification have developed for some certified operations on two levels: increased access to certain certified markets and increased internal efficiency. The first level of benefit has occurred in the north of the country, in forest product industries such as charcoal. These benefits have been primarily due to demands for FSC-certified products from existing buyers in Europe and the U.S. Chain-of-custody certified forest industries in Mexico have, in turn, requested certified products from their community forest suppliers of raw materials.

For the most part, however, economic benefits from forest certification have been lacking. At a workshop with seven FSC-certified community forestry operations in Oaxaca, all operations reported that they had not been able to access markets for certified forest products (ERA A.C. and CCMSS 2003). This lack is the greatest threat to forest certification development in Mexico. Currently, nearly all certified forest *ejidos* and communities sell their timber at the same price as non-certified timber. As a result, forest landowners and proprietors can lose interest in certification and choose not to undergo annual audits or re-assessments, thus losing their certification altogether.

However, some observers are optimistic that economic benefits will improve and hope that a number of recent projects can serve as models for other communities and states of the Republic. For example, the experience developed by the Pueblo Nuevo *ejido* with IKEA, with the support of the Rainforest Alliance TREES Program and initiatives such as the Certified Community Forestry Company of Oaxaca, as well as efforts by the government, NGOs, and supporting international agencies to consolidate and strengthen certified markets, may increase economic benefits. Also, despite the fact that Mexican timber is not competitive in relation to timber from Chile and other countries, the processing quality of its secondary products is better than that of imported timber. For many producers, FSC certification assures continued access to certain export markets (Eva Fernandez, SmartWood, personal communication). This is the case for "Certified Community Forestry Company," which in 2004 signed a contract with a U.S. moulding producer.

Through the certification assessment process, many forestry operations have improved their forest management programs and the supporting cartography developed with geographic information systems, and have implemented additional information systems such as bookkeeping, forest documentation registry, and financial balance sheets. Certified communities and *ejidos* have improved and strengthened many of their manufacturing procedures in the field, sawmills, and forest administration units. For example, in Ixtepeji, Oaxaca, certification has caused the reorganization of the production process over the past three years, which has improved sawmill efficiency and production (Chávez 2005). These improved organizational processes have also allowed the certified communities of Xiacuí and Comaltepec in Oaxaca to repair their inoperable sawmills, and the certified community of Xiacuí to install a kiln.

Environmental

Certified forest operations incorporate more environmental safeguards and biological and ecological considerations into their silvicultural management processes than non-certified operations. Certification requirements and recommendations have encouraged communities and *ejidos* to conduct inventories of the flora and fauna within their forests. Certification has required the development of monitoring systems and other follow-up processes in areas designated for forest use, and has supported initiatives aimed toward educating landowners about the protection and conservation of forests with high conservation value (Patricia Gerez, personal communication 2003).

Certification has also allowed forest communities and *ejidos* to identify their strengths and weaknesses, value their own progress, and try to improve weaknesses in their forestry management procedures, community organization, forest ventures, and overall management. Certification's requirements and recommendations have allowed many communities and *ejidos* to formally incorporate ecosystem conservation and protection procedures and carry out better follow-up of their forestry technical service providers.

In general, however, the ability of certified operations to maximize the environmental benefits of certification depends on their economic and technical resources. Those sites with the most resources tend to be integrated in *ejidos* and/or Community Unions[4] that can hire technical forestry services providers who are closely tied to the project and the interests of the communities and *ejidos*. Several *ejidos* or communities that have important natural and social capital have been able to develop and hire forestry professionals from within their own ranks, which leads to higher quality forestry and commitment to assessment and technical assistance (Bray and Merino 2004). This has, for example, occurred at UZACHI in Oaxaca and the *Ejidos Union Emiliano Zapata* in Durango, among others. In these cases, the process of complying with the requirements of certification tends to be faster and within the timeframe established by the certifiers (Eva Fernandez, SmartWood, personal communication).

[4] Unions of communities or of *ejidos* are organizations made up of more than one *ejido* or community. They normally join together to contract their own forestry professionals to handle forest management. The participating communities or *ejidos* share the costs of these professionals' salaries.

However, there is also a group of small-scale *ejidos* and communities that cannot afford to hire technical forestry assistance on a full-time basis. For these groups, follow-up and attention to the sites that have undergone a certification assessment is done by an external consultant. In this case, compliance with certification conditions and requirements tends to take longer and be more difficult, especially if the conditions require financial investment. This has occurred at the *Ejido Echeverría de la Sierra* in Durango, and *El Centenario*, also in Durango.

Many members of CCMSS believe that certification and its associated benefits are about to reach their maximum capacity in Mexico. Most of the forestry operations that are characterized by a high level of forest management will soon be certified (Patricia Gerez, personal communication 2003). Thus, many forestry operations in the country whose forest management has been rated average and poor will remain so, and will be unlikely to be certified in the near future. As a result, forest certification in Mexico may be unable to solve many serious forest problems such as deforestation,

loss of biodiversity, forest fires, and use of illegal wood, especially since several of these problems occur only in places without commercial forest activity. This is the case with deforestation in Mexico, which is caused primarily by changes in soil use triggered by the expansion of cattle and farming. In addition, forest fires are observed primarily in non-commercial forest areas and can be traced back to the use of fire to encourage the establishment of both farming and grazing areas for cattle.

CONCLUSION

Summary

The principal lessons of forest certification in Mexico include:

1. The forestry operations best situated to be successfully certified are those communities and *ejidos* that carry out community silviculture, because community forestry involves management principles similar to those promoted by FSC;
2. For certified operations, forest certification has served as a tool for improving silvicultural, administrative, social and ecological processes;
3. Forest certification can be used as a government policy instrument for strengthening and improving sustainable forest management;
4. The certification saturation point has been reached in Mexico. Despite intense efforts, all the communities, *ejidos* and small-scale private operations capable of being certified have been certified. The remaining forestry operations in Mexico will, in the medium term, have to undergo an intense process of improving their forest management in order to meet the FSC standards.

Forest certification in Mexico was developed as part of a joint strategy between a civil society organization, CCMSS, and an international NGO, Rainforest Alliance, to promote the improvement of forest management. The forest communities and *ejidos* that practiced silviculture in the southern part of the country shared many of the standards and norms promoted by the FSC.

The demand subsequently created by the forest industry in the northern part of the country — ultimately attributable to demand for FSC-certified products from international buyers — promoted certification in the states of Durango and Chihuahua. In addition, Mexican government programs encouraged and stimulated certification. In just a few years, the number of forest operation sites and certified area in Mexico increased dramatically. At present, around 800,000 hectares are certified or will be assessed soon. In fact, Mexico is one of the countries in the world with the most certified forest area managed by community forestry operations.

Certification has generated among certain sectors of society an increased confidence in certified communities' and *ejidos*' sustainable forest management.

Many certified operations have received financial support from the government, and their forest management processes have been strengthened in terms of both sustainable forestry practices and business processes and management.

However, the value of certification as a market instrument is currently being questioned by many forest communities and *ejidos*, as few economic benefits have resulted from this process. This is why it is urgent that all actors involved — federal and state governments, NGOs, supporting international agencies, and forest industries — address the need to develop commercial links between certified forest producers in Mexico and certified forest products consumers both in Mexico and around the world. It is necessary to analyze and evaluate the feasibility of pushing forward and promoting stable certified forest product markets. Part of this analysis will involve understanding the conditions under which forests in Mexico are produced and managed, and developing and promoting appropriate market niches that incorporate forest certification into a tight and stable market.

Certified forest products stemming from indigenous, poor rural communities may only be able to compete in the marketplace for sustainable forest products when they are officially differentiated from those products coming from private or state-owned forests, or even from certified forest plantations. Without some such strategy, forest certification for forest communities and *ejidos* will cease to be a supporting instrument of proper forest management processes, and will risk becoming an additional cost, soon tossed aside if it does not create an economic advantage in the market.

Roadblocks and Challenges

Although certification was accepted readily by many communities and *ejidos* in Mexico, there have been many challenges to making certification a viable, long-term success in the country. These roadblocks center primarily on the lack of technical and financial resources of community and *ejido* forestry operations, and the lack of markets for their certified products.

Maintaining certification momentum within a universe of small forestry operations has been difficult. Communities and *ejidos*, as well as small-scale landowners, do not have sufficient resources to individually settle the payments for certification or to comply with the necessary technical requirements. While the cost of certification has been covered by NGOs or state initiatives for many operations, these operations will eventually need to be financially self-sufficient.

An additional hurdle for many operations is the lack of access to forestry professionals and technical assistance needed to meet the requirements of certification and to conduct ongoing monitoring and follow-up. The certifying agency generally tends to go no further than the evaluation process, with subsequent annual audits. While the government provides economic support to certified forest operations that do not have the resources to meet the certification requirements, a coalition of civilian organizations and forestry professionals that supports the continuous improvement process of *ejidos* and forest communities would be beneficial. Such a coalition would also analyze the effects of certification at a forest firm level, at an *ejido* and/or community level, and at the regional, state, and national level.

According to CCMSS, another of the most important bottlenecks in the evaluation process for certification in Mexico is the need to have a larger number of qualified consultants to carry out the forest certification assessments (Alatorre 2003).

Without a doubt, one of the greatest obstacles to successful forest certification is the lack of access to markets willing to pay higher prices for certified timber and products. After promoting certification in Mexico for ten years, most of the certified community forestry operations and *ejidos* have not been able to place their forest products directly into markets that purchase these kinds of products. Access has been achieved only by private industries in the state of Durango that purchase certified wood from sites in the state and sell it to their clients in the United States.

Finally, it is necessary to finish developing the national FSC certification standards for Mexico, so that they are congruent with the conditions and reality of the country's forest ecosystems and forestry sector. The development of standards should be part of a national plan that also follows up and monitors the certification process in Mexico.

Future Developments

While Mexican state and federal governments have created stronger pro-certification initiatives than in most other countries, the future success of certification also requires that government policy be developed to improve the transformation and industrialization processes of certified timber products, as well as the production of value-added products and of products that satisfy the quality standards of foreign markets. It will also be necessary to strengthen local businesses' forest administration processes, develop management frameworks, and promote production processes that are highly efficient and competitive.

The certification process in Mexico will require greater fiscal, regulatory and economic incentives in order to maintain the interest of certified communities and *ejidos* in continuing with certification. The achievements of certification in Mexico are due in great part to the work, experience, and trust developed by CCMSS within the communities and forest organizations in Mexico. If SmartWood, as the agency in charge of certification in Mexico now, does not take these experiences under advisement and give priority to the commercialization of certified products, there will be many problems in maintaining the certification process in this country.

Future success of certification will also require that government institutions develop a program to promote effective forestry management in those forest communities and *ejidos* that are still far from being certified, but which have demonstrated interest in improving their management of their forests. The emergence of new certifying agencies in Mexico will likely provoke an improved performance among this type of organization, and will expand the possibility of bringing new forestry operations into forest certification.

Finally, forest communities with internal conflicts in their territory have been deemed ineligible for certification, and this has discouraged them from engaging in proper forest management. This was the case of the Pueblos Mancomunados in Oaxaca. Perhaps if the certifying agency were to consider certifying just the portion

of the forestry operation that is conflict-free, this could encourage the owners of forestland under private or social property tenure to maintain their certification and try to resolve their internal conflicts.

Future Research

Regarding future research on certification in Mexico, among the most important topics will be further evaluation of the environmental, social and economic impacts of forestry certification over the last ten years. This research should aim to discover whether social conditions among the people of certified communities and *ejidos* have improved, whether forest management has come to incorporate better safeguards for preservation and conservation of the biodiversity of certified forests, and whether, through strengthening forestry administration, greater efficiency and improved market prices have been achieved among community forestry enterprises. Research should be encouraged into market and commercialization opportunities so that Mexican forestry firms can improve their prospects for entering international markets in North America and Europe.

In this sense, the feasibility of creating or developing new certification processes that highlight the value of community forestry operations should be explored. Such new certification processes would seek to differentiate their products in the international market, with fair market prices.

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LIST OF ORGANIZATIONS CONSULTED

Organization	Date
Noram de México	2002
Certificación del Consejo Civil Mexicano para la Silvicultura Sostenible A.C.	2004
Comisariado de Bienes Comunales de Santa Catarina Ixtepeji	2002
Comisariado de Bienes Comunales de Capulapan de Méndez	2001
Comisariado de Bienes Comunales de Santiago Textitlán	2002
Comisariado de Bienes Comunales de San Pedro El Alto	2002
Comisariado de Santiago Xiacuí	2002

ACRONYMS

CCMSS	*Consejo Civil Mexicano para la Silvicultura Sostenible en México A.C.*/ Mexican Civil Council for Sustainable Silviculture
CONAFOR	*Comisión Nacional Forestal*/National Forest Agency
ERA A.C	*Estudios Rurales y Asesoría Campesina A.C.*
FSC	Forest Stewardship Council
SEMARNAP	*Secretaría de Medio Ambiente, Recursos Naturales y Pesca*/Secretariat for the Environment, Natural Resources and Fishing
SEMARNAT	*Secretaría de Medio Ambiente y Recursos Naturales*/Secretariat of the Environment and Natural Resources
PRODEFOR	*Programa de Desarrollo Forestal*/Forestry Development Program
PROCYMAF	*Proyecto de Conservación y Manejo Sustentable de Recursos Forestales en México*/Conservation and Sustainable Forest Management Project
PROFEPA	*Procuraduría Federal de Protección al Ambiente*/Federal Office for Environmental Protection
SICODESI	*Sistema de Conservación y Desarrollo Silvícola*/
UNOFOC	*Unión Nacional de Organizaciones de Forestería Comunitaria*
WWF	*Fondo Mundial para la Conservación de la Naturaleza*/World Wildlife Fund

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REGIONAL OVERVIEW

Forest Certification in Sub-Saharan Africa

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INTRODUCTION

This section presents case studies examining the emergence of forest certification in four Sub-Saharan African countries: Gabon, South Africa, Uganda, and Zambia. As with other developing countries reviewed in this book, forest certification has yet to achieve widespread support among forest owners (Directorate General of International Cooperation and Development Helsinki 2002). However in its impact in the areas that have undergone certification, and as a new inclusive arena in which to deliberate over the ideas and principles governing sustainable forest management, it has been undoubtedly important.

Most members of the forest policy communities in the countries covered in this section have been actively involved in discussions about forest certification and its potential role in addressing ongoing environmental and social concerns in Africa's forests. Hence, the cases to follow reveal the important role of forest certification as a "carrier" of ideas. Whether certification will ultimately be the preferred instrument with which to implement wider acceptance of what is considered appropriate forest management, or whether it will eventually fade away in favor of governmental and intergovernmental agreements, remains to be seen. To date, two certificate systems, the Forest Stewardship Council (FSC) and the Keurhout system of the Netherlands (now defunct) have played the major role in certifying forest operations in Africa, but by 2005, the Program for the Endorsement of Forest Certification had made plans for significant inroads on this continent.

These four case study countries share an early start in forest certification relative to other countries in this region as well as some economic, political and social aspects. However, together they offer an impressive range of features to study, as each country has drawn on different social players, economic drivers, and focal points as certification has emerged. Before delving into these case studies, we review below the overarching similarities and distinctions among these countries as well as the critical questions facing the region as a whole. Other Sub-Saharan African countries that have experienced forest certification but are not included as case studies include Cameroon, Namibia, Zimbabwe, Ghana, the Democratic Republic of Congo, among others.

SIMILARITIES

Poverty and Disease

Most countries in Sub-Saharan Africa draw international concern for their many conservation and humanitarian difficulties – from deforestation and rapid biodiversity loss to poverty, disease, and civil conflict. Our four case-study countries are no exception. Poverty and disease exist at high levels in all four countries, making these issues a focus of national and international players alike. For example, 73 percent of Zambia's population lives below the poverty line, and over one in five of its adults is infected with HIV/AIDS. At birth, individuals in Zambia have an average

life expectancy of just 35 years (Central Intelligence Agency 2005). Even the population of South Africa, with its more developed infrastructure and diversified economy, has an average life expectancy of just 44 years, a one in five occurrence of HIV, and a 50 percent occurrence of living below the poverty line (Central Intelligence Agency 2005).

Beyond the individual level, these countries have very limited infrastructure, technological capacity, and economic development, although South Africa stands apart from the group with substantially more development. Waterways and roads are underdeveloped and many people go without access to safe drinking water, health care, and other critical services on a daily basis. Access to technology is limited; in Uganda, for example, there were just 1.3 radios per 100 people in 2002 and just six percent of the population accessed the Internet in 2001 (International Telecommunication Union 2005). The economies depend largely on a small number of extractive industries, such as crude oil in Gabon and copper in Zambia. Forestry is generally an important, but not the dominant, source of revenue for the country (in Gabon, timber only contributes 4 percent to GDP, but the timber industry provides the most jobs of any private industry in Gabon, is second in exports, and growing every day, while the contribution of timber to Zambia's economy is less than one percent).

These factors have affected the emergence of forest certification both in shaping the broader priorities for the country and day-to-day operations. From an operations perspective, the high prevalence of HIV/AIDS, for example, is described in the South Africa case as posing one of the greatest risks to the stability of forestry, with infection rates among forestry workers as high as 39 percent in some areas. A high prevalence of HIV and other diseases across the region (with the exception of Uganda, where it is steadily declining) affects forest certification as forest workers are disabled physically, worker morale plummets, technical expertise is lost as workers die, rates of absenteeism increase, and companies must bear the increased costs of health care expenses.

In addition, forest certification requires a certain level of financial and technical resources that most of these countries are still struggling to develop (with the partial exception of South Africa). As the Gabon case highlights, it is difficult to find the resources to monitor and enforce logging activities, recruit high-quality staff with technical expertise, and obtain equipment in such a context. The Zambia case explains that costly requirements of forest certification — such as the assessment and monitoring of forest operations — are even more expensive when operations must go beyond its borders to find trained experts. This context of poverty is perpetuated as an initial lack of resources results in the absence of necessary preconditions for long-term investment by the private sector.

This context further shapes why and how forest certification has been advanced. The range of players involved in promoting forest certification — from international financing organizations (such as GTZ) to environmental NGOs (World Wildlife Fund-Belgium in Gabon), to local NGOs (Uganda and Zambia), and the timber industry itself (South Africa) — may be focused on forest certification's capacity to

alleviate poverty, enhance rural development, or contribute to local and national economies by securing or initiating access to international markets. A focus on longer-term environment-based goals such as protecting biological diversity and sustainable forest management may not be the leading priority, as there is little room for conservation for its own sake within this context of human suffering and immediate need.

A past of colonialism and oppressive relationships with other countries is another similarity, and one that has particular relevance to the advancement of forest certification. As the Gabon case highlights, for instance, countries may be reluctant to accept certification projects that originate from external sources when there are real or perceived threats to national sovereignty, and where there are concerns that the local context has not been taken into account. The uncertain duration of external projects can also cause hesitation. Initial feelings may subside, however, as the process of forest certification may be seen as having more transparency and involving a greater number of stakeholders than traditional government.

Yet another similarity among all four case study countries is a noted shift over the past 10-15 years toward privatizing some aspects of forestry and becoming more involved in international markets (Uganda's closing of timber exports in 1994 notwithstanding).

In most African countries there is a perception that a transition to either private management or more formalized communal ownership may improve the way forests are managed. Land under customary tenure, which is accessed by multiple people and no particular person or organization claims long-term responsibility, features the highest rate of land degradation according to the Uganda case, where over 70 percent of its forested land exists on private or customary lands. In response to these tendencies, Uganda's Land Act of 1998 allowed for more formalized communal ownership, which may improve sustainable management of the land.

Similarly, in Gabon and Zambia, where forests are all government-owned, there has been a recent switch toward private and community management of those state resources. A similar path was taken in Zambia in 1998; however, these reforms have had difficulty being implemented. Indeed, forest certification emerged in Zambia at the same time that their socialist economy changed to a more market-based approach, making it difficult to analyze the impacts of forest certification independent of these broader trends. Similarly, South Africa's emergence into world markets in 1994, following its abandonment of apartheid and the implementation of democratic elections, paved the way for certification, as a market-force, to play a role in this country's forestry initiatives.

In addition to changing economic policies, in recent years, governments have developed more comprehensive environmental forest initiatives. In the Gabon case, for example, the government has taken significant measures since 1992 to improve forest policy, including requiring forest management plans, increased emphasis on social aspects of forest management, developing technical standards and creating a forestry fund. In these cases it is difficult, if not impossible, to untangle the independent effects of the ideas championed and development through forest

certification dialogues from the effects of changing government policies. It is likely that these multiple forces — certification and progressive forestry policies, for example — are working in tandem, reinforcing each other. In some cases involving privatized plantations in South Africa, for example, government demanded that forests be certified by new owners within 24 months after privatization to ensure third party verification of sustainable management practices.

DIFFERENCES

Although our case study countries share many social and economic similarities, they are quite distinctive in terms of geography, size, and ecology. They represent a range of regions, with Zambia and South Africa in the South, Gabon in the western part of the Congo Basin, and Uganda to the East. They also range in size substantially, from Uganda and Gabon both under 300,000 square kilometers, to South Africa of over one million square kilometers. Gabon has the smallest human population with just over one million, while South Africa has over forty million (Central Intelligence Agency 2005).

Beyond demography, the countries show wide variation in their levels of forest cover, ecosystem types, and environmental problems. These differences and others are responsible for the diverse ways in which forest certification is manifested in our case study countries, ranging from giving an environmental stamp of approval to South Africa's exotic mono-crop plantations to certifying Uganda's protected areas for the purposes of carbon sequestration.

Gabon is distinguished by extremely rich biodiversity, with more than 80 percent forest cover consisting largely of high conservation value tropical rainforest. The forests of Gabon, combined with those of other countries in the Congo Basin, make up the second largest block of tropical forest in the world, home to some of the world's most treasured species including great apes and elephants. Unlike the other case study countries, deforestation (or the conversion of forest to other land types such as agriculture) is *not* a major threat in Gabon; however, related environmental problems associated with logging and other extractive industries, such as over-hunting for bushmeat (wild meat for food), jeopardize healthy populations of chimpanzees, gorillas, and other highly vulnerable species. Unlike some of the other case study countries, Gabon does not include plantations in its array of land use types or forest certification areas.

Uganda, in contrast, faces high levels of deforestation as agricultural land encroaches on what is, in many cases, *protected* forest area. Forests cover 24 percent of Uganda's land area, with the majority comprised of savannah woodlands and tropical high forests, and just one percent in plantations. In this context, forest certification can be used as a tool in areas that are already protected, but that have been degraded nonetheless by poaching, agricultural expansion, and overharvesting. Here, the emergence of forest certification for use of carbon sequestration rather than for timber could result in certification being used for promoting eco-tourism — as the same forests are home to large populations of chimpanzees and gorillas.

In Zambia 55 percent percent of forest cover consists of closed forests and savannah woodlands, which are under threat from deforestation associated with clearing for agriculture, settlements, and wood fuel harvesting. Other key environmental problems include soil erosion, water degradation and the loss of biodiversity. In addition to some forest products, these habitats provide Non-Timber Forest Products (NTFPs) such as mushrooms and honey, hence forest certification in Zambia has focused on these products in addition to timber.

South Africa is also distinct, with just seven percent forest cover (68 percent tropical and 32 percent subtropical) and just over one percent under commercial forestry operations, almost all of which consists of exotic mono-crop operations. Approximately 80 percent of South Africa's plantations are certified, but this is a contentious issue since these plantations were placed in non-forested natural ecosystems. The country grapples with modest deforestation rates as well as other environmental problems such as water shortages, aggravated by forestry operations in catchment areas.

Role of External Markets

In addition to very different natural contexts and types of certification, these countries have unique combinations with respect to the influence of domestic versus international players and pressure from international markets (though at present none of these countries have substantial internal markets for certified timber and external market demand tends to affect market access rather than a price premium).

As the case studies highlight, the pull of international markets in the evolution toward forest certification is a dominant motivator in South Africa, Gabon, and Zambia, but not Uganda. In South Africa, a net exporter of timber, the emergence of forest certification was driven solely by the timber industry, which felt it could secure better environmentally sensitive consumer bases in the UK, the United States and Germany via certification. Gabon and Zambia share this emphasis on international markets but also had a significant investment from international donors. In Zambia, for example, donors that were involved in community development and poverty alleviation saw the potential of certification to develop export markets and hence provide an ongoing source of revenue for communities.

In contrast, Uganda has recently faced timber shortages and has not traditionally exported timber to international markets that require certification for access, such as European markets. Rather, Uganda has relied on exports to other African countries, such as Rwanda. Like all the African case study countries, there is no internal market for certified products. However, Uganda has seen much external investment in certification by non-profits such as the FACE Foundation (Forest Absorbing Carbon Dioxide Emissions) as a way to create and certify stable stores of carbon for a potential international market.

IMPORTANT QUESTIONS FACING THE REGION

The use of forest certification to provide environmental, economic and social benefits to local communities in Sub-Saharan Africa is still just emerging and many questions remain. Perhaps the most salient question is how and whether forest certification's objectives can be more directly linked with poverty alleviation and rural development and whether it must do so in order survive in this context given this emphasis by many local, national, and international players alike. Where would this focus leave environmental protection and sustainable forestry priorities?

Forestry operations can and often do contribute to local development in a number of ways, such as developing an infrastructure of logging roads or building schools and health centers for the workers and their families. Some logging companies contribute to local development projects by developing a clean water supply, building community centers, or granting small amounts of money to community members as compensation for using their local resources. In the case where local companies are involved, forest operations directly contribute to the economic prosperity of an area through local employment.

Should forest certification focus on developing these links? The integration of conservation and development objectives is hardly new, as aiming to protect the environment without incorporating the priorities of local human communities into the process has been seen as not only unethical, but also ineffective. Integrated Conservation and Development Programs (ICDPs) and community-based conservation programs emerged in order to address both of these concerns in unison; instead of pitting environmental protection against development, the sustainable use of natural resources could provide ongoing benefits to local communities, who would be encouraged to protect the resources for the economic benefits they received from them (for example, a community might engage with certified forest operations because their community benefits would be higher). However, there is still some debate over whether these approaches are generally effective, particularly in protecting the environment.

Another key question for Africa is whether forest certification can go beyond just timber to include Non Timber Forest Products – such as honey and mushrooms – or carbon sequestration or even ecotourism. Both the Ugandan and Zambian case studies demonstrate that many of Africa's forests may be more suitable for ecotourism or carbon sequestration than for timber, and whether international certification schemes like FSC decide to incorporate these other forest uses may be essential to whether certification is used in this region.

Finally, more research needs to be undertaken to assess whether forest certification in the African context might move from an arena of policy learning about appropriate sustainable forestry practices to influencing "on the ground" management. That is, in an area of the world where governments often lack significant resources to force compliance, could forest certification provide the resources and means to accomplish such a crucial task? In this sense, are there potential synergies between forest certification and governmental initiatives?

With forest certification still in an emergent phase, the cases to follow cannot answer these questions, but they do shed light on where to direct the next phase of research, and on what practical efforts are required to address the deterioration of Africa's forests.

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Forest Certification in Gabon

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ABSTRACT

Gabon has received much attention by those promoting forest certification because of its exceptional biological diversity. Because Europe is Gabon's second market following Asia, the domestic sector has taken interest in forest certification from its German, UK, Belgian and Dutch markets seriously. Located in the West Coast of the Central Africa sub-region, Gabon's forests cover 20 million hectares, which represents over four fifths of its total land area. While the forest sector only represents 4 percent of Gabon's GDP, a figure significantly overshadowed by crude oil production, the timber industry employs more people than any other private sector in Gabon and produces 4 million cubic meters of industrial round logs annually, most of it sold in international markets as round logs. All forests of Gabon are part of the national forest domain, and are the exclusive property of the state. Forest certification and debates were first introduced in Gabon in 1996 following proactive donor projects. Despite the interest from the forest sector, certification's emergence has been slow. With the exception of a certificate that was awarded and then withdrawn, to date the FSC has yet to certify any forests, while the Dutch-based Keurhout system has certified three companies, whose land areas total 1.5 million ha. However, the impact of forest certification can also be assessed by the ways its ideas of sustainable forest management have influenced governmental policy deliberations over power sharing among stakeholders, and ecological considerations of the forest ecosystems. While the present ability of forest certification to directly improve on forest management practices is still limited, an increasing number of organizations in Gabon consider forest certification as one potential tool to promote sustainable forest management.

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INTRODUCTION

Forest certification has been taken seriously in Gabon because its logging industry exports a significant amount to European markets, where purchasers of forest products have sent signals to the Gabon industry that it prefers to purchase products that it can verify were harvested in environmentally friendly ways. Although forest certification is still in its infancy in Gabon, as of the summer of 2004 it was the only country in the Congo Basin to have formally certified some of its forest operations. Perhaps more importantly, a range of stakeholders, including government and civil society actors, have been involved in forest certification processes, revealing a strong interest in shaping the direction of certification and in influencing ideas regarding sustainable forestry that certification processes develop.

For these reasons I argue that although certified forests represent a minority among timber harvesting concessions in Gabon currently, it is likely that more forest concession managers will overcome existing obstacles and move towards certification during the next few years.

Arguably the major reason for the interest in forest certification in Gabon is its exceptional forest biodiversity that covers over 20 million hectares, or four fifths of Gabon's land base. The most important forest type in Gabon, which is located in the West Coast of the Central Africa sub-region, is the natural tropical rainforest (plantations play an insignificant role). Estimates of the total number of plants species vary from 6000 to 10,000 (Lejoly 1996), while forest-dependent animal species are vitally important, with Gabon hosting 30 percent, 35 percent and 11 percent of the world populations of gorillas, chimpanzees and elephants respectively (Christy *et al.* 2003).

Gabon's 1.2 million citizens yield a low population density of 4.6 inhabitants per square kilometer, which, owing to the fact that most of the population of Gabon lives in urban areas, results in a significantly lower density on most of its land (Christy *et al.* 2003). This also means that, unlike other African nations, there is limited pressure on forestlands to have them converted to other uses such as agriculture. (Deforestation is estimated at the very low amount of 10,000 ha per year (FAO 2001)).

The economy of Gabon is dominated by the extraction and export of crude oil, which contributes over 80 percent of the Gross Domestic Product (GDP). In contrast, the contribution of the timber industry is about 4 percent of GDP. However, the timber industry provides more employment than any other industry in the private sector, employing about 28 percent of the total active population (Direction Générale des Forêts 2003). The timber industry is also the second largest source of export revenues (after oil products). With the decline in oil production in recent years, the relative importance of timber exploitation has been increasing.

Timber harvesting for exportation has a longer history in Gabon than in other countries of the sub-region. The interest of European colonizers in Gabon's timber dates from the late 1800s and has been centred on one main species, *Okoumé* (*Aucoumea klaineana*). *Okoumé* is important for its nice pink colour and for its technological properties, which make it appropriate for rotary peeling and for slicing. Also it is abundant in Gabonese forests and therefore its harvesting is economically

interesting. Perhaps because of the small size of the domestic market, industrial logging in Gabon continues to be oriented towards international export markets, mainly Asian and European markets. The major logging companies themselves are multinationals that bring with them foreign capital to Gabon's resource sectors. Most of Gabon's exports are in the form of industrial raw logs, though it does sell a limited amount of processed timber products, mainly lumber, veneer, and plywood.

Gabon is the country of the Congo Basin that has made the most quantifiable progress towards forest certification. Nevertheless, the impacts of forest certification appear to be more indirect and more related to the debate on forest certification than to the actual field implementation of forest certification. It appears that if the potentials of forest certification as a market-driven system that gives incentive to sustainable forest management are to be realized in Gabon, there must be a stronger synergy between forest certification and governmental agencies, because in Gabon, all permanent forests are under state ownership.

BACKGROUND FACTORS

Historical Context

Forestry Problems

As part of the tropical Africa region, Gabon faces a number of forestry-related challenges: the progressive reduction of forestland areas (deforestation) and the degradation of existing forests characterised by the loss of biological diversity. These problems are especially important in Gabon, which is part of the Congo Basin, the second largest block of tropical forest in the world.

In general, deforestation and forest degradation are closely associated with population pressure and poverty (ITTO 2003), which are the underlying causes of the current situation. Although there is little deforestation due to low population density in Gabon, there is, however, a problem of degradation of forest resources. The direct causes of forest degradation are:

- poor capacity of the forestry administration, resulting from the low financial resources made available;
- inadequate institutional and policy frameworks related to the low political priority given to the forestry sector, above;
- inadequate control, monitoring and enforcement of logging activities, resulting in excessive harvesting and caused by lack of trained staff and equipment and low salaries of staff, limiting recruitment of high-quality professionals and encouraging corruptive practices;
- lack of necessary preconditions (e.g. poor governance) for long-term investment by the private sector at macro and sectoral levels;
- insufficient access of local actors to information about forest management and the involvement of these actors in the decision-making process;

- inadequate scientific knowledge due to the complexity of the tropical forest ecosystem, although the available scientific information is not used adequately in forest management.

All these have contributed to, or exacerbated, unsustainable forest management practices that favour short-term tangible benefits while giving a lower value to longer-term solutions. For forest certification to be successful, it will need to address either the underlying problems or improve the institutional capacity of those who attempt to ameliorate them. Indeed, forest certification could play a large role only if it managed to enforce often un-enforced governmental regulations. However, forest certification, by itself, appears unable to address the widespread weaknesses of the existing institutional setting governing forest management.

Policy Responses

Traditionally, decisions guiding the forest sector are made by the state, through the laws and regulations such as decrees, *arrêté* and ministerial decisions. Laws are proposed by the government for adoption by the elected parliament, and after adoption, laws should be promulgated by the President of the Republic for implementation. There is no institutionalised public debate on laws before their adoption. However, informed interested parties (e.g. the logging enterprises) may express their opinions on law proposals before adoption. Some parties that are less informed (e.g. the local populations) have little say in the design of laws.

An important influential party in decision-making in the forestry sector of Gabon is the international community, especially the international financial institutions such as the World Bank (WB) and the International Monetary Fund (IMF). Low-level regulations such as ministerial decisions are rarely developed through participatory approaches. Usually these policies are designed by the technocratic officials within the Ministry and approved by the Minister. While industry does have influence through lobbying efforts, and international stakeholders through monitoring, the local populations and forest workers have no input at all. Similarly local or national NGOs are rarely invited to participate in the traditional decision-making process of Gabon, though on occasion they are kept informed of key decisions.

Since 1992 the Gabon government has undertaken a number of measures to address the forest problems identified above. These include reform of the institutional and legal framework, as well as the improvement of the technical settings of forest management (mainly the development of guidelines for forest inventories, forest management planning, and timber harvesting).

The most important reform was the adoption of a new forestry code in 2001, which devolved forest management responsibilities to private forest concession managers. However, the government simultaneously enhanced its remaining law enforcement, control, and monitoring responsibilities by requiring the managers of forest concessions to develop forest management plans and adhere to other sustainable forest management regulations concerning forest inventory and reduced impact logging.

The government also created local development initiatives (improvement of social infrastructure) with financial resources received through logging activities (Article 251), as well as promoting community forestry.

In addition, a forestry fund is being created. The forestry development fund is designed as a new mechanism to partly support costs related to sustainable forest management by a share of benefits from logging activities. The forestry development fund is to be managed by government institutions and will be used to strengthen the forestry administration.

The government of Gabon and the logging companies operating in Gabon have also received support from external donors for their efforts towards sustainable forest management. For example, the technical standards were developed and tested through a field project financed by the International Tropical Timber Organization (ITTO). Similarly the French Development Agency (AFD)[1] provided low interest loans to logging companies that were willing to improve forest management practices in their concessions. Five companies benefited from these loans.

[1] (Agence Française de Developpement)

Structural Features

Ownership and Tenure

Ownership and tenure are important to understanding the emergence of forest certification in Gabon for two key reasons. First, heavy state involvement means that choices over forest certification can never be devoid of state authority. Second, the reduced transaction costs associated with the government's creation of large timber leases should make it easier, everything else being equal, to support forest certification.

Government is inexorably involved in forest management, owing to the 2001 forest law (Article 13) that enshrines all forests within the national forest domain, and as the exclusive property of the state (Government of Gabon 2001). Even before 2001, the forest law did not contain provisions on communal and private forest tenure (Schmithusen 1986). The national forest domain is subdivided in two: the state permanent forest domain (permanent forests) and the rural forest domain (non-permanent forests). The permanent forests of the state include classified forests (i.e. protected areas, recreation forests, research forests, botanical and zoological gardens, state forest plantations) and registered timber production forests. Land classified as "permanent forests" cannot be converted to other land-use types such as agricultural farms, grazing lands, etc. However, lands classified as "non-permanent forests" can be cleared and converted to other land use types, if needed.

All forest exploitation requires authorisation from the forestry administration. However, local communities enjoy customary subsistence usage rights over some forest products, which are established by state regulations after consultations with the local populations. These rights usually include the use of dead wood for firewood, the felling of trees for house building, the collection of non-timber forest products (bark, latex, gum resin, fruits and nuts), the clearance of forest for subsistence agriculture, and rights of way and water usage rights.

Industrial logging takes place mostly in registered timber production forests. Individual or enterprises wishing to conduct industrial timber harvesting must obtain permits from the forestry administration. There are three types of logging permits:

- the forest concession under sustainable management (CFAD[2]) which can cover an area between 50,000 ha and 200,000 ha. A single logging company can be granted many CFADs; however, the cumulative area granted to one company cannot exceed 600,000 ha;
- the associated forest permits (PFA[3]) which can be granted exclusively to Gabon nationals. The PFA is granted for smaller forest areas not exceeding 50,000 ha. It can be managed jointly with a CFAD;
- the mutual agreement permit (PGG[4]) also granted only to Gabon nationals. It concerns cutting of fewer than 50 trees.

[2] "Concession Forestière sous Aménagement Durable"

[3] Permis Forestier Associé

[4] Permis de Gré à Gré

The CFAD and PFA are granted within the permanent forest estate (PFE) and are supposed to be managed in accordance with forest management plans developed by the concessionaire and approved by the forestry administration. The PGGs are granted in the rural forest domain only. In addition to the forest management plans, enterprises that apply for logging rights in a CFAD are required to develop an industrialisation plan that identifies its commitment to processing timber locally.

The procedure for granting CFADs has two stages. The first stage leads to the signing of a temporary agreement between the interested enterprise and the government of Gabon represented by the Minister of Forest Economy. The temporary agreement is valid for three years. During this time period, the applying enterprise is allowed to harvest timber while preparing a forest management plan and an industrialisation plan using the methods approved by the forestry administration. The second stage results in the final allocation of the particular CFAD by the Prime Minister to the interested enterprise by decree, provided that the forest management plan and the industrialisation plans are approved by the national committee for the industrialisation of the forestry sector. It should be noted that the granting of the above-mentioned permits does not give rights to exploit non-timber forest products (NTFPs) by the logging enterprise. Similarly, logging companies have no legal obligation to protect NTFPs in their concession. However, where it becomes necessary in the process of designing a management plan that the concessionaire is required by some stakeholders to include measures for the protection of wildlife and NTFPs, then in that case, after the management plan is approved, these additional protection measures become binding. The harvesting of these products, especially NTFPs, is subject to different types of authorisations and permits.

Normally, the logging companies have to pay two kinds of forest taxes: an area-based tax and a tax based on the value of the timber harvested. Concerning the area-based tax, the logging company should pay CFA 600 (0.91 euros or about 1.1 US$) per ha opened to harvesting for concessions that are not yet managed on a sustainable basis in accordance with an approved forest management. Once a concession starts to

be operated on the basis of an approved forest management plan, the area-based tax is reduced to 50 percent of the value above. The value-based tax, on the other hand, relates to an official stumpage value estimated per species and according the zone where timber harvesting took place.

In Gabon currently (February 2004), 11 million ha of forestland have already been granted to 221 logging enterprises, seven million of which have been granted to big companies owned by foreign investors (mostly European and particularly French). About 50 percent of the opened areas are exploited by 13 enterprises, while the five biggest logging enterprises manage about 30 percent of all the forest permits. These companies are Rougier Océan Gabon, Leroy Gabon, Compagnie Forestière du Gabon (CFG), Compagnie Equatoriale du Bois (CEB) and Lutexfo/Soforga.

Two million hectares of forest concessions now have final decrees, while the remaining are still under temporary agreements. Most of the forests currently under temporary agreements occur in zones that are part of the rural forest domain (non-permanent forests) where PFA and PGG are granted to Gabon nationals.

The most influential logging enterprises in Gabon are part of Syndicat des Forestiers Industriels du Gabon (SYNFOGA), a national union of logging companies that is headed at the regional level by the Interafrican Forest Industries Associations (IFIA). IFIA members are active in the logging industry of several African countries including Côte d'Ivoire, Ghana, Cameroon, The Central African Republic, Congo Brazzaville, The Democratic Republic of Congo, Angola and Gabon. IFIA is assigned to represent the interests of the forest industry at the international level[5]; thus, it has been present in all discussions related to forest certification in Gabon and other African countries.

[5] www.ifiasite.com

Markets

From the forest industry viewpoint, the forest resource base of Gabon is subdivided in two zones officially called Zone 1 and Zone 2. Zone 1 covers five million ha located along the coast in the west of the country. When forest exploitation began in the early 20th century, the easy access to the seaport of Libreville and Port-Gentil meant that forest exploitation started here, and until 1956 only occurred in this part of the country. As a consequence, forests of this zone have been overexploited and it is estimated that secondary forests account for more than 95 percent of the resource found here. The road infrastructure is more developed than in the interior of the country. Zone 1 includes the provinces of Ogoué-Maritime, Estuaire, Moyen-Ogoué, and a small part of Ngounié.

In contrast, Zone 2 covers the remainder of the country (the eastern part) and logging started there in 1956. Most of the new developments in the logging industry are now concentrated in Zone 2. An important event that helped the development of the logging industry here was the railroad, which became operational in 1981.

The production of industrial round logs from Gabon's forests is estimated to be around 4 million cubic meters (OIBT 2002), 70 percent of which is exported as raw round logs (Fomete 2003). Log processing is dominated by sawing for lumber production; however, in recent years companies have also been investing in the

production of plywood and sliced veneer (secondary processing). There are a few firms engaged in tertiary processing.

In Gabon, the Société Nationale des Bois du Gabon (SNBG) is jointly owned by the state and private shareholders and is responsible for commercialising Gabon's timber products in international markets. The SNBG tries to regulate the quantities of timber products exported in order to obtain the best prices in international markets. In the past, the SNBG concentrated its activities on *Okoumé* and *Ozogo* products, but it has now diversified to products of other species. The SNBG has a monopoly of *Okoumé* and *Ozigo* timber exports to European markets.

Timber product export plays a very important role in the logging industry of Gabon, which, as we reveal below, facilitated efforts by those promoting forest certification. The domestic market remains very small and only small artisans are interested in supplying wood products to the national market. Traditionally, Gabon timber products are exported mainly to Europe, where the main importing country is France. However, for the last 10 years Asian markets and particularly China have become more important. For example, in 2001, Gabon exported more than 2.5 million cubic meters of raw round logs, with about 45 percent of it going to China (OIBT 2002).

The main importers of timber products from Gabon are shown in Table 1 below. It can be seen that raw round logs are exported mainly to Asia, while the main destination for plywood and veneer is Europe (veneer is also exported to Canada and plywood to the United States). In addition to the figures shown in Table 1, Gabon also exports sawnwood, but in smaller quantities.

Table 1 Main destinations for timber product exports from Gabon

Round logs				**Veneer**		**Plywood**	
Asia		*Europe*		*Europe (only)*		*Europe (only)*	
Country	Volume (m^3)	Country	Volume (m^3)	Country	Volume (m^3)	Country	Volume (m^3)
China	1,124,660	France	415,225	France	31,985	Belgium	572
Taiwan	687,502	Portugal	114,400	Italy	2,809	Holland	5,600
Japan	40,582	Italy	44,197	Germany	2,200		
Malaysia	3,000			Belgium	1,130		
South Korea	27,000						
Hong-Kong	76,335						
Thailand	6,000						
Philippines	405						
Total	1,965,484		573,822		38,124		6,172

Source: OIBT 2002[6]

[6] The report cited indicates that their differences in figures are related to the sources of data. The figures included in this table are from importing country sources.

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

The idea that forest certification might be used in Gabon to promote sustainable forestry originated from the international sphere, but a range of domestic stakeholders has shown interest, including government, the forest industry, and non-government organisations (NGOs).

The most important market signals in support of forest certification came from Gabon's northern European markets, particularly Germany, the Netherlands, Belgium, and the United Kingdom. There has been little demand from southern Europe, although France, Gabon's largest European market, is currently showing some interest in forest certification. Gabon's Asian markets, dominated by purchasers of industrial round logs, do not currently appear interested in certified products[7].

[7] Opinion expressed by the general manager of Leroy Gabon.

Although markets provided signals to Gabon that certification was important, its actual implementation occurred only after foreign governments and non-governmental organizations developed "seed" projects to promote forest certification. One of the first of these was a one year pilot initiated in 1996 (and later extended) by WWF Belgium with financial support from the European Union (EU). The project aimed at promoting sustainable forest management through forest certification (Eba'a-Atyi and Simula 2002) in Gabon, Cameroon, and Ghana. Two key objectives were to:

1. Prepare a framework for certification in one pilot country (Cameroon) and to create and awareness in two other countries (Gabon and Ghana);
2. Improve understanding and commitment for the certification of African timber among importers/industrialists in Europe.

One of the most important aspects of the WWF/EU project for Gabon was that it facilitated the creation of a National Working Group (NWG) on forest certification (though the WWF would have liked the working group to eventually seek endorsement from the FSC, this was not a requirement of its creation). The NWG consists of 15 members representing: the forest administration (2); logging companies (2); environmental NGOs (2); local populations (2); researchers (2); training institutions (2); Ministry of Economy and Finances (1); and observers from international or regional organisations based in Libreville (2). The NWG also includes a well-trained five member technical committee. Many of the NWG's activities have been oriented toward sensitisation about the facts of forest certification and consultation among stakeholders. For example, the NWG has organised seminars and workshops on four themes (Ondo 2001, 2003): sustainable management in the forest policy of Gabon; sustainable forest management and forest certification; concepts and procedures in forest certification; criteria and indicators of sustainable forest management.

The NWG has also organised training sessions to build local capacities in forest management standard development.

For these reasons the National Working Group is the most active organisation involved in awareness-raising on forest certification in Gabon. It has been successful in positioning itself as a key arena for discussions related to sustainable forest management in the country. At the same time its future is uncertain, as it has faced, and continues to face, budgetary constraints. As an independent organisation, its activities have been financed from outside through the WWF/EU project and the German government's technical cooperation development agency (GTZ).

Another problem of the NWG is that its relationship with existing certification schemes is not clear to forest operators. The WWF/EU project originated with the idea that it would promote FSC-style forest certification, which, in 1996, was the only choice for those wishing to appeal to international markets. These dynamics created the perception from the forest industry and the government that the NWG was an advocate of the FSC system. However, because the WWF/EU did not require that the NWG seek endorsement from the FSC, and because of differences within the NWG about the best way to proceed, no endorsement of any system has been sought. As a result, by the summer of 2004, the NWG activities have not led to concrete actions to implement forest certification in Gabon, but instead are situated as an important convening arena for discussion and exchanges of ideas among the Gabonese forest policy community.

Another outside influence on forest certification and sustainable forestry issues has come from the International Tropical Timber Organisation (ITTO), of which Gabon is a member. The ITTO has encouraged its member states to adopt forest certification. In fact the ITTO is a pioneer organization on the use of Criteria and Indicators (C&I) as a tool to enhance sustainable forest management. ITTO published the first set of C&I for the sustainable management of natural tropical forests just before the Rio Summit in 1992.

Although ITTO is not directly involved in promoting a particular certification system, it has undertaken a number of initiatives at the international level to promote the concept of forest certification countries (Eba'a Atyi and Simula 2002). These include:

- providing support for capacity building to its producing member countries in forest certification;
- monitoring progress in the comparability and equivalence of forest certification systems and exploring opportunities for promoting convergence in forest certification standards in member countries, including regional initiatives;
- facilitating discussions involving stakeholders and providing support for exploring the feasibility of a phased approach to certification as a means of improving equitable access to certification by producers in producing and consuming member countries;
- recognising the potential contribution of forest management and chain of custody certification to the control of illegal logging and illegal trade of tropical timber;

- facilitating dialogue and cooperation between consuming and producing countries, and educating stakeholders and the general public about the principles and complexities of sustainable forest management and the certification of natural and planted forests;
- promoting enabling conditions for sustainable forest management and its certification in its member countries;
- supporting research to examine the effectiveness and efficiency of alternative sets of indicators for satisfying specific certification criteria and clarifying the impact of certification on sustainable forest management;
- keeping its members informed on initiatives related to international frameworks for mutual recognition between certification systems; and
- providing support to regional certification and related organizations in the tropical regions.

In Gabon specifically, the ITTO has organised a training session on the development of Principles, Criteria and Indicators (PCI) that can be used in forest certification, as well as holding a regional workshop on phased approaches to forest certification (Simula *et al.* 2003). All these events have contributed to raising awareness about forest certification, particularly at the level of government institutions.

Another key external source of influence in the development of certification in Gabon has been provided by the Keurhout Foundation. The Keurhout Foundation was created as an Act of the Dutch parliament specifically designed for timber products exported to the Netherlands. It defines the minimum requirements for the certification of wood products and sustainable forest exploitation. The Keurhout Foundation approves certificates and declarations made by accredited certification bodies if it is the opinion of its panel of experts that these fulfil its own criteria. The minimum requirements of the Keurhout Foundation draw on the ITTO's definition of sustainable forest management, the Forest Principles (UNCED), and the FSC principles.

Finally, a fourth source of influence is found at the intergovernmental arenas where a heightened interest in moving toward forest certification has occurred. One example is the 1999 sub-regional initiative of the Heads of State from Central Africa (Cameroon, The Republic of Congo, Gabon, Equatorial Guinea, Central African Republic, The Democratic Republic of Congo and Chad), which held a summit in Yaoundé, Cameroon on the conservation and sustainable management of tropical forests (COMIFAC 2003). In their final declaration (now often referred to as the "Yaoundé Declaration"), the Heads of State committed their countries to adopting harmonised national forest policies and accelerating the implementation of forest management tools. They specifically noted the need to have the states of Central Africa approve and promote the development of internationally recognized, harmonised forest certification systems, and to provide resources for their implementation. Even though it was not clear whether this declaration envisioned

that a regional certification system be developed, the declaration strongly influences the forestry administration in Gabon, which signalled its support for the idea of forest certification and committed resources to development of a certification standard and capacity building. (It is worth noting that the Yaoundé Summit was partly initiated by WWF, which may have influenced the declaration's attention to forest certification).

Institutional Design

Institutional design varies across the two forest certification systems that operate in Gabon, the FSC and the Dutch Keurhout system. The African Timber Organization (ATO) undertook a feasibility study to set up a regional certification system in Africa in 2003 (including Gabon) to be called Pan African Forest Certification (PAFC), but as of the winter of 2005 the institutional setting of PAFC in Gabon were still being finalised.

The institutional processes within the FSC (and to a lesser extent Keurhout) can be distinguished by their international frameworks, their domestic processes, and their appeals functions.

At the international level, both the FSC and Keurhout have procedures established outside Gabon that establish governance structures and broad principles and criteria to which all countries must adhere. The FSC, as noted in the introduction to this book, has created 10 principles and criteria governing a range of globally important forestry issues including indigenous rights, sustainable forest management, community involvement, and so on.

The FSC requires that a national working group develop specific indicators and verifiers in accordance with the 10 principles and criteria. The FSC does not require that a national working group vote according to the one-third format of the international body, leaving much rule-making discretion to domestic FSC national working group participants. The FSC does require, however, that half the members of a national working group be FSC members. Gabon's current working group falls far short of this requirement, which partly explains why they have not sought FSC approval.

In the absence of formally approved standards developed by national working groups, the FSC provides for a provisional process in which an auditing company develops temporary standards. These temporary standards tend not to follow the same type of open consultation process and limit local participation. It was these very dynamics that led to the controversy surrounding Leroy-Gabon (discussed below), where concerned national and local actors were not part of the process that led to its certification. Keurhout's domestic process is very limited – other than logging enterprises, there is limited public participation over issuing of Keurhout certificates.

Both the FSC and Keurhout systems require that the decision to issue a certificate be made in a transparent fashion. Reports of the assessment and monitoring missions must be made available to the general public and interested parties are permitted to provide comments. Both the Keurhout Foundation and FSC have established an appeal panel for those who oppose the granting of a certificate. Such processes

provide redress, especially when dealing with the awarding of provisional certificates. For example, following the 1996 awarding of an FSC certificate to the forest company Leroy Gabon, a range of organisations was able to appeal and a second assessment resulted in the certificate being withdrawn (see Box 1 on page 461).

Transparency is also encouraged by the contribution of forestry experts, which is often much broader in the case of certification than in governmental processes because certification processes invite experts from outside the certification systems, whereas the Gabon government almost always relies on its internal government technicians. For example, during the process of development of standards for sustainable forest management by the African Timber Organization (ATO) – these standards can be used for forest certification – experts came not only from local governments but also from international NGOs, universities, research institutes and consultancies.

Clearly then the institutional settings of certification systems require broader participation of stakeholders and are more transparent than the traditional government-led decisionmaking processes. However, two caveats should be noted. First, the domestic certification participatory processes are constrained and directed by general frameworks developed outside of Gabon. The only recourse Gabonese stakeholders would have to alter these frameworks would be at the international level where it would require outreach, in the case of the FSC, to other members of the general assembly.

Standards

Discussions on appropriate certification standards in Gabon take place within the Keurhout Foundation, the Forest Stewardship Council (FSC) and the harmonised ATO/ITTO standards. One of the arguments for the promotion of forest certification in Gabon was that traditional governmental approaches do not sufficiently address ecological and social problems governing forest management. And even when appropriate policies are in place, the forestry administration often lacked the resources to implement and enforce them. For these reasons deliberations in Gabon over forest certification expressly addressed and developed social and ecological requirements.

FSC

FSC offers the only existing global set of standards that was explicitly elaborated to function as a reference for certification of forest management: the FSC Principles and Criteria (P&C). However, Gabon has not developed national FSC-endorsed standards. Even the existing National Working Group (NWG) does not meet the requirements to be recognised as a FSC NWG. As has been done in other countries without FSC endorsed standards, it is likely that, if a forest concessionaire in Gabon were interested in obtaining an FSC certificate, a certification body (e.g. SmartWood) would have to make the assessment using their own interim standards.

Keurhout

Keurhout uses four general minimum requirements:

- forest management should demonstrate that enough attention is given to the integrity of ecological functions and to the continuity of economic, social and cultural functions of the forest based on intrinsic criteria and indictors;
- the forest managing enterprises should have an appropriate management system;
- the certification body is independent and meets international guidelines related to organisation and monitoring procedures, and professional competence in forest management;
- procedures followed in the transportation of timber products concerning the separation of products from different sources should be reliable and transparent.

The first general requirement is further subdivided into principles (3), criteria (3 for each principle) and indicators that are not numbered (www.stichtingkeurhout.nl. 2002.)

ATO/ITTO PCI

In addition to the FSC and Keurhout, it is important to note that a third system of sustainable forestry standards, known as the ATO/ITTO process, has emerged. This system was designed to address tropical forestry operations in Africa, and *permits*, rather than requires, companies to be audited for compliance. These standards depart from the FSC and Keurhout in that governmental agencies were heavily involved in their creation and development. The ATO/ITTO Principles and Criteria merged from two distinct processes. The first originated from the African Timber Organization, which is an organisation of 15 countries within tropical Africa, including Gabon.

Based in Libreville[8], the main objective of ATO is to harmonise forest policies within its member countries. ATO was supported financially by the EU and technically by the Center for International Forestry Research (CIFOR), and applied CIFOR methodologies in standard setting (Prabhu *et al.* 1998). These methodologies consisted of using existing standards established by other organisations, and then selecting and reformulating these based on the results of field tests. Initial tests were conducted in Côte d'Ivoire (1995), Cameroon (1996), Gabon (1998), the Central African Republic (1998) and Ghana (1999-2000). The tests consist of a panel of international, regional and national experts conducting a field assessment and auditing logging companies' forest practices according to the pre-established criteria. The results are then discussed during workshops with a broad participation of representatives of forest management stakeholders (ATO 1999).

[8] The capital city of Gabon

Recognizing that both ITTO (see introductory chapter to this volume) and ATO have adopted similar strategies in promoting sustainable forest management through

the implementation of PCI, a decision was adopted during the 29th Session of the International Tropical Timber Council in November 2000 calling for collaboration between ATO and ITTO. A study was conducted to refine the ATO PCIs and make them consistent with the ITTO C&I. The two organisations have now published a common standard known as the *ATO/ITTO Principles, Criteria and Indicators for the Sustainable Management of African Natural Tropical Forests* (ATO and ITTO 2003). The harmonised ATO/ITTO PCI are applicable at both the national level and the Forest Management Unit (FMU) level. An innovative feature of the ATO/ITTO PCI is the inclusion of sub-indicators, which provide a basis for the development of specific verifiers and standards of performance relevant to the assessment of sustainable forest management at the FMU level in African tropical forests.

This generic standard at the national level consists of 1 principle, 5 criteria, 33 indicators and 45 sub-indicators. The PCI at the national level are designed mainly to assess forest policy at the country level, and therefore cannot used for forest certification in the field.

At the FMU level, the standard consists of 3 principles, 15 criteria, 57 indicators and 140 sub-indicators. The three principles of the FMU level include aspects related to:

- sustainable supply of forest goods and services;
- the maintenance of ecological functions;
- the contribution of the forest to the improvement of the economic and social well being of workers in the FMU and of local populations.

Whether and how these criteria may be applied in the context of non-governmental forest certification initiatives remain to be seen. Any analysis of forest certification in Gabon must carefully assess the influence of the ATO/ITTO process on the role that governments might eventually play, on the role of increased transparency, and on the ideas that are considered legitimate and appropriate within the forest certification context.

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

During the 1990s the majority of decision makers of the forestry sector in Gabon had a negative perception of forest certification. In general, government officers perceived forest certification as a competitive phenomenon designed to limit the power of the state over the management of forest resources and an indirect way to decrease the national sovereignty on the countries' natural resources for the interest of foreign forces. This opinion especially related to the FSC system, which, from the forestry administration standpoint, was dominated by international NGOs at the expense of government institutions. Administration officers and most logging companies saw forest certification as an approach that questioned the position of the state as the owner of forestlands and forest resources.

The reasons for this initial negative perception of forest certification by government policy makers were partly related to the low level of information that forest officers had at their disposal, and especially because it was introduced by international NGOs (particularly WWF). However the fact that governmental officials and agencies could not be part of the FSC process also increased governmental animosity toward forest certification. In addition, the arrival of certification coincided with a time of great political upheaval, as Gabon moved from a one-party monolithic system to multi-party system, often marred by violence. This upheaval led state officers to fear a loss of control over natural resources, which made them view another private arena with suspicion.

However, since 1999 government decision makers' attitudes toward forest certification improved greatly as they learned more about its objectives and procedures. Indeed, some government officials have noted the positive effects that certification may have on the implementation of national laws.[9] Still, for the most part the perception still exists that forest certification must do a better job of taking into consideration the economic, political, ecological and social environment of Gabon.

Conversely, domestic NGOs were very enthusiastic about forest certification at the beginning,[10] as they perceived forest certification as a means that would allow them to monitor logging activities. As the process of forest certification in most cases requires a great deal of transparency from the logging enterprise, local NGOs felt they could gain an increased role in Gabon's logging activities. However, as the FSC has yet to gain many commitments in Gabon, the enthusiasm of national NGOs has decreased over time (see also Box 1). The reaction from the local communities has been virtually nonexistent possibly because of a very low level of information about forest certification and related procedures.

[9] From discussions with M. Nzenguema, Director for Inventory and Forest Management planning unit of the Ministry of Forest Economy.

[10] Personal communication, Constant Alogo and Omer Ntougou, two domestic NGO directors.

Forest Owners

As indicated previously, forests assigned for sustainable timber production in Gabon are owned by the state. However, private individuals or companies, most of which are European, manage most of the forestland, rendering their attitudes toward forest certification extremely important.

The forest management and logging companies reacted in two different ways at the beginning (during the 1990s). A few companies, such as Leroy Gabon and Thanry Gabon, immediately embraced forest certification. These companies saw it as a strategy to gain a better competitive edge and market position, as most of their business was oriented towards international markets in general and European markets in particular. Other companies, including BORDAMUR and LUTEXO-SOFORGA, were rather sceptical about the need to adopt forest certification.

The most illustrative case of companies that immediately became open to forest certification is Leroy Gabon. This company developed its strategy for an FSC certification very early (see Box 1). Leroy's strategy included the establishment of forest research plots, forest inventory and the setting of written guidelines for the sustainable management of forest resources within its concession (ISOROY 1996).

Then, they had an audit conducted by SGS QUALIFOR UK, and a FSC certificate was granted to Leroy Gabon in 1996. However, the certificate was later withdrawn due to action by some national and international NGOs who complained about the validity of the certificate.

The opposition of the NGOs was based on three points: 1) poor stakeholder consultation; 2) lack of a forest management plan; and 3) the presence of a protected area near the logging concession. Some also argued that the certificate should not have been issued before the government of Gabon had completed the reforms of the legal and institutional framework of the forestry sector. Irrespective of these important issues, the withdrawal of the FSC certificate contributed to the negative opinion that some actors in the forest industry have towards forest certification, including the view that it may work to reduce Gabon's timber exports, rather than facilitate them.

The impact of the Leroy Gabon withdrawal was significant in dousing the interest of other companies in pursuing FSC-style forest certification. For example, the forest company Thanry Gabon, which had been preparing for FSC certification, gave up its efforts after learning of the Leroy Gabon case. Nevertheless, preparations for certification did result in important changes in companies like Thanry Gabon, in their efforts to prepare for, and think about, how to promote and address the FSC's requirements of sustainable forest management. For example, each of the above-mentioned companies created a forest management planning unit within its administrative chart and recruited trained forest technician or contracted international consultancy firms specialised in forest management to assist with the development of forest management plans. As a result of these changes and positive disposition towards certification in principle, Leroy Gabon and Thanry turned to, and received recognition from, the Keurhout certification system.

Despite this initial interest on the part of some forest companies, most Gabonese forest companies were lukewarm about forest certification from the beginning. They were leery of the costs of forest certification, and skeptical of the promises of the higher prices they would achieve in international markets. In addition, the demand for certified products was negligible, as only a very small share of the European market influenced by NGOs was sensitive to environmental issues concerning tropical forests. Simultaneous rapid development of Asian markets, which provided no signals for certified products, also provided an option to avoid bearing the costs of certification. Meeting the legal requirements of the government of Gabon as it related to sustainable forest management appeared to be enough. These companies were waiting for a much stronger signal from the market before they would move towards certification.

Another reaction came from the Union of Logging Companies (IFIA). To address the worries of some of its members that forest certification would result in a de facto ban on Gabon's timber exports, the IFIA proposed a code of conduct that would engage its member companies in making progress towards forest certification. IFIA's code of conduct includes fours chapters: Forest management; Rational valorisation of forests; Local processing of timber; and Cooperation with all actors and improvement of the living conditions of local people.

Each of the four chapters is further subdivided into articles. For example, the chapter on forest management is subdivided into 9 articles stating the commitment of member companies to:

- recognise the need to care for forests and to find an appropriate balance between economic and ecological concerns;
- respect the laws of the states in which the operations are conducted;
- respect recognised traditional rights;
- contribute to the fight against poaching;
- minimise the impacts of logging on ecologically important sites through Environmental Impact Assessment (EIA) studies and planning of forest operations;
- define protection sites within the managed concessions for timber production;
- contribute, in collaboration with national institutions and specialised NGOs, to the training of employees;
- call in governments, donors and local populations to concert in order to slow down forest clearing;
- call on all partners to contribute to the sustainable management of tropical forests.

Box 1 Controversies over an FSC certificate in Gabon: the Leroy-Gabon case

Leroy Gabon (hereafter called Leroy) is one of the companies of the multinational business holding ISOROY, a leading manufacturer of plywood in Europe. Leroy is among of the most important business enterprises in the forest industry of Gabon. Leroy currently manages a forest concession covering 578,910 ha and runs a sawmill and a plywood factory. Leroy seems to have a long-term view for its logging business in Gabon, as it has created a forest management plan to cover its activities for the next 30 years. The forest management plan of Leroy's concession was approved by the government of Gabon in 1993.

Leroy is a pioneer among forestry enterprises concerning forest certification in Gabon and even in the Central Africa sub-region. After the Earth Summit in Rio (1992), Leroy started developing a strategy for the eco-labelling of its forest management practices. The concession of Leroy consisted then of 4 lots, labelled lot 28, lot 30, lot 32 and lot 36 and covering 75,000 ha, 105,000 ha, 105,000 ha, and 88,000 ha respectively. In 1993, Leroy contributed to the installation of a multidisciplinary research team inside its concession. The research team carried out multiple-resource forest inventories (fauna and

flora) and studies on the impacts of logging operations and forest regeneration. In addition a unit was established for climate monitoring. In 1996, Leroy published its charter of "EUROKOUME," a written commitment to manage its forest concessions sustainably and comply with FSC principles and criteria. At that time, the government of Gabon had just started reflecting on the revision of its forest legislation, which would be finalised in 2002. The creation of forest management plans was not yet mandatory for forest concessions managers as is the case now.

In 1996, Leroy had not yet developed a comprehensive management plan. However, with the results of the forest inventory and its written commitment to implement sustainable forest management, Leroy commanded a certification audit from SGS QUALIFOR UK. The auditors considered that, even though there was no management plan, there were a number of documents available which together were equivalent to a management plan. As pointed out by a former director of QUALIFOR who took office after the audit had been conducted, "This would not be unique – Swedes do not have a single 'management plan' and nor do many UK forests which are nevertheless certified." The audit was conclusive and a FSC certificate was awarded to Leroy for lots 28 and 30.

After the decision of QUALIFOR to award a certificate to Leroy Gabon had been made public, three national NGOs based in Gabon, CIAJE (Comité Inter-Associations Jeunesse Environnement) and Amis de la Nature et Environnement, and Amis du Pangolin opposed the certificate. They were supported at the international level by Rettet den Regenwald, a German-based NGO member of FSC. According to Constant Alogho, who was the Director of CIAJE at that time, the national NGOs first complained to the government of Gabon without success, because Leroy was too powerful inside Gabon. They later sent their complaints to SGS QUALIFOR and the FSC with the help of their international associates.

Their criticisms: in their opinion, there was no stakeholder consultation. None of these NGOs was consulted by QUALIFOR during the audits. However, some other interested parties such as the current chairperson of the NWG on sustainable forest management admit that they were consulted but did not have a strong opinion against the certification process; In their opinion, there was no management plan. In fact Leroy had included a simplified management plan in its EUROKOUME charter, but the opinion of the NGOs was that such a plan was not enough. They would have preferred that the forestry administration first adopt guidelines for writing forest management plans. Such guidelines would be used to assess the quality of forest management plans elaborated by private companies. Lot 32 of the concession of Leroy was partly overlapping with the Lopé Reserve, a protected area for fauna.

At the behest of leaders of the national NGOs, QUALIFOR suggested putting the certificate on hold until the issues raised could be resolved, but some NGOs would not accept such a proposal. However, one of the NGOs

(Amis du Pangolin) changed its position and became favourable to maintaining the certificate, which, according to its director, would have permitted national NGOs to continue the monitoring of logging practices by Leroy. Because the enterprise had committed itself to the certification process, it had become transparent towards civil society, and national NGOs could visit its operations. At the end the certificate was simply withdrawn.

Controversies over the Leroy certificate had some impacts on the process of forest certification in Gabon in general. The current negative opinion that the forest industry has of the FSC certification system is partly due to the case of Leroy. The industry (not only Leroy, but their union and IFIA) became convinced that the NGOs are more powerful than other stakeholders within the FSC system. The failure of Leroy has incited private companies interested in forest certification to turn to other certification schemes (especially Keurhout) or to support efforts to establish a regional forest certification scheme. Another consequence of the Leroy case is that private companies have become more reluctant to allow the involvement of NGOs in the management of their concessions. In fact the national NGOs that took part in the Leroy inquiry have not been active in forest certification since then. As the Director[11] of Amis du Pangolin puts it: "When Leroy had an FSC certificate it was possible to enter the company and assess its operations, but once the certificate was withdrawn, the doors of Leroy became closed to national NGOs". The position of Rettet den Regenwald, which was seen as radical by the logging company union and by Amis du Pangolin, may have contributed to the perception by some actors that forest certification aims at banning the international trade of timber products exported from Gabon and other countries of the Congo Basin.

[11] Omer Ntougou

The problem faced by IFIA through its code of conduct was that it had no strategy for communicating the results of compliance with the world outside the logging industry. Furthermore, compliance with the code of conduct was hard to see as a credible way to assess progress towards sustainable forest management because the assessment was made only by forest managers themselves. Recently IFIA has joined another initiative to develop an independent system of monitoring the compliance of the private logging sector to their commitments towards sustainable management of forest resources in Central Africa. This initiative is launched by logging companies, NGOs (especially Global Forest Watch and the World Resources Institute) and the World Bank. It is proposed that the results of the monitoring be published periodically over the Internet after an independent third party verification component verifies the accuracy of data received from the private sector.

Current Status of Forestland Certification

Certified forests in Gabon cover about 1.5 million ha from three companies: Thanry Gabon (CEB with 580,490 ha), Rougier (CFG with 287,951 ha) and Leroy[12] (578,910 ha).

[12] After the withdrawal of the FSC certificate, Leroy Gabon was audited a few years later within the Keurout system and obtained a Keurhout certificate that is still valid.

All three companies have certificates endorsed by the Keurhout system and issued by "Form Ecology," a certification auditing firm based in the Netherlands. All the three companies are considered to be large-scale operations.

The companies chose Keurhout because it appears to have a more flexible approach than the FSC, giving firmer input and more local context in which forests are managed in Gabon (INDUFOR and FRM 2003). Most logging companies are rather critical about the FSC system. Representatives of the industry feel the FSC approach would ultimately lead to effective boycotting of African timber in the European market. This opinion results from the action of NGOs that are influential within the FSC system. For example, Greenpeace's campaign to promote a moratorium of industrial wood production and other industrial development activities in the zones with pristine and intact forests and other key forests from the ecological viewpoint was seen a major cause of concern (INDOFOR 2002). This is because such definitions and information are viewed by companies as being biased against economic utilisation of these forests. According to forest industry representatives, as long as there are no agreed definitions for such forests, the application of a moratorium could easily become arbitrary. Within the same campaign context, Greenpeace[13] seems to be advocating that public procurement of wood and paper should be limited to products which come from certified sustainable sources and which are certified by FSC. This, according to the industry, shows the relationship between the FSC and advocates of logging bans in areas such as the Congo Basin.

[13] www.greenpeace.org (2002)

Smaller companies managing PFAs and CGGs have asserted that it is difficult not only to adopt forest certification, but also even to change their forest management approach to meet the requirements of sustainable forest management as set by the forestry administration. They are often local entrepreneurs who are weakly organised and who have little experience in other forest management operations than logging. In addition, their resource use rights may be short term and therefore their interest in sustainability is limited. However, some of them are arranging partnerships with bigger multinational companies, and this may provide an opportunity to progress towards sustainability.

Current Status of the Certified Marketplace

The companies that manage certified forests produce about 400,000 cubic meters of logs annually (which represents about 10 percent of the total round log production of the country). Part of this is processed in the country and the rest is exported as industrial round logs. All the certified timber products are now sold easily in Europe. Although the prices are not affected, it is believed that the demand for certified products is currently higher than the supply in European markets (Parker 2004). However, given the rapid growth of Asian markets, which are less sensitive to certification, and the fact that there is no price premium for certified products in most European markets, the timber industry may not be inclined to move faster toward forest certification.

EFFECTS OF CERTIFICATION

Because there is only one forest certification system implemented in Gabon, and the system uses a minimum requirement approach (not significantly different from legal requirements), forest certification seems to have made limited direct impact on both the management of forests and the marketing of timber in Gabon. In addition, it is difficult to isolate the effects of forest certification from those of policy changes that have occurred in Gabon during the last ten years. However, the opinion in this paper is that beyond getting forestland certified, the whole debate around forest certification has impacted the forestry sector of Gabon positively in recent years.

Power

Among the stakeholders in forest management in Gabon, it is mainly the logging industry and the forestry administration that are well informed about forest certification. The other stakeholders, such as workers and the local populations, have had very little say in forest certification in the case of Gabon, as they did not participate in the standard-setting process and the only certification system implemented in concessions (Keurhout) does not insist much on social aspects. This may be inherent in the implementation of the certification system, which basically does not require much more commitment in some aspects than what the government requires through its legislation.

In Gabon, the power structure continues to be influenced primarily by the state. However, as a result of forest certification, the logging companies are becoming more active in the dialogue with the government in the quest for sustainable forest management. The local populations are also getting more involved in forest management (including in the management of forest concessions not yet interested by certification), mainly in the area of benefits sharing. However, it is difficult to say whether the increased involvement of the local populations relates to forest certification, because the new state regulations also require more consensual decision-making involving the local populations when drafting forest management plans.

Forest certification, in combination with other factors, may have contributed to improved governance in the forestry sector. In fact, logging companies that are involved in forest certification have made considerable efforts to monitor and document forest management practices and activities (Bayol 2003a). These companies are more open to showing their legal records to outside parties such as NGOs and are keen to cooperate with national and international organisations interested in promoting sustainable forest management. This, for example, is the case for Thanry Gabon, which has established a partnership with the national branch of WWF to promote the involvement of local communities in forest management (see Box 2). Similarly, Rougier Gabon kept contact with WCS and WWF during the development of the management plan of the forest concession of Haut-Abanga (Bayol 2003b). The openness in the attitude of the companies has promoted a similar attitude from the forestry administration, which has become more ready to discuss

forest law enforcement with external actors. However, it should be emphasised that forest certification started in Gabon at the same time as a more comprehensive effort was made to improve governance by the national government with the support of international organisations and donor countries. For example, as noted above, during the last 10 to 15 years the political context has been progressing towards a more democratic system with multiple political parties.

It is difficult to say how much the advent of forest certification has influenced the reforms made in the forestry sector of Gabon during the 1990s when certification was introduced. Many other initiatives to improve forest management practices in Gabon were being implemented at the international level at the same time. For example, the ITTO, within its Objective 2000, supported the efforts of Gabon by financing pilot projects designed to improve the technical settings of forest management in Gabon. Similarly, the World Bank supported the government of Gabon in the drafting of a Forest Sector Programme and encouraged the country to revise the institutional and legal framework of forest management to make sustainable development in the sector possible. Nevertheless, the officers of the Ministry of Forest Economy of the government of Gabon recognize that the perspective of forest certification by international non-government bodies has contributed to the adoption of policy orientations favourable to sustainable forest management. The government feared the negative publicity that would result from failure to certify Gabon's forest concessions due to lack of technical and regulatory tools to support sustainable forest management. Forest certification appears to be one of the factors that have pushed forest policy decision makers to define new technical and legal standards for the management of forest resources in Gabon.

Social

In Gabon, the presence of the logging companies in remote rural areas has always been associated with some contribution to local development. In the past, logging companies contributed to the construction and maintenance of the road infrastructure, which was use both to transport harvested timber products and for local development. Each logging company, depending on its location, builds a school for the employees' children and a health centre. This continues to be done, but nowadays logging companies also contribute to local development through direct financial resources put at the disposal of local communities who are required to set up local development committees for the management of such funds. The local committees determine development priorities and design small projects to be financed by the annual contributions received from logging companies. The amounts of these financial contributions are determined as part of the contract agreed upon during the development of the forest management plan. This new approach stems from the forestry laws adopted in 2002 (Article 251). However, forest certification has made the process more transparent and companies that have certificates are more open to showing records of their contribution to local development. For example, CEB (or Thanry Gabon), which is one of the companies managing a certified forest concession, has involved WWF and a social scientist of the Omar Bongo University

in the management of funds allocated to local development. CEB has also helped organising committees to represent the local communities in negotiations related to local development issues, and has contributed to local capacity building through the training of local extension agents (see Box 2).

Another important social aspect of forest management that has changed recently is the definition of user rights for forest resources in which the local communities are now more involved. Once more, the law has provisions about the involvement of the local populations in the definitions of the traditional usage rights, but companies managing certified forests tend to encourage true participation from the local populations and thus, there are fewer conflicts with traditional authorities.

Economic

The most important beneficiaries of forest certification in economic terms have been the national government and the local communities. Government officials have explained that there appears to be an improvement in taxation revenues from the certified companies – though more research needs to be done, such companies not only appear to pay the expected taxes at a higher rate than non-certified companies, but they also take initiative to settle their tax bill on time.[14] They also reveal greater transparency by sharing their tax records. Similarly, local communities are receiving income for local development as agreed, although the real impact of these revenues on the rural development remains weak as shown in the case of CEB (Box 2). The weak impacts of the revenues provided by the logging companies for local development relate more to the lack of community capacity to adequately design and implement local development projects.

[14] Opinion expressed by the Director of the Forestry Department within the Ministry of Forest Economy, Water, Fisheries in charge of Environment and Nature Protection.

The companies have supported not only direct costs related to forest certification, but also indirect costs of upgrading their management system. It is the opinion of these companies that they have not received sufficient benefits to meet the costs endured. Even access to new markets has not been experienced. This probably relates to the fact that the only system adopted by companies operating in Gabon is only recognized in the Netherlands. In fact, these Keurhout-certified companies adopted the system to maintain their market in the Netherlands. The companies hope that with time, as the markets become more sensitive, they will have a competitive advantage. However, because the Asian markets are gaining in importance, this envisaged market advantage from certification may be delayed.

Box 2 Financing local development through revenues from logging: the case of CEB in Gabon

The *Compagnie Equatoriale du Bois* (CEB) is a logging company that belongs to the French multinational business The Thanry Group. The Thanry Group is involved in the forest industry in almost all the countries of Central Africa including Cameroon, The Republic of Congo, The Central African Republic, and Gabon.

In Gabon, CEB manages 580,490 ha of forests in the Okondja Region. CEB was the first logging company to possess an approved forest management plan and to complete a certification process within the Keurhout system. In anticipation of the forest certification process, CEB started to experiment with a new approach to benefit sharing with the local populations. The approach consists of providing financial resources to local communities living around the plots where timber harvesting takes place. The company allocates CFA 1,000 (about US$2) for each cubic meter of timber harvested to the development of the neighbouring community.

The experience concerns 18 villages along the Okondja-Akiene road. When the program started, CEB gave cash amounts to the communities. But it was noted that a year later no change had been made in the community infrastructure. The local community members shared the money among themselves, and the money was used in a rather consumptive way by each person or family. Then, after consultation with the local populations, it was decided that CEB would open a bank account where the revenues allocated to local development would be deposited. The community members would first identify ideas for micro projects that would improve the living conditions of the whole community. Once a project was agreed upon, CEB would transfer the corresponding amount to community members. WWF offered to assist the communities in the identification of micro-projects including the assessment of their feasibility. Project ideas put forth by the communities included the construction of social infrastructure such as primary schools, infirmaries, installations for the supply of clean water, and churches, but also transport buses and the building of bars and the installation of television antennas. Some project ideas were rejected as being too costly or non-viable in the opinion of the advisers from WWF and CEB. It became necessary for each of the communities to establish a committee that would ensure the follow-up of the implementation of the project and maintain dialogue with CEB and the forestry administration. In addition, WWF trained extension agents among local community members to facilitate the participation of the whole community in the implementation of the project. On its side, CEB hired a specialist to deal with local communities.

According to the consultant[15] contracted by CEB to help design its social policy, at this point micro-projects have been successful in only six villages. In the other villages, failures have come from disputes among villagers about

[15] Mrs. Rose Ondo, a social scientist from the Omar Bongo University.

power sharing among community members, mismanagement of revenues by members of the project management committees or poor monitoring and follow-up once WWF has left. However, it is hoped that problems that have been encountered are part of the learning process. CEB started its policy only in 2000 and it will take more time for the local community to improve their capacity and skills for small-scale project management. It should be recalled that the cutting cycle practiced by logging companies is 30 years, which gives more time to ameliorate the benefit-sharing mechanisms.

Environmental

Certification may have its greatest impact on forest management practices: all of the companies that have entered the certification process have changed their forest management practices. One of the most important aspects of these changes is on planning of forest management operations. Each of the concerned companies has designed a forest management plan with a cutting cycle of 30 to 40 years. The plans contain calculations of the annual allowable cut based not only on the inventory of the growing stock, but also on projections based on growth and mortality rates of the species and the estimates of logging damage. The forest concessions have been carefully mapped and subdivided in blocks to be harvested each year. Planning also concerns the forest road system.

Similarly, the companies that have obtained certificates have included special measures for nature conservation and protection of the environment. The practice is to set aside some nature or biodiversity conservation areas within the forest concession. Regulations to fight poaching within the concession have been introduced and workers face sanctions when found to be hunting for bushmeat.[16]

[16] From discussions with forest managers of CEB Thanry, Leroy Gabon and SBL, these regulations are posted in head offices of these companies.

Nevertheless, the reasons for all these changes should also be attributed to the new legislation, although companies with certificates started innovating even before the new forest law was adopted.

CONCLUSION

Summary

The overall impression is that certification has started in Gabon as a result of the sensitisation launched by a few organisations. A few companies reacted ahead of others, but it is likely that during the next five years there will be more companies engaged in forest certification in response to the growth of the international markets for certified products. An increasing number of organisations in Gabon consider forest certification as a potential tool to promote sustainable forest management in the country and to improve the access of Gabon's timber and wood products to the environmentally sensitive markets, especially in Europe and North America. Additional incentives to join forest certification will come from initiatives such the

Forest Legislation Enforcement and Governance (FLEG), which are being pushed by the donor countries.

However, the problem of the choice among forest certification systems needs to be addressed. Currently, companies interested in certification have moved toward Keurhout, which is a limited option because it is specific to the Netherlands. Many actors in forest management in Gabon are still very critical of the FSC system, which they think does not take into account the specific environment of the country.

The capability of forest certification alone to improve on forest management practices is still limited. This is particularly so because forest certification has been approached until now as a non-state process that generates pressure on forest managers from the market, and in Gabon new developing markets in Asia are not sensitive enough to environmental issues. Thus, the expected pressure from the market may not be enough to encourage the adoption of sustainable forest management practices by forest concession managers. Even traditional markets for Gabon's timber products in Europe do not yet seem sufficiently demanding of certified timber products. The situation in Gabon may apply to the case of most countries of the Congo Basin.

In addition, there are many other factors that encourage unsustainable use of forest resources (flora and fauna) that are currently out of reach of forest certification. This is the case with the oil industry, which has been linked with poaching in Gabon (Thibault and Blaney 2003), or the fact that Gabon's economy is based mostly on extractive resources, some of which are found in the natural forests, such as timber and bushmeat (Wunder 2003).

Therefore, provided the end result sought by forest certification is the adoption of sustainable forest management practices by forest resources managers, forest certification should be part of a more comprehensive approach that also includes state policy reforms and international donor policies and legislation.

Roadblocks and Challenges

The most important challenge that promoters of forest certification in Gabon have had to face is the acceptance of forest certification as a complementary tool for the promotion of sustainable forest management. Related to this are difficulties in raising awareness about forest certification amongst all stakeholders. These challenges are confronted by efforts at sensitisation made through NGOs, involving training programs designed for different stakeholders and particularly oriented towards forest administration officers. However, the most important strategy for the promotion of forest certification is certainly the development of environmentally sensitive markets in Europe, which in turn has created a more dynamic vision among logging enterprises in Gabon, which are almost completely dependent on international markets.

Another important challenge yet to be met is dissociating forest certification from the extreme views relating it to the boycott of African timber products in international markets. Forest certification still faces a great deal of suspicion from economic interests in forest management who see it as another approach to try to enforce a ban on tropical timber products from Africa in international markets.

Future Development

The FSC has now established a regional office in the neighbouring Cameroon, which may bring about changes during the coming years in Gabon and the Central Africa sub-region. The FSC office established in Cameroon aims at promoting FSC certification in the Central Africa sub-region (which includes Gabon) by establishing a network of contact persons, setting FSC national working groups in countries such as Gabon and improving its communication strategy (Boetekees 2002). It is likely that during the coming five years, some of the logging companies will enter the FSC certification system, but in the mid-term these will still be a minority.

Logging companies that have long-established experience in logging operations in Gabon, as well as forestry administrations, local NGOs and forest management service companies, are advocating for the development of a regional forest certification system in Africa. The regional forest certification system would be called the Pan African Forest Certification (PAFC), and logging companies operating in Gabon are very much supportive of such an initiative. A feasibility study for the establishment of such a system was conducted in 2002 (INDUFOR 2002) with the financial assistance of the French government. Although the ATO is very active in promoting the establishment of an operational PAFC (which has not yet occurred) it is not clear what the role of ATO within the PAFC would be. Would the role of ATO be limited to standard setting or would the organisation be more involved in the institutional framework of such a system? The PEFC may also establish cooperative links with the eventual PAFC, which would be designed following the PEFC's institutional design. It is possible that the PAFC could become operational during the coming five years, but the credibility of such a system would be low in European markets compared to the FSC. Nevertheless, if formal links are established between the PAFC and the PEFC, there will be a better acceptance of the PAFC at the international level.

Stakeholders also tend to favour phased approaches to forest certification, which consist of dividing full compliance with the standard into a series of phases, making it possible to focus on one or two tasks at a time, instead of trying to begin all the necessary activities at once.

Future Research

Future research that could improve the understanding of forest certification, its impacts and its potentials in Gabon and the Congo Basin can be identified as follows:

- *Forest policy approaches in Gabon and the Congo Basin*. Sustainable forest management and the success of forest certification depend to a great extent on forest policy approaches. Unfortunately there have not been important research efforts to improve the understanding of forest policy approaches in Gabon and the Congo Basin. What are the dynamics in decision-making concerning forest management? How is power over the management of forest resources balanced between the state, private profit-seeking enterprises, the local populations and the donor community?

- *Forest management certification and poverty reduction*. It is well accepted that one of the most important underlying causes of forest degradation in developing countries is poverty, which encourages forest management actors to adopt short-term forest management practices. Therefore, if forest certification is to achieve the goal of sustainable forest management in Central Africa, it should be capable of addressing the issue of poverty reduction. Are the existing approaches and standards of forest certification designed to contribute to poverty reduction? Or, is forest certification mostly oriented towards satisfying moral concerns of the consuming societies in Europe and North America?
- *Forest certification and state institutions*. During the first ten years of its implementation, forest certification systems have been based on non-state and market driven approaches; however, the success of the approaches has been very limited in Gabon and the Congo Basin. The improvements noted in forest management practices are to some extent related to government actions. Can new relationships be defined between forest certification and state policies? Are there ways to achieve synergies between forest certification and state actions?

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ACRONYMS

ATO	African Timber Organization
ITTO or OIBT	International Tropical Timber Organization
GDP	Gross Domestic Product
CFAD	*Concession Forestière sous Aménagement Durable*
PFA	*Permis Forestier Associé*
PGG	*Permis de Gré à Gré*
NTFP	Non Timber Forest Products
CFG	*Compagnie Forestière du Gabon*
CEB	*Compagnie Equatoriale du Bois*
SYNFOGA	*Syndicat des Forestiers Industriels du Gabon*
IFIA	Interafrican Forest Industries Association
GTZ	German Technical Cooperation
C&I	Criteria and Indicators
EU	European Union
NWG	National Working Group
PCI	Principles, Criteria and Indicators
FSC	Forest Stewardship Council
UNCED	United Nations Commission on Environment and Development
COMIFAC	*Conférence des Ministres en charge des Forêts de l'Afrique Centrale*
PEFC	Pan European Forest Certification
PAFC	Pan African Forest Certification
NGO	Non Government Organisation
FMU	Forest Management Unit
EIA	Environmental Impact Assessment

Forest Certification in South Africa

*Cori Ham**

ABSTRACT

The South African forestry industry is predominantly based on plantation forestry. More than 80 percent of the plantations were certified in a market-driven certification process during the late 1990s and early 2000s. As a net exporter of forestry products, South Africa's procurement of new markets and securing of existing markets were critical. The forestry industry saw certification as a marketing tool and accepted it fairly easily. What makes this certification effort even more remarkable was that it took place without a national FSC standard and with very little government intervention. Certification audits are conducted according to certification body generic checklists, while government is still developing a set of minimum standards for sustainable plantation management.

Some of the constraints to certification include the large number of small-scale timber growers (who find it difficult to cope with the costs of certification and to comply with the management standards set by certification), the absence of a national standard, and high HIV/AIDS infection rates that could influence the future sustainability of forestry operations. The positive impacts of certification are manifest in more environmentally sustainable forestry operations and a heightened social awareness amongst foresters. The forestry industry has accepted certification as a self-regulatory tool to ensure the sustainability of its operations and foresters are increasingly embracing certification and incorporating it in their management systems.

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INTRODUCTION

Forestry in South Africa presents a situation fairly unique to forest certification. Contrary to the other African case studies, the South African forest industry is based upon plantation forestry practiced in areas where there were no natural forests previously. It differs also in the fact that certification was adopted swiftly and without much resistance by the whole of the industry, without government or non-government organisation (NGO) intervention.

Commercial plantation forestry activities are restricted to the higher rainfall, mostly grassland, areas of the country that include ecologically very sensitive mountain catchments. Not only are many of these areas ecologically sensitive, but they are also important tourist destinations frequented by local as well as international visitors who come to enjoy their scenic beauty and ecological diversity. These factors place forestry in the environmental spotlight and it is not surprising that the forestry industry has been criticised as being environmentally damaging.

In reaction to growing public criticism during the past two decades against forestry's impact on natural grassland ecosystems, the industry adopted a number of guidelines for sustainable, environmentally friendly forestry operations. Forestry companies started to measure their operations against their own internally developed standards as well as standards set by the industry. The global drive towards forest certification in the 1990s presented an opportunity for South African foresters to receive recognition for already high standards in sustainable plantation management. It was thus possible for South African foresters to slip into certification fairly easily, resulting in South Africa having 80 percent (1,088,071 ha) of its plantations certified (18 percent having both FSC and ISO certification) (Anon 2003a) (Total plantation area in 2002 was 1,351,402 ha [FSA 2003]).

This huge certification effort is even more remarkable if one considers that it is a purely industry-driven effort with no or very limited support from government or environmental NGOs. The forestry industry is a net exporter of forestry products and saw certification as a way of procuring new export markets and maintaining access to existing markets.

Foresters are starting to see certification and the associated systems as a useful management tool that can guide them in their day-to-day operations. With this attitude, certification in South Africa is becoming a "want-to-do" activity instead of something that is being forced on reluctant foresters. It provides foresters with a way of measuring their own activities, with the reward being a certificate to prove that they are maintaining sustainable levels of forest management.

At the same time, certification has brought a heightened awareness of the social issues related to forestry. Better communication mechanisms exist between foresters, their rural neighbours, and employees. Certification could, however, prove to be disastrous for micro timber growers who cannot afford the costs associated with certification compliance. It might potentially prevent them from selling their timber and deprive them of a livelihood.

This case study elaborates on these unique developments in a sequence of analytical steps and reveals that there is a higher level of commitment towards the certification process on the side of the South African forestry industry than in other countries where external agents such as NGOs and government agencies drove the certification effort.[1]

[1] Research for this case study was based on a combination of literature reviews, interviews with key stakeholders in the forestry industry, and personal observations. Personal observations are based on consulting work that enabled the author to communicate with a large number of leading forestry players. The author was part of the team that developed national Principles, Criteria and Indicators for sustainable forestry in South Africa and also accompanied certification bodies on a number of plantation audits as a representative of FSC.

BACKGROUND FACTORS

Historical Context

Forestry Problems

A way to understand forest certification in the South African context is to look at some of the problems faced by the industry in the country. Some of these problems include environmental impacts on water and biodiversity, the impact of certification on small-scale timber growers, and HIV/AIDS.

Forestry and Water Use

Plantation forestry in South Africa is practiced in natural ecosystems (mostly different kinds of grassland) that don't support natural forests. Forestry operations challenge these non-forest natural ecosystems and hence regulations are about limiting or minimizing impacts of forest operations rather than maintaining naturally functioning forest ecosystems.

It was recognized in the early 1970s that forestry activities located in mountain catchment areas reduce stream runoff more than the natural vegetation would have. Since 1972, permits had to be obtained from government for any new tree plantings. In the second half of the 1990s, forestry has been classified as a Stream Flow Reduction Activity and afforestation permits have been replaced with water-use licenses. For any new afforestation to take place, an intensive environmental impact assessment must be conducted and only after it has been determined that the specific catchment has sufficient water available will a license be granted. Forestry companies also need to pay a water tax based on the estimated amount of water that their plantation holdings use per annum (Anon 2002a).

These regulations have made it very difficult to expand plantation forests. Timber growers are unhappy with these regulations because the other agricultural industries are not regulated in the same way (Anon 2002a). As these regulations are part of forestry legislation, certification bodies audit compliance with permits and licenses during certification inspections (SGS 2004).

Biodiversity and Environmental Pressures

Plantation forestry could very well be compared to agricultural activities where an area is covered by a (often exotic) mono-crop. In this regard aspects such as illegal logging and deforestation would not be applicable in a plantation forestry

environment. It can be reasoned that exotic mono-crops of trees are planted with the specific objective of being completely harvested (clear felled) after a number of years (just like any other agricultural crop).

The loss of biodiversity due to afforestation, where plantation trees replace natural areas, is a heated topic in South Africa. This can be illustrated by the following excerpt from a letter written by an environmental NGO in South Africa:

> "An FSC label is proof to the consumer that the timber / pulp has been harvested in a forest which has been responsibly managed. 80 percent or more than a million hectares of South Africa's timber plantations are FSC certified. However: South Africa's timber plantations are NOT forests. They are industrial monocultures, with the primary objective of supplying the optimum amount of pulp fiber. Permanent and ongoing destruction of remaining Southern African grasslands to make way for industrial timber plantations is NOT responsible. Uncontrollably utilizing vast quantities of water is NOT responsible. Damaging and impoverishing the soils is NOT responsible. Industry related pollution of river systems with chemicals such as chloride and organochlorides is NOT responsible. Impacting on rural communities' livelihoods and altering the environment at the expense of other options is NOT responsible. I am convinced that the monoculture timber plantation model is NOT sustainable, primarily due to the long term damage inflicted on the region's soils" (Owen 2004).

Many of the issues raised in the above mentioned letter are indeed addressed in the CB checklists (SGS 2004) and certification can thus be seen as a way of addressing the impacts of plantation forestry on the natural environment and the people living in close proximity to them. To be eligible for certification, plantation management must ensure that the natural areas on a plantation are protected, that exotic trees are prevented from spreading into adjacent areas, that stream runoff and soil erosion are monitored and controlled, that the rights of local communities are protected, etc. (SGS 2004).

Small Scale Timber Growers

The forestry industry has achieved success in empowering small-scale timber growers and making them business partners. Many of these growers are, however, illiterate and find it impossible to comply with the high levels of administration and management required by certification.

There are approximately 19,000 small-scale timber growers in South Africa managing a total of 42,000 ha (Mayers *et al.* 2001). Two group certification schemes are operational in South Africa but do not cater directly for these micro growers. The larger timber companies are in the process of trying to incorporate these small-scale growers in their certification programmes. As certified timber becomes the norm rather than the exception, these small-scale growers might find themselves deprived of a market for their timber (Dlala 2002). For outgrowers not belonging to company

outgrower schemes, it would be virtually impossible to obtain certification and sell their products.

HIV/AIDS

HIV/AIDS probably poses the greatest risk to the social and economic sustainability of forestry in South Africa. Deaths from AIDS now equal all other deaths in South Africa and amount to about 650 persons per day. There are an estimated 1,500 new infections daily. Infection rates among forestry workers are estimated to be as high as 39 percent in areas such as KwaZulu-Natal (Anon 2003c). The impacts of HIV/AIDS on forestry include higher rates of absenteeism, workers who cannot cope with the physically demanding working environment, medical care for sick employees, loss of workers with expert skills, and a need to train new workers.

In rural communities one of the most disastrous secondary impacts of HIV/AIDS is the large number of AIDS orphans. It is estimated that by 2014 South Africa would have 5.7 million AIDS orphans. Currently the government provides an R 450 a month foster care grant per orphan. By 2014 this would amount to R 2.5 billion per month, excluding medical costs and school fees (Anon 2004).

Forestry companies do have policies and systems in place to address the effects of HIV/AIDS. Companies such as Mondi provide anti-retroviral therapy to employees and assist them if their medical aid runs out. Forestry companies employ fewer labourers presently, however, as they are making extensive use of contractors to perform forestry activities. Contract workers are not covered by company HIV/AIDS programmes (Anon 2003c).

The certification checklists of CBs evaluate the living and working conditions of employees and address HIV/AIDS programmes directly (SGS 2004). HIV/AIDS is also a critical issue that is addressed in the government's PCI&S checklist.

Policy Responses

While timber companies adopted certification as a way of showing that their operations are environmentally sustainable, the Department of Water Affairs and Forestry (DWAF) had to define its role in the sustainable management of the industrial forestry sector. It had to find ways of balancing the economic effects of industrial forestry against the cost of water resources and environmental and social impacts. Government had to deal with two opposing viewpoints related to implementing ways and means of achieving sustainable forest management (DWAF 1997).

The viewpoint from the forestry industry was that sustainability should be self-regulatory and that private companies should decide for themselves whether or not to apply environmental management. This approach is driven by market forces, where buyers and consumers of forest products demand high environmental standards and proof of sustainable operations (DWAF 1997).

Parties supporting legal regulation argued that voluntary environmental management systems and standards, even when sanctioned by international standards' authorities, remain open to abuse. Some minimum level of statutory regulation is

required to achieve broad compliance and to ensure that the forestry sector as a whole is sustainable. This view is promoted among environmental NGOs and government agencies in South Africa (DWAF 1997).

It was recognized that there is some common ground between the two viewpoints and it became generally accepted that a set of minimum standards, enforced by statutory regulation, should be developed. These minimum standards should ensure a reasonable level of compliance with basic environmental norms. However, the statutory minimum standards would not be sufficient to achieve high standards of environmental management. It was reasoned that, through market forces, companies would be driven to adhere to these higher standards of environmental management (DWAF 1997).

Approaches to the development of a procedure for the establishment of national criteria and indicators as minimum standards for sustainability were discussed in 1997. The objectives of the procedure were to:

- reach agreement on criteria and indicators of sustainable forest management;
- influence all management systems and current certification systems through the authority of a national set of criteria and indicators;
- examine the need for further information (DWAF 1997).

The development of a national set of minimum standards was taken further with the incorporation of a section on the promotion and enforcement of sustainable forest management in the National Forest Act (Act 84 of 1998). The Act provides for the Minister of Water Affairs and Forestry to:

- determine criteria on the basis of which it can be determined whether or not forests are being managed sustainably;
- develop indicators that may be used to measure the state of the forest management and appropriate standards in relation to indicators; and
- create or promote certification programmes and other incentives to encourage sustainable forest management (Republic of South Africa 1998).

In 2001 the Committee for Sustainable Forest Management (sub-committee of the National Forestry Advisory Council, which advises the Minister on forestry matters) appointed a group of consultants to develop a national set of Principles, Criteria, Indicators and Standards (PCI&S) for sustainable forest management in South Africa. The process was funded by the UK Department for International Development (DFID). The development process is centred on a very intensive stakeholder consultation process. Stakeholders from forestry, environmental groups, labour unions, etc. were consulted at every step. The process was completed in 2002.

The main objective was not, however, to develop a national FSC certification standard as developed by countries such as Sweden. The purpose was to develop PCI&S that could be used at national, provincial, landscape, and local scales by a

range of stakeholders, and to monitor trends in forest condition and thereby guide sustainable forest management (Anon 2002c). These PCI&S can be used to compile a 'state of the forest' report, and the National Forest Act provides for the legal prosecution of individuals and organizations not practicing sustainable forestry according to these PCI&S.

When implemented, these PCI&S should form an agreed set of 'baseline' minimum standards for South African forestry. Certification standards will then have to reflect these, thereby improving their applicability to the South African forestry context (Frost *et al.* 2003). Extensive testing of the PCI&S took place between 2003 and 2004 and it is envisaged that a regulatory management system will be implemented in the near future by government.

The South African Department of Water Affairs and Forestry became indirectly involved in FSC certification by specifying that privatized plantations must be certified within 24 months. It also became directly involved with the FSC certification of a total of 35,000 ha (6.6 percent) of the natural closed canopy forests under its control (FSC 2004).

Structural Features

Ownership and Tenure

South Africa has a land area of 122.3 million hectares. Forestry takes up 1.1 percent of this area with grazing being the biggest land user at 68.6 percent. In 2002, plantation forestry occupied 1.351 million hectares with:

- 52.2 percent planted in pine trees;
- 38.9 percent planted in gum;
- 8.3 percent planted in wattle;
- 0.6 percent under other species such as poplar;
- 56 percent of the plantation area managed for pulpwood;
- 37 percent managed for sawlogs;
- 6.9 percent managed for other uses such as mining timber (FSA 2003).

Private timber companies are the biggest forestry landowners, holding 842,520 ha of the forestland. Government, including SAFCOL (a parastatal company), held 318,366 ha of forestland until the 1999 privatisation effort[2]. Individuals/partnerships/trusts hold 186,355 ha and municipalities 4,161 ha (FSA 2003).

There are currently 12 private timber companies in South Africa with landholdings larger than 5000 ha (Table 1). All of these companies are currently FSC certified. Four of the 12 are new companies that were established as a result of the government's privatisation of state forest assets. The oldest of these new companies is Singisi Forest Products, established in 2001. These companies do not own the forestry land but lease it from the government. One of the conditions of the privatisation process was that

[2] After years of negotiation, government plantations were placed on the market in 1999 in a privatisation bid. Plantations were divided into seven geographic business packages and investors were invited to bid for a 75 percent shareholding (of which at least 10 percent needed to be Black-owned) per package. Minority shares in each package are held by government (10 percent), workers (9 percent) and the National Empowerment Fund (6 percent) in order to secure Black institutional investment in forestry. Government also determined that the land associated with the plantations should remain in public ownership. Investors were consequently not offered title to land, rather the use-rights to it through a mechanism of a long-term lease (Mayers *et al.*, 2001). Currently, new forestry companies manage all the packages as illustrated in Table 1. Approximately 85,000 ha of plantations are still under government control. These consist of approximately 70,000 ha of commercial plantations in the former homeland areas and 120 small scattered plantations, extending over 15,000 ha, producing material not generally sold under commercial contract but utilised by local people (Mayers *et al*. 2001).

the new companies had to acquire certification from an internationally accredited organisation within 24 months of the commencement of the lease agreement. If the company does not receive certification or loses it, the lease agreement can be terminated (Frost *et al.* 2003).

Table 1 Forestry companies in South Africa

Company	Land Tenure	Remark
Amatola Forestry Company (Pty)	Public	Privatised government plantations in Eastern Cape
Global Forest Products Pty Ltd	Private	Venture between Mondi and Global Environmental Fund
Komatiland Forests (Pty) Limited	Public	Privatised government plantations in Mpumalanga
Masonite (Africa) Limited	Private	
Mondi Forests	Private	
MTO Forestry (Pty) Ltd Western Cape Region	Public	Still being managed by SAFCOL
NCT Forestry Co-operative Ltd.	Private	
Northern Timbers	Private	
SAPPI Forests Pty Ltd	Private	
Singisi Forest Products Pty (Ltd)	Public	Privatised government forests in Eastern Cape
Siyaqhubeka Pty Ltd	Public	Privatised government forests in KwaZulu-Natal
Steinhoff Southern Cape (Pty) Ltd	Private	

Source: FSC 2004

Other forestry landowners include approximately 1,800 timber farmers (Mayers *et al.* 2001) (commercial farmers with on average between 100 and 200 ha under trees) who supply their timber to cooperatives. These farmers have access to FSC group certification schemes.

There are nearly 19,000 small or micro growers in South Africa, holding woodlots averaging around two hectares and totalling around 42,000 ha in extent. Just over 12,000 of these growers are participating in company-sponsored outgrower schemes (the companies provide the farmers with loans, seedlings and advice and the farmers sell their trees to the companies) falling under SAPPI (Project Grow), Mondi (Khulanathi) and the South African Wattle Growers Union (SAWGU) (Mayers et al. 2001). Due to the small scale of operations, it would be very difficult for these micro growers to certify their plantations.

The forestry industry provides work to approximately 60,000 people. An additional 40,000 jobs are provided though primary processing facilities (FSA 2003).

Vertical Integration

Most of the forestry companies mentioned in Table 1 are vertically integrated with their own primary processing facilities. Sappi Forests and Mondi Forests are divisions of large international pulp and paper companies. The South African forest operations of these companies feed into their South African based pulp mills. Other companies such as Singisi Forest Products and Global Forest Products supply roundwood to their own sawmills. NCT Forestry Cooperative Ltd. exports its members' timber in roundwood or chip form to processors in the Far East.

The timber companies also have geographic swapping arrangements with each other, where timber from one company is delivered to another company's processing facility if it is geographically closer to the forest area. In return, the receiving company supplies some of its timber to the other company's processing facility in that particular geographic area.

Annual Production

Total roundwood production in 2002 was 16.6 million m^3. The average mean annual increment is approximately 12 m^3/ha/yr. Pine plantations are managed on a 20 to 30 year rotation while gum plantations are managed on a 6 to 10 year rotation. Due to land use pressure and a strict afforestation permit system, land area under plantation forestry only increased by 284,720 ha over a 23-year period from 1980 to 2002. Forest management and silvicultural operations are directed at increasing the yield from the existing plantations with a lesser focus on new afforestation. To illustrate this point, plantation area increased by only 16.4 percent between 1980 and 2002, but production increased by 39.9 percent over the same time period (FSA 2003). It is estimated that the mean annual increment could be increased to approximately 15 to 18 m^3/ha/yr through either genetic tree improvement or site species matching (DWAF 1997).

Markets

South Africa is a net exporter of forest products with a total export of R 11.2 billion[3] per annum. It imports forest products to the value of R 5.4 billion annually. The forestry industry contributes 1.3 percent to the GDP and 8.7 percent to the Agricultural GDP. Total annual sales of forest products equate to R 13.8 billion as illustrated in Table 2 (FSA 2003). The forest products industry currently ranks among the top exporting industries in the country, contributing 4.29 percent to the total exports in 2001, and 1.86 percent of total imports (Anon 2003b).

[3] Exchange rate US$ to South African Rand: US$1 / R 6.26 – 12/04/04.

The major exports of South African forest products include:

- pulp, especially dissolving pulp;
- packaging, paper and board;
- printing and writing paper, especially newsprint;
- wood chips (an estimated 1.5 million tons is exported annually) (Mayers *et al.* 2001).

Table 2 Total annual sales of forest products

Product	R billion
Pulp	8.6
Chips	1.5
Lumber	1.9
Panels	0.6
Mining timber	0.1
Other	1.1
Total	13.8

Source: FSA 2003

There are 182 primary processing facilities in South Africa (FSA 2003). Table 3 gives a breakdown of these facilities as well as an indication of the volume of timber processed by them.

Table 3 Primary processing facilities

Primary Processor	Number	Timber Intake (million m^3)
Sawmills	103	3.7
Pulp and paper mills	20	12.3
Mining timber producers	12	0.5
Other	6	0.3
Pole	41	
Total intake		16.8

Source: FSA 2003

Subsistence use of forest products is limited to the harvesting of timber for fuelwood. It is estimated that approximately 11 million tons of fuelwood are used per annum (Gander 1994). This wood is coming mainly from woodlands, closed canopy forests, community woodlots, and harvesting waste from commercial plantations. Fuelwood harvesting is an informal activity where very little control is exerted by government or private companies. Unlike other African countries, little if any charcoal production is taking place at the community level.

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

Before the first democratic elections in 1994, South Africa was isolated from the world through sanctions and boycotts. With the advent of democracy in 1994, these barriers to the rest of the world were demolished and South Africa found itself exposed to

world markets and international competition. South African timber product manufacturers found international markets for their products but were faced with requests for certified products.

B&Q, as a leading UK-based retailer of low cost Do-It-Yourself (DIY) and household products, was an important customer amongst South African DIY product exporters, offering high volume orders for pine products. This company made it clear that it would only buy from FSC-certified suppliers by the year 2000. B&Q's agent in South Africa, Alpine Trading, was instrumental in raising awareness of FSC throughout the South African forest products sector. Alpine Trading's early experience of promoting certification was that it was regarded as "a money making scheme" and only companies supplying directly to B&Q accepted it (Frost *et al.* 2003).

The DIY market is highly competitive and the pressure to become FSC certified intensified considerably once significant volumes of certified pine products became available from Poland. South African exporting companies found themselves in a situation where they had to convince their supplying sawmills that they should be FSC certified (Mayers *et al.* 2001).

It took time to convince sawmilling companies that FSC certification would be required if South African products were to be exported. Sappi and Mondi (the largest forestry players in SA) could afford to ignore the demands, since they were focusing more on the paper market (where interest in certification was much lower) than on wood for value-added products. Certification, however, received a big injection when Mondi's single biggest sawn timber customer opted for FSC certification in 1996 (Mayers *et al.* 2001).

From 1996 onwards certification gained momentum as companies saw it not only as a way of marketing their products but also as a way of:

- demonstrating environmental commitment;
- improving internal systems and efficiency;
- staying ahead of the game;
- dealing with supply chain pressure;
- responding to environmental and social criticism;
- anticipating certification becoming an industrial standard;
- complying with increasing investor scrutiny (Mayers *et al.* 2001).

This drive towards forest certification resulted in more than 80 percent of all plantations receiving FSC certification within less than 10 years.

Standards

South Africa does not have a national FSC standard – yet. Following a FSC board meeting in South Africa on 2 March 2004, an FSC working group was initiated (personal communication).

Certification audits to date have been based on generic checklists from the two main certification bodies (CBs) operating in South Africa (SGS Qualifor and Soil Association Woodmark). SGS Qualifor is currently the leading certification body and has issued 17 of the 19 Forest Management certificates in South Africa. Differences in the generic checklists of the two CBs could lead to different standards being employed in FSC certification. The possibility exists that forestry companies might perceive it as easier to obtain certification when the one CB's checklist is used compared to the other CB's checklist.

As part of the certification bodies' checklists, references are made to national standard setting documents developed by the South African forestry industry. These documents are:

- Guidelines for Forest Engineering Practices in South Africa. Forest Engineering Working Group of South Africa (FESA), May 1999.
- Guidelines for Environmental Conservation Management in Commercial Forests in South Africa. Forest Industry Environmental Committee, 1995.

Forestry operations are also assessed on compliance with national laws and regulations (see list of legislation pertaining to forestry on page 505). Most of the problems experienced by forestry in South Africa (environmental pressure, uncertified plantations and HIV/AIDS) are addressed in some or other format by the combination of CB checklists, industry standards, and national legislation. The industry is therefore forced to take cognisance of these matters and to implement strategies dealing with them.

Most forestry companies were already employing some form of environmental assessment, measuring against internal company standards, before certification. It was thus fairly easy for them to adopt environmental certification standards. Companies were fairly ignorant of social impacts, however. The CB checklists focus strongly on the maintenance of social standards and foresters had to become more socially aware. It is also noticeable that on FSC-certified plantations, the foresters are more sensitive towards labour, accommodation, and community issues than their counterparts on non-certified plantations (personal observation).

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

Stakeholder consultations during the development of the national PCI&S showed that, although people welcome a certification process driven by independent organizations such as FSC, there is still a high level of suspicion against forest management activities. This was especially apparent in consultations with non-governmental environmental organizations, which indicated that they still believe that environmentally damaging forestry activities continue even when plantations are certified. In some instances individuals remarked that they could not believe that a certain forestry operation received FSC certification (personal communications). In

many instances the environmental debate is not so much about the sustainable management of plantations as about the replacement of natural grasslands with plantations.

Forest Owners

As mentioned previously, the initial response to certification was slow but it gained momentum from 1996 onwards. Mondi became one of the first South African forestry companies in 1996 to initiate an FSC certification process for its plantations. The responsibility for this task was given to the environmental team of the Forestry Division. Initially the team found that response on the ground was very mixed, with approximately 20 percent of the foresters accepting certification, 60 percent having a neutral opinion and 20 percent opposing certification. Through training, workshops and the implementation of an innovative system for staff to report Corrective Action Requests (CAR), staff was trained in forest certification. Mondi's Northern region was certified in 1997 and its entire operations in 1999 (Frost *et al.* 2003).

In the case of Mondi Forests, vertical integration had a direct effect on certification. The above mentioned certification process at Mondi was initiated upon request from the General Manager of Mondi's timber division for certified timber from Mondi plantations (Frost *et al.* 2003). In this case market forces demanded certified products from a company that supplies timber from its own plantations to its own sawmills. To be able to sell certified products, the processing division had to have access to certified raw material and placed pressure on the company-owned plantations to become certified.

SAFCOL (the parastatal forestry company which operated government plantations during the 1990s) opted for certification as a way of demonstrating environmental credentials. SAFCOL had faced considerable criticism from local NGOs and had been looking for a way of demonstrating its social and environmental credentials for a number of years. The General Manager of SAFCOL was committed to obtaining FSC certification and after 24 months of hard work, a main assessment by SGS took place. A major CAR was raised and only closed out a year later. The environmental manager felt that the initial failure to obtain certification actually helped to develop ownership of the FSC principles and criteria. Staff went from meeting FSC requirements because they were told to do so to being proud of getting it right by managing their forests in an environmentally and socially responsible manner. The entire SAFCOL forestry area was certified by 1998 and it was only after certification was underway that SAFCOL began to receive requests from buyers for certified timber (Frost *et al.* 2003).

SAPPI Forests opted for ISO 14001 certification instead of FSC certification. This choice was aimed at satisfying the demand from customers for an independently verified environmental standard. An environmental "Green Team" was responsible for implementing ISO 14001. Team members visited every plantation once a month and they found that the system was popular with most staff. The ISO 14001 system helped to create commitment to good management on the ground (Frost *et al.* 2003). As consumer demand for certified paper increased over time, the demand for

certified timber from SAPPI's milling operations became so great that this side of their operations was certified in 2000 and the whole of SAPPI Forests Pty Ltd. received FSC certification in 2003 (FSC 2003). According to SAPPI spokespersons it was easier to obtain FSC certification once all the ISO 14001 systems were in place (personal communication).

Once the "big three" forestry companies were certified, the chain of custody certification process became much simpler (Mayers *et al.* 2001). A second round of certification among manufacturers ensued, resulting in a total of 113 chain of custody certificates being issued in South Africa by 2003 (FSC 2004). South African companies began to receive requests for FSC products from international buyers such as Homebase, Wicks, Great Mills and Metpost in the UK, Bauhaus in Germany and Home Depot in the USA (Mayers *et al.* 2001)

The pulp and paper companies were initially less enthusiastic about certification as they experienced low demand for certified products from the Far East. The introduction of the FSC's percentage-based claim policy in 2000 provided this wood products segment with a means to obtain the use of an FSC label for a product with a proportion of its material sourced from non-certified forests. The introduction of the percentage-based claim has meant that this market is now becoming responsive to companies looking to certification as a potential mechanism for gaining market access (Frost *et al.* 2003).

The success in selling certified timber to the pulp and paper market can be illustrated by the example of NCT Forestry Co-operative. NCT Forestry Co-operative started to provide private timber growers with middle-size holdings (average about 120 ha each) a group certification management system in 1999. A strong demand for FSC certified pulpwood from the Far East assisted this company in increasing its turnover in 2001 by R 151 million to R 572 million (36 percent increase upon the 2000 turnover) (Anon 2002b).

In a survey of the smaller private timber growers that was conducted in 2000, nearly all the respondents indicated that access to international markets was very important. They indicated that the main reasons for certification were to procure new international markets and to maintain old markets (Ham 2000).

As can be seen from the above discussion, South Africa's adoption of certification was mostly initiated by market demand, but the internal momentum generated by forest owners drove the process to deliver reputational benefits. By adopting an internationally recognised mark of "sustainable forest management" such as FSC certification, forest owners could: (1) show the world that SA timber was produced to international standards (raising the profile of the industry after isolation); and (2) respond to domestic critics by demonstrating third party-audited environmental standards.

Although forest owners did not necessarily receive premiums for certified timber, certification did open markets and secure existing international contracts. These markets and contracts demanded FSC-certified timber, effectively steering the forestry industry towards this specific certification standard and preventing the adoption or development of non-FSC certification standards.

Current Status of Forestland Certification

There are currently 19 Forest Management FSC certificates issued in South Africa representing 1,088,071 ha (or more than 80 percent of plantation area). Eighteen percent of forestry operations are certified under both FSC and ISO 14001 (FSA 2004). In the case of SAPPI Forests the company obtained ISO 14001 certification first and then FSC certification. The ISO certification assisted them in getting their plantation operations ready for FSC certification. Table 4 presents a list of the Forest Management certificates issued in South Africa.

Table 4 Forest management certificates issued in South Africa

Company	Certificate Number
AFC – Amatola Forestry Company (Pty) Ltd.	SGS-FM/COC-0123
African Environmental Services Group Certification Scheme (AES)	SGS-FM/COC-1337
Amatola Forestry Company (Pty)	SGS-FM/COC-0885
Department of Water Affairs and Forestry Directorate: Indigenous Forest Management - Southern Cape	SGS-FM/COC-1231
Global Forest Products Pty Ltd.	SGS-FM/COC-0809
Komatiland Forests (Pty) Ltd.	SGS-FM/COC-0068
Masonite (Africa) Ltd.	SGS-FM/COC-1015
Mondi Forests - Lowveld, Komati, Piet Retief, Natal and Zululand	SGS-FM/COC-0084
MTO Forestry (Pty) Ltd Western Cape Region	SGS-FM/COC-0133
NCT Forestry Co-operative Ltd.	SGS-FM/COC-0348
NCT SLIMF	SGS-FM/COC-1598
Northern Timbers	SGS-FM/COC-0561
SAPPI Forest Products	SGS-FM/COC-0442
SAPPI Forests Pty Ltd.	SA-FM/COC-1230
Singisi Forest Products (Pty) Ltd. – Glen Garry Forests	SGS-FM/COC-1544
Singisi Forest Products (Pty.) Ltd. – Baziya	SGS-FM/COC-1503
Singisi Forest Products Pty (Ltd)	SGS-FM/COC-0780
Siyaqhubeka Pty Ltd.	SGS-FM/COC-0870
Steinhoff Southern Cape (Pty) Ltd.	SGS-FM/COC-1143

Source: FSC 2004

Except for the Department of Water Affairs and Forestry certificate, all certificates are for plantation forests. The DWAF certificate is the only one covering natural closed canopy forests.

Government-managed plantations in the former homelands[4] are included in the 20 percent of plantations that have not been certified yet. These plantations are in a very poor state of management due to decades of bad management by homeland administrations. During the process of privatisation of state forest assets, many of these plantations were taken over by private timber companies and it is the responsibility of these companies to bring them up to standard. Approximately

[4] A central element of South Africa's apartheid system was the creation of Black Homelands from the 1950s onwards. The territories, essentially based upon the so-called Black Areas identified in the 1913 Black Land Act, were set aside for occupation by members of a particular language group. Originally known as reserves, they were given as a measure of self-government by apartheid theorists intent on removing all Africans from white South Africa and using the Homelands simply as pools of migrant labour. Four of these areas later chose independence (recognised only by South Africa) while six others became self-administrating territories within RSA. The system was scrapped in 1994.

85,000 ha of state plantations still remain under government control and would require substantial efforts to bring them to a management level where they could be assessed for certification.

Some of the earlier certificates were issued in 1997 and these operations have already been re-certified. As discussed previously, it is still very difficult for small scale operations to be certified due to the high costs associated with the certification process and the intensive levels of administration and management required from mostly illiterate forest owners.

Current Status of the Certified Marketplace

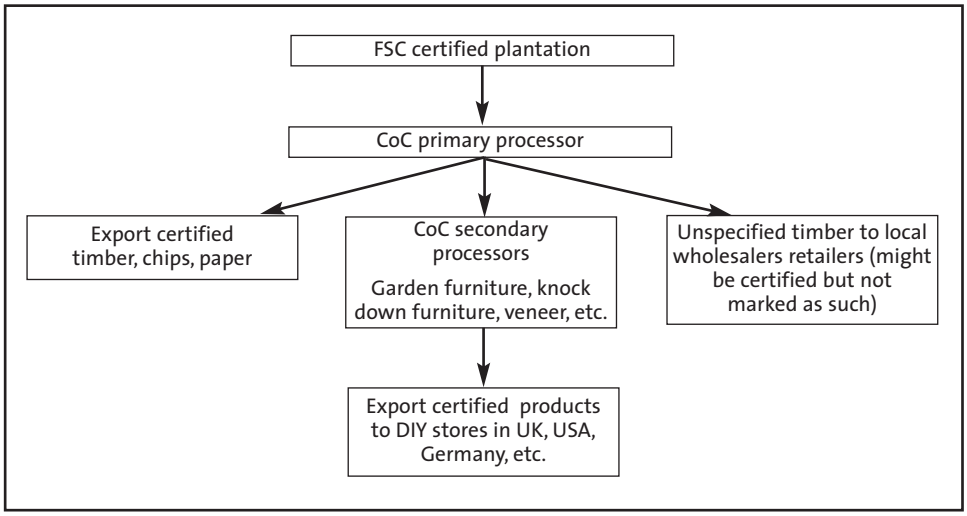
Dunne (2000) reported that FSC currently has no following among South African retailers and that the manufacturers of primary or secondary timber products are involved either directly or indirectly in the export market. I tested his statement by contacting ten hardware stores in and around the city of Cape Town and asking them for FSC-certified building timber. One of the stores could supply FSC timber, three knew about it but did not stock FSC timber, and the remaining six stores had never heard about FSC before.

Despite the low demand for certified timber in South Africa, 113 primary and secondary processing companies have Chain of Custody (CoC) certification (FSC 2004).

The supply chain for certified timber products can be summarized as follows (Figure 1):

- Timber from a certified plantation is processed at a sawmill with a chain of custody certificate. It is then either exported or sold to local secondary processors, also with a chain of custody certificate.
- The secondary processors manufacture products such as knock down furniture from certified timber and export it to retailers in countries such as the UK, Germany or the USA.
- In some instances certified timber is sold unspecified by primary processors to local wholesalers/retailers as there is a demand for timber but no specific demand for certified timber (personal observation at sawmill in KwaZulu-Natal). With 80 percent of South Africa's plantations certified, there is a very good chance of buying unmarked certified timber in hardware stores in South Africa (unknowingly, the ten hardware stores that I consulted could have had FSC timber in stock).

Figure 1 Supply chain for certified timber products



Companies exporting certified timber products have found that they received no price premiums for it and that it was rather a matter of being able to continue selling their products. In general, FSC certification alone appears insufficient to command new business, but combined with an existing relationship with a customer sourcing FSC products, adequate manufacturing capacity or a specific position in the industry, FSC undoubtedly can offer market benefits (Dunne 2000).

One specific market for FSC products illustrates key trends. Saligna, a species of Eucalypt, has rapidly gained prominence in overseas markets as a suitable substitute for tropical hardwoods. The demand for certified Saligna timber has caused chronic shortages, and sawmills certified to supply Saligna cannot keep up with demand. This inevitability lead to price increases in Saligna timber (Dunne 2000).

Some of the products sold by primary and secondary Chain of Custody processors include:

- moulding, laminating, boring, finger-jointing of pine components into Do-It-Yourself bookcases and wall-mounted shelving kits;
- the sawmilling of pine and eucalyptus boards;
- slatted boxes, laundry baskets, CD racks, shelving, clothes pegs, hangers;
- the manufacturing of decorative mouldings using sanding dust-based paste;
- the manufacture and supply of charcoal and briquettes;
- outdoor garden products from logs;
- veneer slicing;
- furniture and knock-down components (FSC 2004).

Table 5 presents a summary of the number of different products manufactured by the 113 Chain of Custody certificate holders in South Africa.

Table 5 Different products manufactured by CoC processors in South Africa

Product	Number of processors manufacturing product
Household wooden products	21
Sawn Timber	46
Charcoal	12
Wood chips	3
Mouldings, boards, doors, flooring	18
Laminated timber	6
Furniture (including garden furniture)	13
Veneer	5
Paper	1

Source: FSC 2004

EFFECTS OF CERTIFICATION

The effects of forest certification can be assessed according to the impacts that it has had on environmental aspects related to forestry, the socio-economic environment surrounding forestry, and power dynamics associated with forestry.

Power

The experience and potential of certification have in part provided impetus to the process to develop a national standard for sustainable forest management. Industry representatives are unanimous in recognizing the positive impact voluntary certification has had on the self-regulation of industry, in particular concerning legal compliance. The CB auditor at present is playing a role of substitute regulator in the absence of adequate government monitoring (Frost *et al.* 2003).

The process of certification has also intensified the questioning and analysis of social issues in the forestry sector. This in turn has enabled genuine contributions from the forestry sector to be made in wider national debates and negotiations on labour, land rights and affirmative action (Mayers *et al.* 2001).

Certification has had a positive effect on forestry regulation and has assisted in creating a consultative environment where large multi-national corporations such as SAPPI and Mondi must consult forestry communities regarding their activities. Certification has had a negative effect on small-scale timber growers, however, and placed them in a situation where their very existence is threatened.

In a private timber grower survey in 2000, high costs and excessive administration were mentioned as two of the main constraints for small-scale timber growers to receive certification (Ham 2000). Small-scale timber growers currently have an option to join group certification schemes such as those of NCT and African Environmental

Services. FSC has also implemented the Small and Low Intensity Managed Forest (SLIMF) initiative, which makes it easier for small-scale timber growers to obtain certification. NCT Forestry Cooperative currently has a SLIMF certificate.

Despite these initiatives, micro growers remain the most marginalized group in relation to certification and evidence suggests that the pursuit of certification and its inherent costs may distract from more pressing needs to improve small holder livelihoods (Frost *et al.* 2003). Small-scale growers belonging to company outgrower schemes do receive assistance in obtaining certification and selling their timber, but a large number of small-scale growers are not affiliated to any company. For these growers, it is becoming more difficult to sell their timber. They are not certified and would find it very difficult to obtain certification due to financial and management constraints. There are still sawmills accepting non-FSC timber, but it is foreseen that this amount will be reduced to zero in the near future (Dlala 2002).

Social

The strong focus of certification on social aspects was also raised as a benefit during stakeholder consultations for this study, as it helps foresters to concentrate on communication with adjacent communities and employees. This in return creates better relationships and a more positive attitude towards communities. Forest labourers are also benefiting, as foresters need to comply with strict health and safety standards. Some of the direct benefits of a heightened social awareness include the speed at which social changes take place, the development of mechanisms to improve the learning of foresters and staff, improved stakeholder consultation, and protection for the staff of forestry contractors.

Speed of Change

One of the interviewees of the 2004 survey mentioned that certification has had a direct impact on the speed of socio-economic changes related to the forestry labour force and forestry communities. Where changes in aspects such as labour, housing and worker safety might have taken years to be implemented in the past, it now happens very rapidly as foresters need to comply with the social standards set by certification. He found a general willingness and commitment among foresters to comply with social standards (personal communication).

Mechanisms for Learning

The certification process has highlighted the importance of adequate systems to ensure compliance and to internalise feedback mechanisms. Feedback includes inputs from audits, a change policy and legislative framework, and issues raised by those affected by company activities. The dynamic political landscape of post-1994 South Africa has meant that more stringent demands have been placed on the sector in terms of, for instance, labour legislation and land reform programmes (Frost *et al.* 2003).

Assessors on surveillance visits have remarked on the improvement to systems that support companies responding to the requirements of certification, with formalized mechanisms to address issues raised during audits. This has resulted in improved operational manuals and training for staff, especially with respect to social issues. Social issues such as stakeholder consultation were seen in the past as nuisances, which if ignored for long enough would disappear. More emphasis is being placed on these issues, and mechanisms are being put in place to deal with them (Frost *et al.* 2003).

SGS, as the main certification body in South Africa, has recently started with FSC certification training courses to help foresters in understanding the technical aspects of certification. In the past, feedback meetings between foresters and assessors used to be little more than the reading of Corrective Action Requests (CARs) and a confrontational session where the different sides defended their positions. The SGS auditors currently make more time for the feedback meetings and explanation of the reasons for raising CARs. In such a process much more emphasis is placed on learning (personal observation).

Stakeholder Consultation and Social Benefits

The process of consulting with a broader range of stakeholders stipulated under the FSC process is relatively new. Most companies had forums established to discuss issues with formal groups such as environmental NGOs, but no structures existed to communicate with neighbouring communities. Problems included:

- incomplete identification of stakeholders;
- inappropriate methods of engaging with stakeholders;
- skewed/partial stakeholder responses;
- weak feedback and communication beyond the formal process (Mayer *et al.* 2001).

Compliance with social certification standards is still weaker than and not as well understood as environmental compliance, but in general, foresters are becoming more socially aware. The requirements under FSC have brought this issue higher up on company agendas and more pro-active initiatives are underway (Frost *et al.* 2003).

The respondents from the 2004 survey were also in agreement that certification has had direct benefits for the forestry labour force and forest dependent communities. They felt that working conditions with regard to health and safety have improved and the living conditions in forest villages are also better.

Incorporation of Outsourced Forestry Operations

The current trend for outsourcing forestry operations by forest-owning companies has focused attention recently on the roles and responsibilities of the parties in relation to certification. The issue of contractors complying with FSC criteria (especially social criteria) has raised concerns. It was initially assumed that, as long as the forest

owner had adequate systems and practices in place, a certificate could be issued. The fact that a certificate covers the forest management unit and all operations related to the FMU (therefore all enterprises undertaking operations in an FMU including contractors have to be in compliance) was not considered (Frost *et al.* 2003).

This resulted in a number of major CARs being raised reflecting the inadequacy of service providers' systems and practices. The outcome has been that companies are now pro-active in encouraging and ensuring that their contractors comply with the necessary standards such as those pertaining to health and safety (Frost *et al.* 2003)

Economic

The perceived market advantage of obtaining FSC certification has not materialized to the degree some companies expected. Many producers did not experience the predicted increase in sales and subsequent expansion of markets (Frost *et al.* 2003).

For instance, during a recent indigenous timber auction held by DWAF, it was widely advertised that the timber came from a certified forest. According to a spokesperson for DWAF, this had no impact on the number of buyers or the prices paid. It was noticed, however, that the buyers of the timber did indicate to their market that their products were made from certified timber.

Still, few companies regret becoming certified as the process has helped to consolidate and secure existing markets. Some firms feel that having certification has improved their marketability to prospective customers and others report getting orders for new products as these customers try to move away from non-certified suppliers, particularly in Asia (Frost *et al.* 2003).

It is suggested that the relative early certification of South African manufacturers helped to improve their position in the market and first-mover advantage has come into play. In 1996 South Africa hardly featured in Homebase's supply list, but it is now estimated that 10 percent of its timber is purchased from South Africa (Frost *et al.* 2003).

A non-tangible benefit of certification has been the improved transparency created throughout the supply chain. As individual products are marketed with a unique certification number it becomes easier to monitor quality standards. Previous defects could only be traced to country of origin; now they can be pegged to a specific manufacturer (Frost *et al.* 2003).

Environmental

Certification has had an indirect effect on the natural environment by promoting more environmentally acceptable management practices. The biggest environmental effect can, however, be found in the change that it brought to the way foresters think about forest management.

Change in Attitude

From a survey conducted in 2000 among private timber growers in South Africa, access to markets was identified as one of the biggest reasons for obtaining FSC

certification. Growers were unhappy with the high costs and excessive administration associated with certification, but saw it as something that they must do to ensure access to markets (Ham 2000).

For this volume, a range of key stakeholders were consulted. Not only were timber growers consulted but also individuals and organizations directly in contact with certification processes (see page 505 for list of individuals consulted).

It was interesting to note a change in attitude and reason for certification among these stakeholders. The ability to procure and secure markets was mentioned less during the consultation sessions than during consultations in 2000 (Ham 2000) and everybody acknowledged that there are few if any price premiums on certified timber. The ability to manage a plantation in a more environmentally and socially sustainable way by following certification systems was now mentioned as the biggest benefit of certification.

It was mentioned that foresters new to certification do not like the process, as they see it as an added burden, but that foresters who have been working with the system for a number of years accept it as a management tool. It helps them to think more strategically, and in some instances forestry estates are now even competing with each other for the best certification scores.

Better Forest Management

In 1995 the forestry sector developed a set of guidelines that outlined best management practices to mitigate the environmental impacts of plantation forestry. Although the guidelines were welcomed and supported by the industry, implementation was voluntary. The introduction of certification was seen to provide an incentive to formalize their adoption and it became part of forestry standards and management systems (Frost *et al.* 2003).

The raised profile of environmental issues has led to the improvement of checks and balances in management systems. This includes formalisation of formerly *ad hoc* adherence to company policies and the systematisation of existing systems to ensure consistency in implementation. Internal checklists were developed for company operations, the profile of internal audit systems was raised, and the number of environmental management staff within the larger companies has increased (Frost *et al.* 2003).

One of the improvements to operational practices that was stimulated by certification is the management of riparian zones. Under the old afforestation permit system, a fixed distance had to be observed between streams and compartment boundaries (30 m for streams and 50 m for wetlands). A delineation protocol[5] has now been developed with stakeholders, which defines the location of wetlands and streams in the landscape and ensures a more scientific approach towards determining the open area between wetlands and forestry plantings.

It is agreed that the most significant physical impact on plantations of the improved practices encouraged by certification is due to criteria related to water-course management. This includes the felling of trees along watercourses and the rehabilitation of wetlands and riparian zones (Frost *et al.* 2003).

[5] According to the delineation protocol, the transition zone between stream and wetland areas and adjacent land is determined. It is only allowed to plant trees 20 m away from this transition zone.

CONCLUSION

Summary

Plantation forestry certification is approaching maturity in South Africa. With 80 percent of plantation areas certified and more than 100 Chain of Custody certificates issued, South Africa can serve as an example for other countries. The forestry industry was not forced by government or encouraged by NGOs to adopt certification. The benefit of certification in providing environmental and market credibility motivated foresters to adopt certification without much resistance. This has led to a positive attitude towards certification, where it is being seen as more of a way of effectively managing plantations than just something that must be done to sell timber.

The certification of plantations on private land has had less of an environmental, social and political impact than in the case of certified natural forests in the tropics. However, certification has led to plantation forestry being conducted in a way that has less impact on the adjacent natural and social environment than it did ten years ago. Communities and forest labour are also benefiting through better relationships with forest managers.

The South African forestry industry should be applauded for the speed with which it has adopted forestry certification. The industry can truly serve as a case study in effective certification. There is no doubt that it will be able to adjust to future changes in forest management and certification. A number of roadblocks and challenges, however, still need to be resolved regarding certification in South Africa.

Roadblocks and Challenges

Some of the main issues that must still be resolved within the South Africa certification environment include:

- *Small-scale timber growers.* Even with assistance from companies and group certification schemes, it is going to be difficult for micro timber growers to comply with all the FSC certification requirements and to absorb the costs. The possibility exists that micro timber growers who are dependent on forestry for their livelihoods, but who cannot afford certification, would not be able to sell their timber in future. Certification could thus become a barrier that will prevent people depending on forestry for their livelihood from selling their timber.
- *Lack of a national standard.* Certification has been adopted by the private forestry industry in South Africa as a self-regulatory tool. Government, although supportive of certification, has played little or no role in influencing current certification efforts. A national set of Principles, Criteria and Indicators was developed as a minimum standard but has not been implemented yet. The lack of a national certification standard could place the credibility of FSC certification in South Africa in question.

- *HIV/AIDS.* One of the biggest threats to the economic and social sustainability of plantations is HIV/AIDS. It is estimated that infection rates in some of the plantation areas is as high as 39 percent (Anon 2003c). Certification promotes better living and working environments for forest labour but procedures to address HIV/AIDS are not part of the FSC checklists.
- *Lack of domestic market and interest in certification.* The South African consumer is still very ignorant about certification. There is virtually no market for certified timber products in South Africa. A major effort to create such a demand and to educate South African consumers will have to be launched to ensure that forestry could benefit from a domestic certified timber market.
- *Certification and management of woodlands.* South Africa has approximately 29 million ha of woodlands. These woodlands belong to a diverse range of owners, including government, private farmers and communities. Management is based on *ad hoc* activities by landowners and there is no clear government policy about the management and monitoring of woodlands. Research efforts should be directed at finding options for the management and certification of this very important source of timber in South Africa.

Future Developments

The draft set of national PCI&S was tested extensively during 2003 and 2004. It is envisaged that regulatory management guidelines based on these standards will be developed within the next two years. The implementation of the PCI&S system would force forestry companies to comply with an extra set of guidelines over and above the current CB checklists.

A national FSC certification standard based on the FSC principles and the national set of PCI&S would make it easier for foresters to comply with certification standards. It would also provide more credibility to the process. With the establishment of a national FSC working group, it is envisaged that a national FSC standard will be available in the near future.

Future Research

With the possibility for the development of a national FSC standard in South Africa, it would be advantageous to understand the drive within the forestry industry that has led to 80 percent certification without a national standard or government and NGO intervention. A possible hypothesis that could be tested would be that if the certification process is allowed to evolve without too much outside intervention, except for market forces, higher levels of commitment could be obtained from the forestry role players. The role that the introduction of a national FSC working group and national FSC standard will play in future certification should provide an interesting

study. The question to be asked is: how will a forestry industry with more than 80 percent of its plantations certified react to a new certification standard?

The role of certification in addressing roadblocks and challenges should also be considered. Ways and means must be found to bring small-scale timber growers into the certification arena before they are deprived of a livelihood. Growing numbers of HIV positive forest workers could place a tremendous burden on the forestry industry that could impact on social and economic sustainability. How can certification play a role in addressing this threat?

A last aspect to consider for future research is that of the marketing of the FSC brand. South African consumers seem to be ignorant regarding certification. Ways should be investigated to raise brand awareness regarding FSC. The question is: Who should do this? Is it the responsibility of FSC, the certification bodies, or the certified forestry companies?

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SOUTH AFRICAN NATIONAL LEGISLATION APPLICABLE TO FORESTRY OPERATIONS

National Forest Act
National Environmental Management Act
Development Facilitation Act
Municipal Systems Act
Water Act
Environment Conservation Act
Veld and Forest Fire Act
Conservation of Agricultural Resources Act
Extension of Security of Tenure Act
Interim Protection of Informal Land Rights Act
Occupational Health and Safety Act
Basic Conditions of Employment Act
Compensation for Occupational Injuries and Diseases Act
Employment Equity Act
Skills Development Levies Act
National Heritage Resources Act

Source: Berrisford, S. 2002. Legal Standards for Sustainable Forest Management ('SFM'): for the INR Consortium working on Criteria, Indicators and Standards for SFM.

INDIVIDUALS CONSULTED

Organisation	Date	Location	Person	Position
NCT Timber Cooperative	Feb. 2004	Telephone interview	Mr. Craig Norris	Forestry Manager, NCT Timber Cooperative
Forest Engineering South Africa	Feb. 2004	Telephone interview	Mr. Francois Oberholzer	Executive Officer, Forest Engineering South Africa
Sappi Forests	Feb. 2004	Telephone interview	Mr. Robin Hull	Forester, Sappi Project Grow
Department of Water Affairs and Forestry	Feb. 2004	Telephone interview	Ms. Cobri Vermeulen	Forestry liaison, DWAF Indigenous forest management
Global Forest Products & FSC Board	Feb. 2004	Telephone interview	Mr. Shaun McCartney	Environmental Manager, Global Forest Products & FSC Council Member
Sappi Forests	Feb. 2004	Telephone interview	Dr. Dave Everard	Environmental Manager, Sappi Forests
Timberwatch	Feb. 2004	Telephone interview	Mr. Walley Menne	Member, Timberwatch
SGS Qualifor	Feb. 2004	Telephone interview	Dr. Michal Brink	Program Director, SGS Qualifor
Mondi Forests	Feb. 2004	Telephone interview	Mr. Simon Thomas	Forester, Mondi Forests
Forestry Contractors Association	Feb. 2004	Telephone interview	Mr. Jaap Steenkamp	Executive Officer, Forestry Contractors Association
SGS Qualifor	Feb. 2004	Telephone interview	Mr. Dominic Mitchel	Social expert and SGS auditor
Fractal Forest Africa	Feb. 2004	Telephone interview	Mr. Mike Howard	Consultant, Fractal Forest Africa

HARDWARE STORES IN CAPE TOWN CONSULTED

Organisation	Date	Location
Brights Hardware Store	Feb. 2004	Telephone interview
Build Mor Hardware	Feb. 2004	Telephone interview
Bracken Mica Hardware	Feb. 2004	Telephone interview
Green Oaks Hardware	Feb. 2004	Telephone interview
Kraaifontein Hardware	Feb. 2004	Telephone interview
Afri Build	Feb. 2004	Telephone interview
Do It Yourself Shop	Feb. 2004	Telephone interview
BPS Building Supplies	Feb. 2004	Telephone interview
FEDS DIY	Feb. 2004	Telephone interview
Campwell Hardware	Feb. 2004	Telephone interview

ACRONYMS

CAR	Corrective Action Request
CB	Certification Body
CoC	Chain of Custody
DFID	Department for International Development
DWAF	Department of Water Affairs and Forestry
DIY	Do it Yourself
FESA	Forest Engineering Working Group of South Africa
FSA	Forestry South Africa
FSC	Forestry Stewardship Council
GDP	Gross Domestic Product
ISO	International Standards Organisation
NCT	Natal Cooperative Timber
NGO	Non-G overnment Organisation
PCI&S	Principles, Criteria, Indicators and Standards
RSA	Republic of South Africa
SAFCOL	South African Forestry Company Limited
SAWGU	South African Wattle Growers Union
SGS	Société Générale de Surveillance
SLIMF	Small and Low Intensity Managed Forest

Forest Certification in Uganda

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ABSTRACT

Interest in forest certification in Uganda as a tool for promoting social, environmental and economic sustainability is at a nascent, but arguably emergent, phase. External actors have largely driven existing efforts, many of them supporting reforestation as a means of carbon sequestration. Choices made by government officials, actors in the timber industry, and external agencies in the next few years could result in an increased role of forest certification in promoting responsible forestry. For instance, forest certification could provide external recognition for, and pressure to maintain and enhance the existing reforms to public policy. This will be achieved by providing a globally accepted framework with which to assess and promote domestic sustainable forest management. Two specific impacts seem plausible. First, unlike other cases reviewed in this book, forest certification might first gain a strong foothold in Uganda as a way of verifying protected area status – i.e., addressing the criticism that many reserves exist on paper only, or that they fail to take into account local people's livelihoods. Second, certification may be useful in promoting the use of non-timber forest products and carbon sequestration efforts.

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INTRODUCTION

Interest in forest certification in Uganda as a tool to promote social, environmental and economic sustainability is at a nascent, but arguably emergent, phase. Virtually all developments involving forest certification in Uganda will be affected by, and recognize, that in five to ten years there will be a serious domestic shortage in wood supply, caused by two interrelated factors: increasing population growth, and a twenty year lag between establishment of the first softwood pine plantations thirty years ago and the second crop (Uganda Forest Resources Management and Conservation Programme 2004). Forest certification will interest domestic actors if it can help promote long-term sustainable plans that help to avoid mistakes of the past, and if it can promote short and long-term economic benefits. In Uganda's case, the potential economic benefits of forest certification appear, in part, to be different from other countries in that they come not from traditional commercial timber harvesting, but from the promotion of utilization of Non Timber Forest Products (NTFPs), including non-consumptive forest products (e.g. eco-tourism and watershed management), that could benefit from forest certification. In addition there are a number of initiatives that promote forest/tree management for the carbon market that could benefit from certified emission reductions (CERs). Above all, forest certification will be attractive to the Ugandan forest managers – government and private forest owners alike – if it brings with it a price premium and does not add to forest management costs.

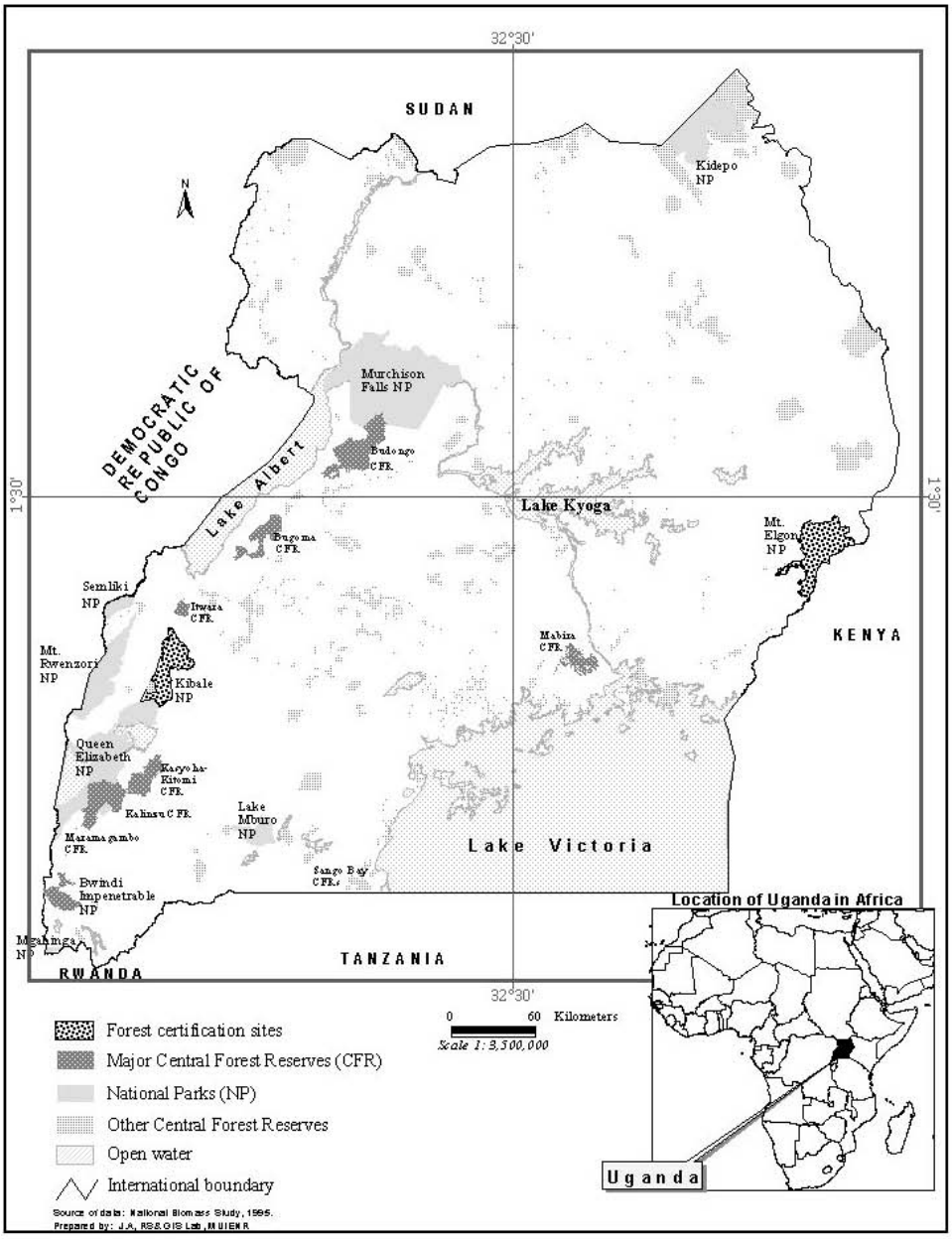
For these reasons, forest certification has been largely driven by external actors. Such efforts have included using forest certification as a means of demonstrating carbon sequestration efforts in order to promote natural forest regeneration in national parks. This is important because it shows that, in Uganda, forest certification efforts often intersect with existing public policy intergovernmental efforts – in this case with global agreements on climate change.

There is similar potential for forest certification through development of plantations on both Government of Uganda forest estates and privately owned land. With a conducive environment in place, through the development of policy and institutional frameworks that aim at promoting sustainable forest management both inside and outside protected areas, forest certification may provide lessons as well as a tool for promoting responsible forest management practices. Indeed, certification may provide the most recognized and "legitimate" arena in which to assess whether, and how, forest management can provide for ecological, social and economic benefits with the participation of all stakeholders and a strong emphasis on communities that derive their livelihoods from the forest.

For these reasons choices made by government officials, the timber industry, forest dependent communities and external agencies in the next few years could result in an increased role for forest certification in promoting responsible forestry. Certification could help recognize and maintain public policy reforms. This would be achieved by providing a globally accepted framework with which to assess and promote community and farm level forest management practices.[1] This case study outlines these developments.

[1] Research for this case study was conducted through interviews and discussions with key informants, mainly officials working in conservation agencies both government and nongovernmental, as well as review of relevant literature, mainly project reports and policy documents.

Figure 1 Totally Protected Areas (TPAs) and forest certification project sites in Uganda



BACKGROUND FACTORS

Historical Context

Forests and woodlands cover approximately 4.9 million ha, about 24 percent of the total land area (Uganda Forest Policy 2001). Plantations constitute 1 percent of the national forest cover while Tropical High Forests (THF) and savanna woodlands constitute 99 percent of woodlands. Uganda has a large number of Protected Areas (PAs) that together cover about 13 percent of the country. The PAs fall under two broad categories (National Parks and Wildlife and Forest Reserves), and are managed independently of each other by the Uganda Wildlife Authority (UWA) and the National Forest Authority (NFA), respectively. About 1.9 million hectares of the PAs form the Permanent Forest Estate (PFE). This includes all forest reserve land and all forested areas in the National Parks and Wildlife Reserves (Figure 1).

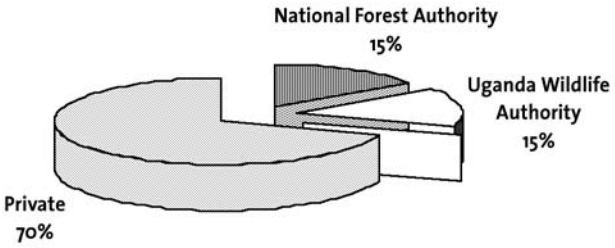
The Permanent Forest Estate represents about 9 percent of the total land area of Uganda. These areas are set aside permanently for conservation of biodiversity, protection of environmental services, sustainable production of domestic produce, and some commercial forest produce such as timber. Half of the PFE is made up of the gazetted central and local forest reserves, land that is held in trust and managed by the National Forest Authority and Local Authorities. Under the NFA jurisdiction, there are seven major closed Central Forest Reserves (Budongo 793 km^2; Maramagambo 443 km^2; Kasyoha-Kitomi 399 km^2; Bugoma 365 km^2; Mabira 306 km^2; Sango Bay Forest Reserves 157 km^2; Kalinzu 137 km^2) totaling to about 2,300 km^2 and a number of smaller forest reserves (altogether totaling to 704 reserves), many of them located in savanna areas (Howard 1991). The other half includes the forested areas of National Parks and Wildlife Reserves, land held in trust and managed by the Uganda Wildlife Authority (UWA). Details are presented in Table 1 and Figure 2.

Table 1 Approximate areas (ha) of forest and woodland under different categories of ownership and management

	Government (Gazetted) land		Non-Gazetted Land	TOTAL
	Central/Local FR	National Park/ Wildlife Reserves	Private & Customary Land	
THF	4,170	3,210	1,467	**8,847 (5%)**
Woodlands	7,200	0	33,078	**40,278 (19%)**
Plantations	306	20	19	**345 (0.2%)**
Total Forests	**11,676**	**3,230**	**34,564**	**49,470**
Other cover types	414,000	1,167,000	13,901,000	**15,482,000 (76%)**
Total Land	**425,676**	**1,170,000**	**13,935,564**	**15,531,240**

Source: National Biomass Study 1995

Figure 2 Management of Uganda's forest land



About 70 percent of forested land in Uganda includes large areas of forest and woodland on private land or customary land (Table 1 and Figure 2). A National Forest Authority (previously, Forest Department) has been instituted for a greater focus on the sustainability of the nation's forest resources. The government of Uganda has also set up a Forest Inspection Division (FID) in the Ministry of Lands, Water, and Environment. Its mission is to coordinate, guide and supervise Uganda's forest sector and contribute to the rational and sustainable utilization, development, effective management, and safeguarding of forest resources for social welfare and economic development. The National Forestry and Tree Planting Act of 2003 empowers the FID to sensitize key stakeholders on opportunities including forestry in agricultural services. The FID provides guidelines supporting SFM to all stakeholders including privately owned forests in addition to its regulatory roles.

Forestry Problems

From 1934 to the early 1970s, the forest services in Uganda enjoyed an international reputation for practicing some of the world's best tropical forestry on Permanent Forest Estates (PFE) (Plumptre 1996). However, this reputation was based on conventional forest management principles that over-emphasised the forest's timber-producing role and largely ignored its social and ecological roles (Plumptre and Reynolds 1994; Mupada 1997). In the early 1990s, concerns that forest management was damaging the forest ecosystem's structure and function led the government to change the conservation status of six major forests (Mgahinga, Bwindi, Rwenzori, Semliki, Kibale and Mount Elgon), based on their exceptional biodiversity values of global significance or importance as water catchment areas, from gazetted forest reserve (where forest harvesting was permitted) to national park status that forbade commercial harvesting. However, current forest management plans operating under the Forest Service are strongly oriented toward timber production activities (Uganda FRMCP 2004). The enforcement of environmental laws, statutes, and policies that have been put in place to support sustainable management of the TPAs in Uganda is limited due to limited funds and staff. Management plans for the forest reserves have been or are being reviewed to address the stated forest problems in Uganda. However, clearing for agriculture, construction, illegal harvesting, limited manpower, and limited involvement of local communities still hinder the management of forests.

Policy Responses

Most conservation efforts in Uganda are directed at the gazetted (protected) areas. The government of Uganda, through the restructuring program of the FD, has established the NFA to be in charge of the country's forest resources, central forest reserves and plantations (personal interviews, NFA). The NFA was inaugurated on 26th April 2004. The Executive Director (ED) heads the NFA, and under the ED are three directors – of Field Operations, of Support Services and Finance, and of the Administration and Personnel Divisions. The FRMCP under the NFA predicts that in the next five to ten years, there will be a timber deficit in Uganda because of increased population and because most of the soft wood plantations (which were planted more than 30 years ago) will have been harvested. The NFA therefore aims at establishing quality plantations for timber production to meet these demands with the hope of certifying these plantations (personal interviews, FRMCP). A saw log production grant scheme of 1,920,000 Euros from the EU is planned to support the establishment of plantations. Private institutions or individuals as medium scale investors with a minimum of 100 ha are eligible to apply for this grant (MWLE 2004). The government of Uganda is also in the process of establishing a plantation development fund to support this initiative.

In 1995, the government initiated stamping of timber in the FD, which is a chain of custody system that facilitates labeling and is related to the certification process. The Timber Monitoring and Tracking Unit (renamed Forest Produce Monitoring Unit in 2003) carry out this stamping of timber. Four main reasons led to the establishment of this unit (personal interviews, Forest Department): 1) to stop illegal trade in timber, charcoal, and poles; 2) to control harvesting of plantations and natural forests; 3) to monitor the origin of forest produce (timber) on the market; and 4) to provide data on harvested volumes to the department's database e.g. volumes harvested from respective districts and Forest Management Units, revenues collected, and saw mill operators in each district.

Two types of hammers are used to stamp the timber – the field hammer used by the forest rangers and the district seal hammer used by the district forest officers (DFOs). While in the field, a saw miller fells marked trees whose royalty fees have been paid, depending on the class of the species (Table 2, next page). The volume to be converted is noted by the forest rangers. After felling, the field hammer is used to mark the respective stumps of trees felled, and a forest declaration form is filled after converting the logs, indicating details such as volume of timber, forest, and trees felled. The saw miller then takes the form and timber to the DFO for verification and assessment of tax to be paid. The DFO then stamps each piece of timber with the district seal hammer and issues a forest produce movement permit. Each district has its own code for the seal hammer. Imported timber has a special hammer labeled **Imp** and showing the name of the entry point. The DFO then fills the timber harvesting Volume Measurement Forms to be submitted to the headquarters for entry of data into the database.

The Forest Produce Monitoring Unit moves to the markets in various parts of the country to look for illegal timber on the market, which is confiscated, and the culprits

fined or prosecuted. Area Forest Managers take the lead in implementation of forest activities in place of DFOs in the new NFA structure. Under the NFA timber tracking initiatives piloted at Kalinzu Central Forest Reserve, area managers, sector managers and field supervisors have specific codes on their stamps defining the forest zone, supervisor, and forest codes on top of the block, species and licensee codes. Four classes are used to charge royalties of trees that are felled in a forest or plantation (Table 2).

Table 2 Timber classes used to charge royalty in Uganda

Class	Royalty (U Shs M^{-3})	Examples of Tree Species
1A	100,000/=	Elgon teak (*Olea capensis*) Mahoganies (*Entandrophragama spp ie E. utile, E. cylindricum, E. angolense, E. excelsum, Khaya spp. i.e. K. anthotheca & K. grandifoliola*),
		Nkoba (*Lovoa trichilioides*)
		Mvule (*Milicia excelsa*)
1B	45,000/=	*Cordia sp.*
2	28,100/=	Musizi (*Maesopsis eminii*)
		Musambya (*Markhamia lutea*)
3	17,000/=	*Eucalyptus spp, Antiaris toxicaria*

The classification is based on the scarcity of species, mechanical properties, and the rotation time. The royalties for threatened species are hiked to encourage use of alternatives. However, royalties are not paid for the timber that is sourced from private land. Moreover, registered timber dealers desire that the timber-monitoring unit becomes more effective to ensure price stability. Prices are normally unstable mainly due to illegal timber trade.

Applications (by saw millers) for licenses to harvest are addressed to the Minister of Water, Lands, and Environment, who then forwards them for consideration by the Licensing Committee in the Ministry. Approved applications are given licenses on payment of a statutory fee. The license has conditions, which the licensee accepts by signing. The conditions cover legal, technical, administrative and social aspects that deal with responsible harvesting and conversion of timber. A copy of the license is sent to the AFM, who in turn gives copies to the district leaders. The license is normally valid for one year subject to revision unless the licensee contravenes the conditions of the license and the law established. Harvesting in natural high forests is done by pit-sawing. At present, there is only one sawmill (Budongo saw mill) operating in natural forest harvesting, mainly *Cynometra alexandrii* for floor parquets. Its operation is at a very small scale. The same licensing procedure used in sawmilling applies to the pit sawyer except that the pit sawyers apply through the Local Council authorities. Pit sawyers provide timber for industries.

Sometimes saw millers are licensed to plant trees. Nileply is a big company that makes plywood and flash doors. The company has also planted its own trees,

approximately 300 ha in Jinja. They are also managing Mutai Forest Reserve (287 ha of *Eucalyptus* spp.) whereby they pay forest dues annually and harvest the trees themselves. Apart from saw millers and pit sawyers, there are also private tree farmers who ask for licenses to practice forestry in forest reserves. A list of such individuals is given in Table 3.

Table 3 Private tree farmers that are licensed to practice forestry in Forest Reserves

Company	Forest/district	Area (ha)	Area planted (ha)	Species planted
BAT	3 FRs in Apach	70	70	*Eucalyptus* spp.
Busingye Jack (RIP)	Bushenyi	127	127	*Pinus* spp.
Uganda Tobacco Growers Co.	Kalinzu	ND	ND	*Eucalyptus* spp.
Busoga Forest Company	Bukaleba	5,000	700	*Pinus* spp.
Saudi Marble	South Busoga	2,400	ND	Broadleaved woods for timber
Nileply	Kagoma	ND	Approx. 300	*Pinus* spp.
ND	Nsuube	277	230	*Eucalyptus* spp.

ND: No data available.
Source: Forest Produce Monitoring Unit 2002

The current process of stamping timber is helpful in curbing illegal timber activities but is so far hardly effective for encouraging sustainable forest management principles and serves more towards curtailing illegal activities. Limited funding for the monitoring activities has resulted in poor surveillance mechanisms limiting control of illegal activities. There have been cases of imported timber being stamped as local produce, and timber from private landowners is assessed for payment of taxes only. However, if well funded and the staff well motivated, it is a good intentioned process that may contribute towards SFM.

Structural Features

Ownership and Tenure

The management and ownership of the forest estate in Uganda falls under gazetted (protected) areas managed by government parastatals, and private or communal ownership managed by individuals or communities. The Forest Inspectorate Division (FID) among others duties monitors, regulates and provides guidelines for SFM across all sectors in the country. The gazetted forests are managed by the Uganda Wildlife Authority (UWA) or the National Forest Authority.

UWA's mission is to conserve and sustainably manage wildlife resources and biodiversity inside Protected Areas (PAs) that are under its jurisdiction (National Parks and Wildlife Reserves) and outside (the PAs) for the benefit of the present and future generations of Ugandans and the global community. Extraction of resources is mainly limited to non-consumptive purposes. Under UWA, national parks cover 4.6 percent of the country while wildlife reserves cover 15.35 percent (which in the past included wildlife reserves 3.6 percent, wildlife sanctuaries 0.35 percent and community wildlife areas 11.4 percent).

The National Forest Authority (NFA), formerly Forestry Department (FD), is in charge of the country's Central Forest Reserves and Plantations. The NFA is aimed at supporting a vigorous private sector and a more effective forest administration in line with the processes of decentralization and privatization. Under NFA jurisdiction there are seven major closed Central Forest Reserves totaling about 2,300 km^2 in area. There is another 704 smaller Forest Reserves ranging in size from 0.3 km^2 to 500 km^2, many of which are in savanna areas. It provides for sustainable extraction of both consumptive and non-consumptive forest resources.

Forests in Uganda are therefore either directly under government or private management. Under government are the Permanent (Gazetted) Forest Estates (PFE) that includes Forest Reserves, and Forests in National Park and Game reserves. Amongst the Forest reserves, Central Forest Reserves (CFRs) are under the jurisdiction of the National Forestry Authority and Local Forest Reserves are under district forest authorities. Timber extraction, in addition to extraction of non-timber forest products, is allowed in the Forest Reserves. The forests in National Parks and Wildlife Reserves are mainly for biodiversity conservation where extraction of timber is prohibited.

The private forests are located in areas not gazetted, and little attention has been paid to them in the recent past. These private forests are of significance with respect to biodiversity conservation and provide the bulk of the resources in daily use (Pomeroy and Mwima 2002; Moyini 2001; Nabanyumya and Kakuru 1996). There is an estimated overall loss of biodiversity at a rate of about 13-15 percent per decade (Pomeroy and Mwima 2002) which includes loss from private forests. The uneven distribution of people (due to factors such as climate, history, soil fertility, etc.) means that the distribution and amount of such ungazetted ("open land") forests is also uneven in Uganda. In heavily settled areas, such "open land" is highly fragmented and in small patches often on sites unsuitable for cultivation (e.g. in Iganga, Eastern Uganda). In western Uganda, from Mityana to Kabarole, and Masindi districts, settlement pressure is relatively low. This leaves extensive natural areas of often good quality closed forest and woodland.

The high rate of loss/degradation of un-gazetted forests and woodlands is due to land tenure systems that do not seem to favour conservation. The land tenure system in Uganda has undergone transformations since the colonial days, when various policies and laws relating to the ownership and management of land tended to favour individualization but without alienating the need for customary tenure. Traditionally, freehold and Mailo tenure systems were encouraged. After independence in 1962, the

Planning Act of 1964 related to orderly planning of urban and rural land use, and the Public Act 1969 provided for the protection of customary land rights. The Land Reform Decree of 1975 (during Amin's government), however, declared all land in Uganda to be public land vested in the Uganda Land Commission, abolishing freehold interests in land except where such interests were vested in the commission. As a result, all freehold land, including Mailo ownership, was converted to leaseholds. In the recent review, the Land Act of 1998 now recognizes four tenure systems in Uganda:

- Customary tenure: a system of land tenure regulated by customary rules which are limited in their operation to a particular description or class of persons;
- Freehold land tenure system: the holding of registered land in perpetuity subject to statutory and common law qualifications;
- Mailo tenure system: the holding of registered land in perpetuity and having roots in the allotment of land pursuant to the 1900 Uganda Agreement and subject to statutory qualifications;
- Leasehold land tenure system: holding of land for a given period from a specified date of commencement, on such terms and conditions as may be agreed upon by the lessor and lessee.

Land under the Mailo or the freehold systems, because of security of tenure, may encourage conservation depending on the level of awareness and interest the owner has in environmental protection. The privately owned forests are better managed and are less threatened by degradation compared to other forms of un-gazetted forests (personal interviews, ECOTRUST). Leasehold arrangements may encourage maximum exploitation of the land during the period of tenure. The current owner is tempted to exploit the land to the maximum possible level without due consideration of sustainability since he is not sure of the continued future benefits of the land.

Most of the land in Uganda is under customary tenure, usually meaning communal utilization (Sebukeera and Turyatunga 2001). In some areas, particularly in the rangelands, there is often open access where no control is exercised in determining where, when or who utilizes wood or grazing resources. These 'open accesses' have been the areas where land degradation has occurred most. In this respect, the Land Act of 1998 is an improvement, to the extent that it allows for the formation of community land associations for the purpose of communal ownership and management of land. The Act also provides for the issuance of certificates of customary ownership. Such certificates confirm, and are conclusive evidence of, the customary rights and interests in such land.

Through the Land Act of 1998, the government has improved the ownership and management of land in the country. The need is to enforce the law. Although quite progressive, the hurried enactment of the law meant that some issues were overlooked and should be redressed. First, the law was formulated without an

accompanying land-use policy. Therefore, as Uganda is in the process of formulating a land-use policy, some aspects of the Land Act 1998 may have to be revised. Second, the law is weak in its provisions for equitable sharing of benefits of land ownership amongst family members. Hence the gender aspect of the law may have to be revisited.

The future of the un-gazetted forests is not as bad as it appears to be. Firstly, the Forestry Inspectorate Division (FID) is providing guidelines to SFM in all forest sectors and is encouraging private forest owners to register in order to protect their rights of use. The registration of the private forest owners is done under the National Forestry and Tree Planting Act (2003) on submission of acceptable management plans that support SFM (personal interviews, FID). Secondly, ECOTRUST, a local funding institution (not-for-profit trust fund) is supporting the conservation of biological diversity and alleviation of poverty through sustainable economic development activities. The financial support is provided to non-governmental organizations (international and national NGOs), community-based organizations, government institutions and other agencies involved in environmental management or conservation activities. ECOTRUST aims at promoting private land management for biodiversity conservation, noting that most biodiversity lies outside protected areas. The focus is on a set of incentives that should encourage private landowners to engage in forest conservation and carry out restoration activities. The market-based incentives that ECOTRUST advocates include carbon off-sets (still in early stages), promotion of nature-based enterprises (e.g. Apiary), and institutional capacity-building. As one of ECOTRUST's initiatives, the Bushenyi Carbon Project in southwestern Uganda helps smallholder subsistence farmers to gain access to the emerging carbon market while realizing other benefits of tree planting such as timber, fuel wood, fodder and fruit. In future, ECOTRUST will encourage and support certification of Non-Timber Forest Products such as honey (personal interviews, ECOTRUST). ECOTRUST also helps private forest managers develop management plans to promote Sustainable Forest Management.

Markets

In 1994, the government of Uganda instituted a ban on exportation of round wood timber (logs) because forest department inventories indicated there was not enough timber to export and sustainably manage the forests. Records show that most or all of the timber from forests is consumed locally. Tables 4 to 6 summarize forest production, exports, and imports.

Table 4 Total production in 2002

	Wood fuel (Mt) wood (Mt)	Indus. Round	Sawn wood (Mt)	Wood-based panels (Mt)	Pulp for paper (Mt) (Mt)	Paper and paperboard
Production	35,141,824	3,175,000	264,000	4,600	ND	3,000
Exports	ND	ND	113 (valued US$38,000)	ND	ND	70 (valued US$49,000)
Imports	ND	ND	649 (valued US$94,000)	24 (valued US$38,000)	ND	2538 (valued US$1743)

Source: FAOSTAT

Table 5 Trends and current status of the contribution of the forest sector to national economy

Sector	Contribution
Forest sector (excluding furniture) employment as a percent of total work-force (2000)	0.0
Gross value added in forestry income (millions US$) (2000)	86
Gross value added in forest sector (excluding furniture) (millions US$) (2000)	120
Forest sector contribution to GDP (%) (Source: FAO)	2.2
Forest products export (excluding furniture) (Source: FAO)	Not significant
Forest products import (excluding furniture) (millions US$) (Source: FAO)	18
Forest sector contribution to export (excluding furniture) (%) (Source: FAO)	Not significant
Forest sector contribution to import (excluding furniture) (%) (Source: FAO)	1.2

NOTE: All data are for 2000
Source: FAO 2003

Table 6 Trade of forest products showing the top ten Uganda trading partners (importers and exporters) in forest products (all data from 2001)

Importer of Uganda Forest Products	Value (in US$1000s)
Congo, Dem Republic	4
Switzerland	8
Netherlands	9
Ireland	10
Sudan	13
Germany	16
Canada	23
Denmark	25
Congo, Republic of	32
Rwanda	442
Exporter of Forest Products to Uganda	
United Arab Emirates	376
Netherlands	403
Finland	439
Indonesia	551
France	619
Germany	691
Belgium	696
China	703
Sweden	1,171
Kenya	11,148

Source: http://faostat.fao.org/default.jsp

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

The initial support to forest certification in Uganda was by foreign actors who came in to assist the government of Uganda to rehabilitate its forest estate after a decade of political upheaval. The unsustainable management of the forest estates during the 1970s to early 1980s was a major concern that led to drastic reforms to reverse the negative trends. Most of the protected areas were encroached on for expansion of agricultural land, poaching for wild meat, and excessive harvesting of various resources. The impact was great, as species such as the white rhino became extinct in the wild, populations of other large mammals (e.g. elephants) greatly reduced, and forests were highly degraded. Illegal logging led to removal of the most valuable tree species.

The National Resistance Movement government that came into power in 1986 embarked on the rehabilitation of Protected Areas mainly with donor funding. The government invited IUCN, the European Community, and later FACE Foundation (Forest Absorbing Carbon-dioxide Emissions) to undertake restoration work. In

1994, FACE Foundation formally started its operations with Uganda National Parks as its contract partner under the UNFCCC Clean Development Mechanism (CDM). The FACE Foundation is a non-profit organization established by SEP, the Dutch Electricity Generating Board, with the objective of creating long-term stable stores for carbon in the form of regenerating forests. FACE aims to establish enough forests to offset the emissions from one 600MW power station in the Netherlands. Through FACE, SEP has funded projects in Czech Republic, the Netherlands, Ecuador, Malaysia, and Uganda.

In Uganda, the FACE project carried out enrichment planting in formerly encroached forests of Mount Elgon and Kibale National Parks. The rehabilitation of degraded forest came along with upgrading the two Forest Reserves to National Park status, a higher level of protection, institutional reforms leading to enactment of revised laws, new policies and statutes, formation of the Uganda Wildlife Authority and the National Forest Authority, and certification of parts of the forest estates in Mount Elgon and Kibale National Parks.

Mount Elgon National Park is located in eastern Uganda (between 0°52′ and 1°25′N to 34°14′ and 34°44′E) covering 1145 km^2. The altitudinal range is 1460 to 4320 m above sea level. During the political upheaval between 1970-1985, Mt. Elgon National Park was subjected to agricultural encroachment that resulted in the destruction of 25 hectares of prime high montane forest between 2000-3000 m. Pit-sawing and shifting cultivation reduced the dense forested lower slopes to bare landscapes and its water catchment status severely eroded. The degraded 25 ha of the forest estate were targeted for rehabilitation and, quite recently, forest certification under the Forest Stewardship Council (FSC) principles.

The Kibale National Park covers 560 km^2 in western Uganda (between 0°12′ and 0°40′N to 30°20′ and 30°35′E). The altitudinal range is 1110 to 1590 m above sea level. About 23 percent comprises grassland and swamps that are targets for the replanting program by the UWA-FACE project. The UWA-FACE project is working exclusively in the restoration zone, which covers an approximate area of 10 hectares, the area certified for carbon sequestration.

The process of certification in the forest sector of Uganda is in the initial stages and few people in the sector have undertaken training in forest certification. The UWA-FACE project provided the initial support to Mt. Elgon and Kibale National Parks' reforestation project sites, which were certified in March 2002 (SGS Forestry 2002). As a way of assessing operations against the requirements of the SGS QUALIFOR certification programme, the UWA-FACE project sought the services of the SGS group's forest certification program accredited by the Forest Stewardship Council (FSC). The project sought FSC certification of their activities in the two parks as evidence of the quality of their activities. The certifiers visited in 1999, 2000, and 2002 before certificates were issued for the sites. In the current arrangement, local communities benefit from the park through employment and collection of fuel wood and grass.

The Busoga Forest Company, owned by a Norwegian company, is to plant about 100,000 ha of trees and has shown interest in forest certification (personal interviews, FORRI).

Within the East African region, the East African Forest Certification Initiative (EAFCI) was started and aims at supporting capacity-building for forest certification in seven countries of Eastern Africa, namely: Eritrea, Ethiopia, Kenya, Somalia, Sudan, Tanzania and Uganda (personal interviews, FORRI). The objective of the initiative is to facilitate, analyze and document a process by which stakeholders formulate and agree on a regional capacity-building strategy in forest certification based on FSC principles and criteria.

The first regional workshop was held in May 2002 in Kenya, where a regional focal point institution (ELCI) was selected to coordinate the development work. In addition, national focal points were identified. Forestry Resources Research Institute (FORRI) was selected as the Ugandan representative. The second regional workshop was organized in November 2002 to adopt a draft governance structure for the initiative and begin training in forest certification based on sustainable forest management. It was agreed that the national level stakeholders are contacted and sensitized on strengths and challenges of forest certification. The development process is required to be participatory and transparent in each country. This initiative is implemented by the International Agriculture Center (IAC), Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), and ETC East Africa. The German government, Department for International Development (DFID) and European Commission (EC) are the financiers of the initiative. Uganda stands to benefit from this regional initiative through building capacity in forest certification that is largely lacking. A logical framework for forest certification capacity-building strategy in the Eastern African region was adopted for a period of one year in the November 2002 workshop. Participants in these workshops who were supportive of this initiative included various forest stakeholders in the region including government, industrialists, academicians, and non-government organizations.

Institutional Design

In 1999, the government of Uganda launched a forest sector reform process, which resulted in the development of the National Forest Policy (2001), the National Forest Plan (2002), and the National Forestry and Tree Planting Act (2003). A new institutional framework was created with clear roles and responsibilities for central and local agencies, the private sector, civil society and local communities. The arrangement aims at promoting efficient and effective governance of the sector. A key part of this new institutional framework is the Forest Inspection Division (FID) in the Ministry of Water, Lands and Environment. The Forest Inspection Division's role is set out in the National Forest Plan, and its capacity is being strengthened to oversee forest sector development.

The vision of the forest sector in Uganda is "a sufficiently forested, ecologically prosperous Uganda." The Mission of the FID is "to effectively co-ordinate, guide and supervise Uganda's forest sector, and contribute to the rational and sustainable utilization, development, effective management, safeguard of forestry resources, for social welfare and economic development." The functions of FID contribute to the achievement of the national goal of "an integrated forest sector that achieves

sustainable increases in the economic, social and environmental benefits from forests and trees by the people of Uganda, especially the poor and vulnerable."

The core responsibilities of the FID are: 1) to formulate and oversee forestry policies, standards and legislation; 2) to monitor the National Forestry Authority (NFA) using a performance contract; 3) to provide technical support and monitor district forestry services; 4) to support forestry advisory services under National Agricultural Advisory Services (NAADS); 5) to promote information, advice and advocacy to sector stakeholders; 6) to ensure effective National Forest Plan (NFP) co-ordination and cross-sectoral linkages; and 7) to raise funds and other resources for the forest sector.

Standards

The aim of Uganda's National Forest Plan is to guide all forest-related activities and development of management plans for specific forest management units. The plan was developed through a participatory process where all major stakeholders contributed. It is geared to Sustainable Forest Management. The management plans developed from the National Forest Plan need to be improved in relation to the Forest Certification Framework.

The current silvicultural and harvesting guidelines and the related productive operations are to a great extent compatible with the requirements of SFM. Most forest reserves have got management plans and there is documentation of the activities undertaken. An existing gap in current management plans is the lack of instruction about controlling adverse environmental impacts of forest operations such as water and soil (e.g. erosion control), minimization of harvesting damages, road construction, and disposal of wastes (e.g. chemicals). (Uganda FRMCP 2004; Forest Department 2003).

The current monitoring and reporting systems focus on the operations carried out, timber harvested and processed, and costs and revenues. Monitoring of growth rates, regeneration and conditions of the forest, composition and changes in the flora and fauna, and environmental and social impacts of harvesting and other operations are lacking. Monitoring is necessary to show that the operations are in accordance with the management plan and that the environmental and social impacts are acceptable.

Forest certification in the two sites in Uganda is based on sustainable forestry standards derived partly from the ten FSC principles and criteria, as well as locally applicable standards developed in consultation with stakeholders and local professionals. The standards include the following: 1) security of tenure, use rights and responsibilities; 2) indigenous peoples' rights; 3) community relations and workers' rights; 4) benefits from the forests; 5) environmental impacts; 6) management plan; and 7) maintenance of high conservation value forests.

There is also a concerted effort to develop national forest management guidelines for forest certification, and labeling of forest products with short-term technical assistance from INDUFOR under the Uganda Forest Resources Management and Conservation Programme (Uganda FRMCP 2004). The objectives of the initiative are

to explore concrete possibilities for placing Uganda on the path to Sustainable Forest Management (SFM) using the certification approach and to assess other emerging international processes that will be beneficial to Uganda and that have links with the certification approach to SFM. The approach involves developing a national standard for SFM in a participatory process, and in cooperation with the East African Forest Certification Initiative, and improving the current forest management systems to be consistent with the concept of economic, ecological and social sustainability. Development of standards for SFM (the standard-setting procedures and implementation arrangements) will follow the procedures of FSC in line with the ten FSC principles.

The NFA is preparing a draft of the national standards to be debated and discussed with various stakeholders before adoption (personal interview, NFA). The standards will apply to all Central Forest Reserves and all plantations under the NFA jurisdiction. Individuals and institutions with licenses to carry out activities under the mandate of NFA will be obliged to follow the national standards.

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

Uganda recently reviewed its national forest programs with considerable emphasis given to the adoption of SFM approaches and has, in principle, committed itself to the transition from the current status of forest management to SFM according to the FSC.

A new forest policy was launched in 2001. The NFA and FID plan is to develop intensive sensitization strategies in support of forest certification to complement development of national standards in line with forest certification procedures (personal interviews, NFA; personal interviews, FID). These developments are under the influence of local and regional certification initiatives, following the FSC principles, and general global trends.

The UWA is in full support of certification in the two national parks (Mt. Elgon and Kibale). UWA leased the planted forests to the FACE Foundation for a period of 99 years, under which they are to be left intact. It is planned that forest certification for carbon sequestration will be expanded to cover the whole of the Mt. Elgon and Kibale forests. This is because of the success of certification of planted sites of the forest that has been realized. It is logical to certify the whole and not just part of the forest estate in order to benefit from the current carbon markets.

The Uganda Forestry Association (UFA) and the Uganda Wood Farmers Association (UWFA) advocate for SFM strategies and are supportive of Forest Certification initiatives (personal interviews, UFA; personal interviews, Uganda Wood Farmers Association). In principle, UWFA embraces forest certification because it promotes product quality and SFM. Wood farmers in Uganda are interested in short term returns and therefore plant *Eucalyptus* spp. for small poles harvested in 2 to 3 years that are in demand for the construction industry. Few

farmers have plantations for production of timber or big poles for electricity distribution lines. Until recently, most of the coniferous plantation timber was not recognized in the construction and furniture industry. Coupled with the fact that this is a new concept, it will take up to five years for wood farmers to be actively involved in forest certification initiatives. Preference for FSC is mainly because it is the only forest-certifying agency in the country.

The saw millers (personal interviews) support SFM, as this would sustain their businesses. However, the majority of saw millers do not understand the concept. The few who understand it are those that have participated in the East African Forest Certification Initiatives.

Through key informant interviews, big consumers of wood (e.g. construction companies such as Excel and ROKO) were supportive of certification initiatives and expressed willingness to buy certified timber on the local markets. Small-scale consumers, however, are unfamiliar with forest certification. Sensitization is needed to explore this potential market for certified timber. The World Conservation Union (IUCN) supports SFM globally and appreciates the Forest Certification Initiatives (personal interviews, IUCN).

Forest Owners

A big concern in terms of ownership is the 70 percent of the forests outside the Permanent Forest Estate (in the Traditional Protected Areas). These forests are on communal land or are privately owned by individuals. The FID, under its mandate, registers private forest owners to safeguard their rights. The registration covers communal forests, forests owned by institutions, and individually owned forests. Before any forest is registered, an acceptable management plan supporting SFM has to be developed and submitted. So far, ten community forests are registered under this scheme from the Masindi District, but still a lot has to be done to sensitize the communities (personal interviews, FID). The FID encourages communities to form associations and asks that individuals with forests on their land register them as either communal or private. The FID will provide guidelines for the development of management plans and plans to sensitize such forest owners about forest certification if funds are available.

Current Status of Forest Certification

The concept of forest certification is still new to most forest stakeholders in Uganda. Only modest attempts at forest certification have been made so far. However, the wave of certification is generally moving very fast in the country and various sectors have been certified according to ISO 9002 standards by Société Général de Surveillance (SGS) certifiers. Among these are manufacturers such as Rwenzori Water, Uganda Bati, Uganda Batteries, and the brewery industry.

Kibale and Mt. Elgon National Parks are the only sites where forest certification audits have been completed in Uganda under FSC. The UWA-FACE project is integrated into UWA, and the scope of the certificates will be expanded to cover

whole parks as it is not permitted to certify only part of a forest management unit (personal interviews, Mt. Elgon NP, UWA-FACE project). At the time UWA signed agreements to lease out part of the forests of these two national parks, benefits accruing from the sale of carbon credits had not been known or anticipated (personal interviews, UWA). The project sites in the two national parks are leased to the FACE Foundation for 99 years, and for any carbon credit schemes, it is the FACE Foundation that benefits. There are plans for UWA to re-negotiate the terms as it is envisaged that the whole and not part of the forests will be certified for carbon offsets.

In addition to the UWA-FACE project sites already certified, Tree Farms (a Norwegian company) established itself in Uganda in 1996 and has an afforestation project in the Bukaleba Reserve under its subsidiary's name of Busoga Forestry Company Ltd. The project is setting up between 80,000 and 100,000 hectares of plantations of pines (*P. carribaea, P. oocarpa* and *P. tecunumani*) and Eucalyptus (*E. grandis*). The Busoga Forest Company has expressed interest in forest certification for purposes of trading in carbon. However, the eviction of some 8,000 people from 13 villages, mainly farmers and fishermen, from their land that the company now occupies created social and environmental conflicts which are yet to be resolved (World Rainforest Movement 2000). This has hindered the certification process.

The Faculty of Forestry and Nature Conservation at Makerere University (FFNC) is considering developing a curriculum to cover forest certification. This follows the East African Forest Certification Initiatives towards building capacity in order to promote forest certification in the forest sector (personal interviews, FFNC).

Large timber sawmills such as Nileply appreciate the concept of forest certification (personal interviews, Nile Plywoods Uganda Ltd.). They are willing to certify their products in order to explore the export markets. However, they have no plans to do so in the near future. It is highly probable that, because of locally available markets for their products, there has not been a need to incur costs of certification of their products, let alone the forest plantations for carbon sequestration. The main challenge remains to convince the private (community, organizations, and individuals) owners of forests and plantations to practice forest certification.

Current Status of the Certified Marketplace

The current status of the certified marketplace for forestry products in Uganda is that the market is not yet developed but is slowly evolving. The market for Certified Emission Reductions (CER) for forestry projects under the Clean Development Mechanism (CDM) has great potential since the guidelines for forestry projects were approved in the 10th Conference of Parties that took place in December 2004. A number of tree farmers have expressed interest in the tapping into the carbon market and will therefore have to follow guidelines under the CDM in order to produce CERs.

EFFECTS OF CERTIFICATION

Whereas forest certification in Uganda is for carbon sequestration under the auspices of an international organization collaborating with the UWA, it has had some impact on the trend towards sustainable management of forests in the country.

Power

The NFA, in collaboration with the FID, is developing national standards based on the FSC principles and criteria that were adopted by the FACE project in the certification of project sites in Uganda. It has therefore had a certain level of influence on government agencies in the development of policies and laws to support sustainable forest management programs.

Social

Following the gazetting of the forests into national parks, local communities lost all rights of access to forest resources. The only way that use can be re-established is through the signing of formal agreements with park management, under Collaborative Resource Management Agreements (CRMA). The local communities negotiate with park management and other UWA staff (including the UWA-FACE project staff) to agree on the type and quantity of the resource they wish to extract from the park. Examples in the Mt. Elgon area include the Kapkwai Collaborative Resource Management Agreement where UWA-FACE plantations are included within the scope of the agreement. Through the CRMA, local communities access park resources sustainably. In some places, permits are issued to raise annual crops amongst young trees, 'Taungya style,' further increasing the incentive to protect the sites from fire.

Workers and farmers in project sites receive training in nursery practices, and establishment and nursery management of trees. The knowledge is replicated in raising coffee seedlings, which is of value given the demand for coffee bushes in the area. Wild and cultivated coffee is a major economic crop in the Mt. Elgon area. Many farmers grow it on their smallholdings and others collect it from the park. There are no coffee bushes growing in the encroached areas. The farmers have gained skills and knowledge to establish woodlots.

Many cultural sites exist in the national parks. Only a few occur in the certified forest areas. These include salt licks, caves and big rocks. Access to these sites remains a customary right.

Other social benefits are indirect. For example, UWA-FACE workers are entitled to medical care and other benefits laid out in the UWA-FACE project Terms and Conditions of Service.

Economic

UWA-FACE is widely recognized as one of the few significant sources of income in the project sites. In Mt. Elgon alone, a permanent labor force of approximately 250

workers is employed, and during peak seasons, an additional 1,000 casual laborers are employed. UWA-FACE project now purchases seedlings from community-based nurseries. Villagers have been offered the opportunity to raise seedlings and sell them to the UWA-FACE project. The inflow of cash into communities has enabled project employees to improve their standards of living. The forest resource that the project will exploit is carbon sequestration. To date this resource is relatively small as the trees are still small. As the trees mature and the degraded lands are transformed into a long-term stable store of carbon, the benefits will increase.

Environmental

Carbon will be sold without being 'harvested'. The project is re-planting native species in order to recreate a stable long-term store of carbon and restore the forest's ecological functions. The establishment of natural forest has the impact of enlarging the habitat for native species, protecting the park's biodiversity and enhancing its tourism value.

Tourism is an important source of income for the southwestern region of Uganda, with local groups facilitating access to the tourism sites. Kibale National Park is rich in biodiversity, and in the neighbourhood is an NGO, the Kibale Association for Rural Development (KAFRED) promoting and managing the Bigodi Wetland Sanctuary. The area is rich in primates and over 370 species of birds. However, the presence of rebels from the D. R. Congo in the forests has previously had adverse impacts on visitor numbers.

There is support for community development activities, initiated and implemented through the Kibale-Semliki Conservation Development Programme (KSCDP) around the Kibale National Park. The activities include a building program for schools and provision of culverts for road drainage, training in bee keeping, soil stabilization, pig farming, and fruit tree cultivation. The KSCDP project is to be integrated into UWA activities. The Mt. Elgon region ecosystem program funded by DANIDA is in the offing and aims at supporting farmers around Mt. Elgon in several aspects of conservation to improve community livelihoods and reduce human-natural resource use conflicts.

CONCLUSION

Summary

The case study has highlighted Uganda's forest sector in relation to sustainable forest management and forest certification initiatives. Forest certification in Uganda and the East African region was initiated by external drivers, with governments playing limited roles. Discussions with government agencies indicate that the present funding mechanisms do not provide a sustainable basis for forest management in state-owned Forest Reserves. It is important that the Central Forest Reserves are provided with sufficient financial resources to facilitate forest management operations.

The concept of forest certification is new in Uganda. Intensive sensitization campaigns are required for the concept to gain root. The response by the government has been positive by putting in place legislation in support of sustainable forest management and strengthening management of forests through institutional reforms. The government of Uganda could also take advantage of the East African Forest Certification initiatives to build the necessary capacity in forest certification.

The two carbon offset projects in Uganda operate in national parks, which are managed under the wildlife statute and are protected permanent forest estates. Under the collaborative management memoranda signed with the park authorities, local communities have some limited access to natural resources in all national parks. Access to the resources therefore is not exclusive to the forest certification process.

Employment opportunities, skills in tree nursery operations, and incomes generated from the sale of seedlings to the UWA-FACE project are incidental benefits that resulted from the need to restore the degraded forests. The certification serves to demonstrate to FACE, UWA, and other parties that the parks are well managed. The fact that local communities have opportunities for employment and alternative sources of income (from sale of seedlings) has greatly reduced conflicts between encroachers and national parks. It is envisaged that in the next phase of certification farmers will benefit directly from the forest certification process.

Roadblocks and Challenges

As the National Forest Authority (NFA) strives to develop national standards that support Sustainable Forest Management (SFM) and forest certification, the following challenges need to be overcome:

- designing Ugandan forest certification standards that are friendly and applicable to local situations;
- resolving conflicts between local communities bordering forest reserves. This is a big problem in areas where the local people have expanded their land holdings into forest reserves due to unclear boundaries;
- establishing and embracing standards that may take care of a multiplicity of forest outputs since Uganda's natural forests are ecologically diverse and socially important;
- reconciling with environmentalists, given that their thinking is deeply rooted in social and ecological effects. Furthermore, there is a need to take care of the diverse interests of different actors;
- overcoming weak institutions. In the past, the Forest Department suffered the lack of stewardship, institutional support, a lack of public accountability, corruption among forest officers, and over-reliance on external support. It is necessary to ascertain how these historical issues impede certified forests and the process of certification. The challenge is that many old faces in the Forest Department appear in the NFA;

- forestry is mainly foreign-funded. It is necessary to know the commitment of donors to this new forest management practice.

Future Developments/Scenarios

The government should institutionalize forest certification in government and non-government agencies. A regulatory framework should be put in place by government, but driven by the private sector, in order to minimize funding shortfalls.

There is a need for increased awareness and sensitization among management agencies, consumers and service providers. The government should take advantage of the East African Forest Certification Initiative (EAFCI) to build capacity for forest certification. Management agencies that should be targeted include government institutions and parastatals at different levels, and private forest owners. The service providers comprise training institutions, research institutions, and NGOs.

Since there will be a timber shortfall within 5 to 10 years, forest certification should be expanded to cover forest timber products, and non-timber products other than carbon sequestration. Uganda exports floor parquets mainly to China, and reasonable quantities of honey harvested from forests are processed and consumed locally and internationally.

Forest certification has not focused on forest services such as eco-tourism that are very important regarding forests in Uganda. The big populations of mountain gorillas and chimpanzees are some of the most important fauna in Uganda's forests. Water catchment is another important role of the forests. It is high time that such services are recognized in FSC to support SFM for such vulnerable ecosystems.

Cross border conservation initiatives, as in the case with Mt. Elgon National Park, should take advantage of certification of forest ecosystems lying across borders.

Future Research

There is a need for a comprehensive pilot study to generate information on forest certification potential. Such a study would focus on the impacts of local and international markets for certified forest products, local capacity and awareness of the stakeholders.

Research is also required on the net impact of forest certification in relation to the principles of Sustainable Forest Management (SFM) in Uganda and the effectiveness of the government institutional framework for SFM. Protocols for sharing benefits from certification need to be investigated and adapted to the local context.

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LIST OF ORGANIZATIONS CONSULTED

Organization	Date	Location
Environmental Conservation Trust of Uganda (ECOTRUST)	17th March 2004	Kampala, Uganda
Forest Resources Management and Conservation Programme (FRMCP)	7th May 2004	Kampala, Uganda
Forestry Department (FD)	5th March 2004	Kampala, Uganda
Forestry Resources Research Institute (FORRI)	17th March 2004	Kampala, Uganda
Makerere University, Faculty of Forestry and Nature Conservation (FFNC)	1st March 2004	Kampala, Uganda
Ministry of Water, Lands and Environment	11th May 2004	Kampala, Uganda
National Forestry Authority (NFA)	3rd May 2004	Kampala, Uganda
Nile Plywoods (U) Ltd	7th May 2004	Jinja, Uganda
Saw millers	6th May 2004	Kampala, Uganda
The World Conservation Union (IUCN)	1st June 2004	Kampala, Uganda
Uganda Forestry Association (UFA)	2nd June 2004	Kampala, Uganda
Uganda Tree Farmers Association (UTFA)	2nd June 2004	Kampala, Uganda
Uganda Wildlife Authority (UWA)	6th April 2004	Kampala, Uganda
Uganda Wildlife Authority-FACE Project (UWA-FACE)	13th April 2004	Mbale, Uganda

ACRONYMS

AFM	Area Forest Manager
CERs	Certified Emission Reductions
CRMA	Collaborative Resource Management Agreement
DANIDA	Danish International Development Agency
DFID	United Kingdom's Department for International Development
DFO	District Forest Officer
EC	European Commission
ECOTRUST	The Environmental Conservation Trust of Uganda
ELCI	Environmental Liaison Centre International
ETC East Africa	Subsidiary of ETC Netherlands, Leusden (ETC Group)
EU	European Union
FACE	Forests Absorbing Carbon dioxide Emissions
FD	Forest Department
FID	Forestry Inspectorate Division
FORRI	Forestry Resources Research Institute
FRMCP	Forest Resources Management and Conservation Programme
FSC	Forest Stewardship Council
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
IAC	International Agriculture Center
IUCN	The World Conservation Union
KAFRED	Kibale Association for Rural Development
KSCDP	Kibale-Semliki Conservation Development Programme
NAADS	National Agricultural Advisory Services
NFA	National Forest Authority
NGO	Non-Governmental Organization
PA	Protected Area
PFE	Permanent Forest Estate
SGS QUALIFOR	Forest management certification programme (an internationally recognized mark of quality forestry)
SFM	Sustainable Forest Management
SGS	Société Générale de Surveillance
THF	Tropical High Forest
TPA	Totally Protected Area
UNFCCC	United Nations Framework Convention on Climate Change
UWA	Uganda Wildlife Authority
WRM	World Rainforest Movement
WWF	World Wide Fund for Nature

Forest Certification in Zambia

*Felix Njovu**

ABSTRACT

Interest in forest certification as a means of promoting sustainable forest management arrived in Zambia in the early 1990s. Before then, all forest management was done by the government and users were only required to obtain licenses for the use of forests. Forests cover over 41 million hectares, more than 55 percent of Zambia's surface area. Both local and national events led to development of interest in certification. Locally the need to earn higher incomes from various forest products, coupled with an increased awareness and concerns by western consumers, prompted local companies and organizations to seek forest management and chain of custody (CoC) certification. The certification efforts have, however, met a number of roadblocks and challenges arising from uncertainty, the cost of certification and the absence of tenurial rights by certified companies. The nature of tree and land ownership in Zambia is the biggest challenge, as all forests are government owned. This makes private management to meet the certification principles very difficult except in forest plantations. Presently government, the owner of forests, has no specific policy or official stand on forest certification.

Zambia's forest sector is confronted with both ecological and economic challenges. Deforestation and forest degradation are the main ecological problems, while the low contribution of forestry to GDP, despite its significant resource endowment, is the key economic challenge.

The main driving force for forest certification has been the need to gain access to foreign markets that are large and reliable, rather than better prices. The first companies to seek certification were involved in rural development and the use of natural resources as a means to combat poverty. These companies promoted forest certification for the purpose of harvesting non-timber forest products. Private sector companies came in as a result of liberalization of the national economy, which saw both an increase in competition and a decline in economic activity, resulting in a depressed local market.

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Being a new phenomenon, certification's future in Zambia depends on the success of the five certificates that are currently operating in the country. The sixth certificate has been suspended due to controversy over the certificate and forest ownership. Should current certificate owners meet with success in terms of improving the management of the forests while at the same time increasing returns from the utilization of the forest resource by accessing foreign markets, then the future of certification will be bright, as more companies are likely to seek certification.

INTRODUCTION

Forest certification first gained attention in Zambia in the early 1990s during a turbulent time in which the country moved from a socialist command to a market economy. These broad macro-factors are central to any story of forest certification because the government gave up its controlling interest in most economic production ventures (including the forest sector), resulting in increased attention to, and interest in, market forces and incentives. As a result, forest certification, with its focus on market-approaches, was arguably facilitated by these broad changes in economic orientation. Whether, and how, forest owners are able to take advantage of forest certification, however, is contingent on successful implementation of these reforms, which are still at a nascent stage. Indeed, as late as 1999, the state maintained sole responsibility for authorizing forest management and the development of forest products. The total certified indigenous forest area is currently 8,485,000 hectares. This represents 11 percent of the 75,260,000 hectares of the total land area for the country.

In part for these reasons, initial interest in certification can be traced to two different international sources: export markets and international donors. The first was a response to concerns in Europe and America, where consumer awareness is relatively high. These concerns originated with the knowledge that, while Zambia is well endowed with forest resources, the last quarter century has witnessed widespread deforestation that has depleted this valuable resource. As a result, exporters found that it was not possible to export Zambian forest products without offering any assurance to the foreign markets about the quality of forest management (Malichi 2004). In view of this it was deemed necessary to satisfy the foreign market by meeting the European and American standards. To this end certification was sought with the hope that it would open export opportunities for these certified products. Whereas community-based natural resource management organizations have funded the certification for non-wood forest products (NWFP), commercial companies have had no subsidy for funding the certification process. To them it has been a business risk that has to be undertaken in order to safeguard market share. There is no guarantee that certification will bring increased profitability.

The second set of international sources consisted of donors, who were interested in promoting community forestry community development and poverty alleviation. Such efforts and resources created fewer bottlenecks than existed for commercial forestry, and as a result, it was on these forests that the first certifications were granted. However, as shown below, sustainability of the operations after the departure of donors could not be assured because of the existing macro-economic conditions Zambia was facing.

For these reasons, existing effects have been mixed. Different stakeholders view certification differently. Whereas the certified organizations view it as a way to sustain their businesses, government looks at it as a process that diminishes its power and control over forests. Consequently, government acceptance of certification has been cautious.

A decade after forest certification arrived in Zambia there is still doubt over the benefits that the practice of forest certification can bring with respect to improved management of the forest resource. At the moment, government, the owner of the forest, has shown little interest in certifying their forests, the forest companies show reluctance due to lack of assurance of the possibility of the investment in certification to pay back, while there are no strong indicators of environmental benefits on the ground.

In spite of these cautionary tales, this paper finds that the story to date is important for two reasons. First, a review identifies and addresses key bottlenecks that, if removed, might facilitate future effectiveness. For instance, as we show below, a major roadblock to forest certification was that until 1999 the private sector and forest communities were not permitted to participate in the management of the resource. However, the government has introduced a new forest policy designed to devolve responsibility to local communities. When, and if, these changes are fully implemented, forest certification arguably will have greater potential to enhance forest management. Such impacts would be enhanced to the extent that international demand for certified wood increases.

Second, there seems little doubt that, though difficult to measure, certification has also had positive social, economic and environmental impacts in terms of the ideas and norms concerning what is viewed as responsible sustainable management of the forest resource. At same time it is clear that forest certification in Zambia will only constitute a piece of the sustainable forest management puzzle and that other issues, such as indigenous forest management rights, may have to be addressed in a meaningful way through other arenas.

The remainder of this paper proceeds in the following analytical steps. Following this introduction, it identifies background factors that are central to understanding how forest certification initially emerged. It then explores trends and social, economic and environmental impacts of certification, followed by a description of the current status of certification in the country, and concludes by identifying future trends and pressing research needs.[1]

[1] Research for this paper included in-person interviews, as well as a review of existing primary and secondary sources. Key in-person interviews included the Acting Director of Forests, former General Manager of Muzama Crafts Ltd., the managing Director Ndola Pine Plantations Ltd., Kabompo and Mpongwe communities and the Community Development Organization. Additional information was obtained through literature review and analysis of primary data in various reports.

[2] To gazette an area is to officially designate the particular piece of land in terms of land use through legislation. In this case, the official land use is forestry.

BACKGROUND FACTORS

Zambia is a landlocked country in Southern Africa surrounded by Congo DR, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola. There are two main routes to the sea, through the South African ports to the south and through the port of Dar es Salaam to the Northeast. The country belongs to a number of regional political and economic groupings such as the African Union (AU), the Southern African Development Community (SADC) and the Common Market for East and Southern Africa (COMESA).

The country is regarded as one of the highly forested countries in Southern Africa, with forest covering about 55 percent of the 752,600 square kilometer surface area, most of which is administered traditionally under customary law. Gazetted[2] protected

forest reserves occupy about 9 percent of the total land area and forests in national parks[3] another 9 percent. The importance of forests and woodlands to the development of the country is widely acknowledged.

[3] Area reserved specifically for wildlife management.

Zambia's vegetation is classified into three major categories. In the first category are the closed forests which comprise *Cryptosepalum* evergreen, the deciduous *Baikiaea* forests and to a limited extent the *Parinari*, *Marquesia*, montane, riparian swamp and itigi. In the second category are the open forests (savannah woodlands), which account for 87.4 percent of the total forest area in Zambia. These woodlands are dominated by the Miombo woodlands followed by the Kalahari woodlands, Mopane and Munga woodlands to a lesser extent. The last category of vegetation is the grasslands, including wetlands and dambos[4]. Table 1 below shows the major forest types in the country. The most common tree genera in the Miombo woodlands are *Brachystegia*, *Julbernadia*, *Isoberlinia*, *Marquesia* and *Uapaca*. The soils are rather poor and the trees have thus developed in collaboration with mycorrhizal fungi. Apart from wood, the Miombo woodlands are a source of many NWFP including mushrooms and honey.

[4] Low lying depressions where the water table is close to the surface. Mostly covered with grass and other species that tolerate high water tables.

Table 1 Forest types in Zambia

Forest type	Percentage of total forest area	
Closed Forests		8.2
Dry (evergreen and deciduous)	7.7	
Swamp and riparian	0.5	
Open Forests		87.4
Miombo	58.3	
Kalahari	15.8	
Mopane	7.2	
Munga (acacia)	6.1	
Other		4.4
Termitaria etc	4.4	
Total	100.0	100.0

Sources: Makano, Ngenda and Njovu 1996

Historical Context

To understand the rise in interest in forest certification, it is necessary to know the background to the socio-economic development of the country. The main export commodity has been copper, which is exported to Europe. Within the region the major trading partner is South Africa, where a number of companies that operate in Zambia are based. The bulk of Zambian timber exports are also to South Africa. Since independence in 1964 Zambia has relied on mineral export for foreign income, but efforts are now being made to diversify the nation's economy. Wood is one of the natural resources that is abundant, but there has been little investment in this sector. The shift from a command economy to a market economy in 1991 has encouraged private

sector participation in the forestry sector and this has resulted in efforts being made to export forest products. However, the world market for these products is now demanding certified products, hence various attempts to certify forest products from Zambian forests.

Domestically, two major factors have been responsible for protecting indigenous forest areas in Zambia: the need to conserve areas of biodiversity significance and the need to provide industrial wood raw material for the various industries in the country, especially the mines.

The reasons for starting plantations in Zambia were: to supplement the limited supply of timber from the low-yielding indigenous forests; to provide timber resources for the mining industry, as it was feared that the indigenous forests would be exhausted or become uneconomic due to ever-increasing extraction distances; to form the basis for the wood industries in view of the increasing consumption of construction sawn wood, wood-based panels, various types of pulp products and certain round wood products, which all had to be imported, thus exerting pressure on Zambia's foreign exchange reserves; and to provide employment for thousands of people in forest-related industries and the service sector.

Plantation development was started by the government in the 1960s on a pilot scale. To date there are over 55,000ha of industrial forest plantations in the country. The species used have mainly been pine (79 percent) and eucalyptus (20 percent). Currently the commercial plantations are being reduced, as there has not been enough replanting and/or expansion. It can be stated that the forest plantations have greatly reduced the pressure on indigenous forests in the Copperbelt. Until 1991 all forest plantations were owned by government either directly or through a parastatal company called Zambia Forestry and Forest Industries Corporation (ZAFFICO). Apart from plantations, this company also operated some softwood sawmills and a pole treatment plant. With the advent of liberalization in 1991, the industrial assets (sawmills, wood preservation plants and carpentry workshops) were sold off together with part of the plantation. Private companies now own about 2,000ha of the original 55,000ha ZAFFICO plantation.

Forestry Problems

The major forestry problem in Zambia is deforestation and forest degradation resulting from mismanagement for narrow, short-term gains (MENR 1997). Eighty two percent of the forests lie on customary lands. Government ownership is equivalent to no ownership as there is no one on the ground to control exploitation. This has promoted forest degradation through illegal harvesting. The stringent economic programmes that were implemented in the 1990s focused on liberalization and reduced state interference in the economy. These were accompanied by reduced spending on social services and loss of formal employment, thereby increasing poverty levels. The prevalence of poverty in rural areas has implications for forestry, as it remains the only resource that can provide fall-back support.

The reduced government expenditure has also meant that few resources are available for the management of forests, resulting in diminished government control

in on the ground. As a consequence, deforestation has increased, encroachment is up, and there is an overall degradation in the quality of the forest resource arising from uncontrolled and illegal practices.

Policy Responses

Realizing its failure to properly manage the forest resource, the government adopted a new forest policy in 1998. The main tenet of this policy is the acceptance of communities and other stakeholders in the management of forest resources through a practice termed "Joint Forest Management" (JFM). Under the arrangement, a community or other organization may apply to the minister of Tourism, Environment and Natural Resources for permission to manage a given forest with technical assistance from the Forest Department. The benefits arising from the forest are to be shared between the two parties. The new law that grows out of this policy reflects the aspiration of government to sustainably manage the forests. Although it refers to forest and timber products, it does not give guidelines on issues of certification in the light of the market economy.

The private sector has taken advantage of the government's laxity and increased timber production. However, since the local market cannot absorb all of the locally produced timber, companies have had to seek foreign markets, and in so doing are faced with the demand for certified forest products. Hence efforts to certify forests and forest products.

The response of NGOs has been to promote the harvesting of NWFP as a way of maximizing the value of the forest without tree cutting. Attempts have been made to obtain certification for the forests from which these NWFP are taken.

Structural Features

The main feature of the Zambian forestry system is the ownership pattern and the way in which power and rights have been distributed.

Ownership and Tenure

Legal ownership of all land and natural resources in Zambia is vested in the republican President, who administers it on behalf of the citizens. Consequently all trees are "owned" by the President on behalf of all Zambians (Forest Act Number 7, 1999). For operational purposes the administrative powers have been delegated to various institutions. Consequently, forests are administered by either the traditional chiefs or the Director of Forestry on behalf of the President. The change from a socialist to a market economy has not resulted in a change of ownership of the forest resources. What has changed is the ownership of the means of production, whereby the private sector can exploit the resources to produce goods and services. In terms of land tenure the country is classified as in Table 2.

Table 2 Land ownership in Zambia

No.	Category	Percentage
1	State land	6
2	Reserve land	35
3	Trust land	50
4	National parks	9
Total		100

Source: MENR 1997

Both trust and reserve lands are regarded as traditional land and administered by traditional chiefs and their headmen who control land allocation. Ownership is sustained through land utilization (cultivation) and may be inherited. Land, forests and wildlife resources in uncultivated areas are communally utilized (MENR 1997). Traditional land outside of protected areas (forest reserves, game management areas (GMA), national parks and bird sanctuaries) are referred to as open areas. Land designations that are relevant to forests include:

- *Forest reserves* – which are either local or national protected forests that are protected from open access because of their national value such as protection of water catchment areas for river systems. Licensed forest activities are allowed in these areas by the Forest Department.
- *Trust land* – also referred to as open areas. These are open for community subsistence use. Tree harvesting for domestic use is free; however, limited commercial harvesting is allowed through casual and pit sawing licenses obtained from Forest Department.
- *National parks* – these are managed for the protection of wildlife. No forestry activities are allowed.

Regardless of land ownership, trees remain government property. The President has delegated the authority to manage and administer all forests to the Forest Department in the Ministry of Tourism, Environment and Natural Resources. The Director of Forestry can transfer the right of utilization to any individual or organization through a license. There are four main types of forest licenses issued by the forestry department:[5] the production license, the conveyance license, the concession license and the casual license. The various forest licenses allow for the harvesting of timber from the forest. The regulations in the forest licenses only stipulate the 'proper' ways of cutting the trees and handling 'waste,' the remaining material from the cut trees. These regulations are aimed at promoting continued growth of the remaining forest. The Forest Department monitors harvesting. The forest licenses do not say anything about certification. The same licenses are applicable in both certified areas and uncertified areas. NWFP are usually collected free of charge. Although a small fee may be charged for entering the forest, it has no relationship with quantity collected.

A combination of both local and international factors led to the acceptance and adoption of the certification process by local institutions in Zambia.

[5] The production licenses are used for the commercial production of sawn timber and may either be commercial saw milling licenses or a pit sawing licenses. The main difference between the two is that one allows for the use of motorized saw milling equipment while the other is for the manual production (using hand tools) of sawn timber respectively.

The concession license gives rights to the holder to harvest trees in a given area for a specified period (usually five years). To qualify for this license, the applicant must produce a forest management plan and satisfy other requirements such as owning a sawmill. Production takes place within the forest. In most cases, concession license owners produce timber for export.

The conveyance license allows for the movement of forest produce from one area to another. The main forest produce that attracts a conveyance license is timber in its round or sawn form, firewood and charcoal.

The casual license is a general license. It allows the holder to harvest forest produce for domestic use and sometimes for sale. Where selling is involved, rough sawn timber is sold to large sawmills, construction companies and furniture manufacturers.

Local Factors

From 1972, Zambia was politically administered as a command economy by a one party government system. Under this system most of the important means of production were in government hands and administered as parastatal companies. This situation also applied in the forest sector where a number of companies were involved in industrial plantations, harvesting and processing indigenous forests, and secondary manufacturing using forest products as raw materials. With the collapse of the economy and subsequent adoption of a market economy, government had to withdraw from economic activities and assume the role of overseer. This was achieved by liberalizing the economy to allow private sector participation and also by selling ('privatizing') companies previously run by government. These two changes removed the protection that local companies previously enjoyed and also introduced more players into the market.

For some time the government had been trying to develop rural areas. To achieve this, a number of development projects were embarked upon. One of these for the Northwestern province was the Integrated Rural Development Programme (IRDP). This programme was aimed at poverty alleviation but had a limited life span. The activities that were started under IRDP were not continued under government funding. As a solution, it was decided to commercialize some of the viable activities, and this resulted in the formation of North Western Bee Products Ltd (NWBP) and Muzama Crafts Limited (MCL) in 1986. The change of economic policies in Zambia found these companies in their infancy. Whereas previously their operations were shielded by donor funding, this no longer was the case.

The fact that the local economy was seriously depressed meant that there was no money in the local economy. Privatization resulted in a number of retrenchments. Manufacturing companies had to struggle to sell their products to the 8 million inhabitants. The local market could not absorb the production taking place in the economy. A solution was to look to foreign markets in order to sell larger volumes. In addition, the pricing structure for local raw materials has not been favorable to local producers, e.g. the introduction of Value Added tax (VAT) and higher fees for tree licenses.

On the Copperbelt, the establishment of Mpongwe Development Company (MDC), a large Commonwealth Development Corporation (CDC)-funded agricultural undertaking, brought some hope to the rural area. However, a number of people live around this agricultural project and provide seasonal casual labor. Due to high poverty levels, and in an effort to improve the livelihoods of the local inhabitants, the Miombo Project for wild mushroom collection was introduced in 1996-7. One of the activities of this project is to promote the marketing of wild mushrooms that are in season at the time when the labor requirements in the coffee plantation are low. The local people have been encouraged to deploy their energy on collection of mushrooms from the surrounding forests. The Miombo Project facilitates transportation and export. Since the local people cannot, as individuals, profitably take their mushrooms to urban markets, which are already saturated with the same mushroom from nearby forests, the project sought foreign markets for the product. In the process of accessing this market, the issue of product certification came up.

International Factors

Timber certification initiatives began in 1992 following the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. The Rio conference recognized that problems of poverty and food security were linked to deforestation and indebtedness of developing countries. A number of intergovernmental approaches and protocols provided a setting for the development of certification standards worldwide (Bass 1998). Environmental NGOs and other interested groups started the certification initiatives leading to the establishment of the Forest Stewardship Council (FSC) in 1993 (Ng'andwe 2003). Other certification schemes arose thereafter. The goal of FSC is to promote environmentally responsible, socially beneficial and economically viable management of the world's forests (FSC 2000).

After Rio, international awareness of environmental conservation increased in most countries. Other research results also showed that increased damage to the environment in one locality affects the quality of life elsewhere. An alarm was raised about the cost of ozone depletion and global warming. All these, it was realized, had origins in the uncaring manner in which natural resources were being harvested and used. In an effort to encourage better management of forest resources, it was thought wise to impose measures that would encourage sustainable management of these forest resources. European and American consumers also began to demand more natural as opposed to artificial products.

One way to respond to these multiple concerns was through forest certification. The idea was to restrict markets for those countries and organizations that do not manage their resources sustainably, and to expand them for those that do. With this restriction, it has become difficult for Zambian institutions that are trying to export forest products to do so. Local institutions are interested in either poverty alleviation or industrial development. Since the local market is small and depressed, higher incomes and increased production from forest industries can only be attained through access to international markets for both wood and NWFPs.

Zambia is a signatory to over 22 international environment-related conventions, some of which have been ratified. The conventions and treaties provide a policy framework to guide the nation's international policy on forests. The national forest policy does not mention forest certification but the main themes are sustainable management, conservation and utilization.

Markets

Before independence in 1964 and immediately after, Zambia was a net importer of forest products (mainly soft wood for construction and other industrial uses). However, with the development of the forestry plantations, the country has become a net exporter of softwood timber and timber products. Currently softwood timber from Zambian plantations is utilized locally as well as exported. All harvesting at the moment is commercial. ZAFFICO sells standing trees to private sawmill owners who produce sawn timber and boards for both local and foreign markets.

The main demands for timber are accounted for by domestic firewood and charcoal consumption. Charcoal is a significant commercial forest product and provides an important source of income for rural communities. Wood fuel is the main source of domestic energy in Zambia. Construction poles, saw logs and peeler logs are also in demand. Important non-wood products include mushrooms, game meat, honey, fruits, insects (caterpillars), fibers, and medicines.

Commercial indigenous timber harvesting has mainly supplied the local market. The main consumer has been the mining industry, which uses lumber for railway sleepers, underground pit props and copper smelting. Selected tree species of high quality (e.g. *Pterocarpus angolensis*, *Guibortia coleosperma*, *Afzelia quanzensis*, *Baikiaea plurijuga* and *Faurea saligna*) have been sawn for the construction industry and for high quality products such as furniture. Since the liberalization of the economy and resumption of trade relations with South Africa, a number of South African companies are investing in extraction of indigenous timber species for export to South Africa and other countries. Table 3 shows the importers of Zambian timber products.

Table 3 Timber exports (2001)

Importer	Value (US$)	Proportion of total (%)
Tanzania	7,000	0.20
Norway	12,000	0.39
United Kingdom	16,000	0.59
Sudan	19,000	0.61
Italy	27,000	0.87
Egypt	32,000	1.03
Congo (DR)	48,000	1.55
Malawi	63,000	2.04
Botswana	233,000	7.53
Zimbabwe	479,000	15.48
USA	840,000	27.15
South Africa	1,318,000	42.60
	3,094,000	100.04

Source: FAO STAT and Musonda 2002

Non-Wood Forest Products

Apart from subsistence agriculture, the collection of non-wood forest products is an important livelihood activity in all rural areas. Household livelihoods have traditionally been based on the consumption and trade of NWFP. The transportation and communication systems in rural areas are not developed, thus NWFP are usually marketed locally. In urban areas too, high unemployment and poverty lead to high dependence on forest products. Unemployed and poor urban dwellers rely on forests for their livelihoods and income supplementation (as firewood collectors, charcoal

producers, as collectors and sellers of NWFP), while employed urban dwellers provide the market for the forest products. This is possible because of the nature of forest ownership in Zambia. Since ownership of all forests is vested in the President, access is virtually free for the collection of NWFP. Conflicts only arise in instances where one tries to settle, cultivate or cut trees in a forest area without legal authority. Depending on the land use designation, one can acquire a license for harvesting timber or a title for settling land.

This situation means that forests are viewed as common resources for all and that they do not belong to any specific group of people. However, the possibility of changing the ownership offers opportunities for private ownership. Currently it is not easy to demarcate the difference between certification and ownership. The certificate holder is required to impose restrictions that may only be done by the owner of the forest. Thus, creating the conditions for widespread certification will require accumulating powers and duties regarding forests tantamount to those of ownership.

Timber Products

On the indigenous timber front, the country has always been a net exporter of high value timber from *Baikiaea plurijuga*, *Pterocarpus angolensis*, *Guibortia coleosperma* and a few other species. Timber from the natural forests is still being utilized both locally and in the external market. The major export in this area is sawn timber. Harvesting in the indigenous forests is both subsistence and commercial. At the subsistence level casual license owners produce sawn timber by pit sawing and sell it to other users including commercial establishments. Commercial harvesting is done by concession license owners.

THE EMERGENCE OF FOREST CERTIFICATION

Interest in forest certification as a means of promoting sustainable forest management arrived in Zambia in the early 1990s. Before then, all forest management was done by the government and users were only required to obtain licenses for the use of forests. Both local and national events led to the development of interest in certification. Locally the need to earn higher incomes from various forest products, coupled with an increased awareness and concerns by western consumers, prompted local companies and organization to seek CoC or forest certification.

Initial Support

Certification has been seen as a way of getting around the non-tariff market barriers that exist in European and American markets. The fear of losing market share forced Zambian companies to enter into certification processes. Only those companies with the capacity to acquire forests from government, manage the certification process and simultaneously export their products have been able to support this endeavor on their own. Support for community forestry certification has come mainly from international donors.

The issue of certification of forests and forest products is driven by international markets. Locally there is little or no consumer awareness about forestry or forest products certification. The idea of forest product certification is to link trade to the sustainable management of forest resources by providing consumers with information on the production status of the forests from which the timber and other forest products come. In Zambia certification has not developed as a domestic process. It has been a foreign market driven process, and it began in 1990 with the organic certification of NWBP's honey, which was the first of its kind in the world (Thornber 2000). This was followed by the Muzama's certificate in 1998, which was the first Forest Stewardship Council (FSC) forest management certification in Zambia, and then the MDC certification of organic wild mushrooms in 1999.

The most recent certification has been that of 1092 ha of a private plantation in 2003. This is part of the former ZAFFICO industrial plantations that has been leased to Ndola Pine Plantations Limited (NPP). This is complemented by two chain-of-custody (CoC) certificates awarded to WPI and NZG.

Institutional Design

Almost all certified forests and forest products in Zambia hold an FSC certificate. There is no local certifying body in Zambia, nor is there a local chapter of FSC. The interested organization approaches a certifying agent who does the assessment and makes appropriate recommendations based on FSC requirements. Once these are fulfilled, FSC certification is granted.

Prior to 1990 government technocrats decided what was good for the forestry sector, the politicians adopted this as policy, and implementation was done. After 1990, however, the process changed in that wide consultation on forest matters was done at all levels (government officials, traditional rulers, civil society and other interest groups) before adoption of any standards. This is the international trend adopted in Zambia following current world approaches in forest management. This is the process through which the current forest policy was adopted. The development of forest guidelines also goes through the process of consultation with relevant stakeholders.

Standards

Except for MCOSC, which was a wild mushroom certification done by Ecocert, all cases of certification in Zambia have been under the FSC standards. These standards were not locally developed and the organization seeking certification had to satisfy them and abide by them in order to keep the certification. Modification on a case-by-case basis is possible but generally the established FSC guidelines and principles are followed. The lack of local initiatives and certifying agents has probably resulted in this situation, whereby standards that were developed elsewhere are being followed.

In contrast to the situation for plantations, for which standard management practices have been developed, there is no proven practice for the management of the natural Miombo forest that forms the major vegetation type in Zambia.

Consequently there are no known management plans (Kowero 2003). This makes it difficult to prescribe any actions for purposes of maximizing productivity of any given forest product including timber. Nonetheless, the certifying of some forest areas gives credence over time to the practices that are being applied to the forests, as monitoring is done by independent auditors. This creates confidence that sustainable management practices are being established. There is therefore an incentive to manage the forest as prescribed in the agreements.

THE REACTION TO CERTIFICATION

Key interest in forest certification has thus far been limited to companies and organizations that saw a market benefit and have had backers to assist them go through the certification. Government officials have been uninterested because, although they are responsible for all the forests, government does not sell trees or other forest products outside the country. The other reason could be that they have not been properly made aware of the benefits that certification may bring to the nation as a whole. Thirdly, it is an institutional matter. The Forestry Department does not deal with land tenure matters. These are handled by other sectors of the government. In addition, the Forest Department does not promote selling of forest produce. Their role is well defined in statutes: to manage forest resources. The issuing of permits to collect forest products and licences to harvest trees is just a forest management tool.

Forest Policy Community and Stakeholders

Forest policy makers initially had no idea what certification would or would not do. The effect on policy could not be envisaged, so the reaction was to wait and see. To date there is no specific policy on certification, as it is viewed as a marketing tool rather than a forest management tool. There is no objection for those that legally lease or own forests to certify them.

Environmental issues in Zambia are not a big agenda item that would generate wide interest unless in situations where there is an immediate negative impact. Consequently, as the practice of forest certification is not a widely talked about issue, there is little interest from other quarters such as NGOs and academicians.

Forest Owners

In Zambia the forest owner is the government. Local villagers may collect various forest products from the forest with very little management. The management is a government responsibility. Because certification encourages conservation and sustainable management of the forests, the Forest Department accepts forest certification in so far as it promotes sustainable management of the resource, but is not yet ready to give up the control of the resource (Shakachite 2004). It has, however, been possible to certify some forests because the communities have user rights for the collection of products. Certification is desirable to the communities because it gives them the capacity to sell their products to a larger market.

It must be understood that although certain forest areas have been certified, it is not the owners of the forests that have certified these areas. It is either the lessor-assigned user of the area or end products that are certified. This situation led to problems in the case of Muzama, where a large area was certified by an organization that did not own the forest.

Current Status of Forestland Certification

The current status in Zambia is that there have been six certifications, one of which is suspended.[6] The government is currently piloting the idea of joint forest management in which local communities or other organizations may be allowed to manage forests jointly with government and share the costs and benefits arising from that particular forest. A number of organizations have shown interest in this idea and also in forest certification as a tool to promote sustainable forest management. In addition, ZAFFICO, a government company that owns the industrial plantations, is considering certifying part or the whole plantation so that their customers will buy certified raw material, and, in case they are interested in certification, all they will need is the chain-of-custody certification. (Chisanga 2004). The status for the five certified organizations is as follows:

[6] The suspension of the MCL certification arose when government decided to withdraw the pit sawing licenses that were held by pit sawyers who supplied the company with timber. MCL used to pay for the licenses and then they kept the licenses. In effect, MCL used pit sawyers names to obtain licenses. The FD wanted MCL to apply for a license directly. This conflict is against FSC regulations, hence the cancellation of the forest certification.

Table 4 Status of forest certification

Certificate Holder	Area under Certification (ha)	Comment
Northwestern Bee Products Ltd.	7.5m	Honey certification
Muzama Crafts Limited	800,000	Natural forest
Mpongwe Coffee and Organic Stallholder Cooperative	185,000	Wild mushroom certification
Ndola Pine Plantations Ltd	1,092	Exotic pine plantation
Wood Processing Industries Ltd	–	Chain of custody
Norzam Glulam Ltd	–	Chain of custody

Source: Personal communication

The certification of MCL and NPP are based on forest management with the aim of producing timber products (Patel 2004). MCL certification did not yield any benefits, as the pit sawing licenses were withdrawn. For a small community-based operation such as MCL, the funds that were spent on the certification process were quite huge. The company could not afford the cost. The donor agencies that funded the certification were doing so on the understanding that this would help the rural community whose members were involved in pit sawing. There was one shipment of pit-sawn timber that was exported under certification but this was not well handled. MCL has no timber seasoning kilns and no planning machinery. The timber was exported in its rough form with no quality control.

North Western Bee Products

NWBP holds a product certification covering honey and beeswax from a 7.5 million hectare forest issued in 1990. The certifier is the Soil Association of UK. The partners or financiers for the certification were TPF and Oxfam, which have provided logistical support and funding for the certification. The motivation for certification was to gain access to export markets so that the proceeds can improve income for local inhabitants. Most of the exported honey goes to the UK and Germany. The certification for NWBP has had no impact on land tenure or any other rights of the people in the area. The social benefit initially was that higher prices were paid to producers because NWBP was able to get a price premium for certified products in export markets.

Muzama Crafts Limited (MCL)

This is a sister organization to the North Western Bee Products company. MCL deals in indigenous timber and timber products. Noting that the local prices for these products were low, the international donor organization assisted in acquiring the certification so that the company might get better prices for its timber and timber products.

MCL held an FSC forest management and CoC certification covering a total area of 800,000 hectares issued by Woodmark in 1998. Here again the motivation for certification was to gain access to export markets so that the proceeds could improve income for local inhabitants. The sponsor of the certification and inspection processes is SNV, the Dutch development agency.

Due to conflict between the Forest Department (FD) and MCL the pit sawyers licenses were withdrawn. This action contravened FSC principles, and the certificate was suspended in 1999. Efforts to have the situation restored have not yielded any positive results, and presently there is no solution in sight. It was the fear of the change in power dynamics that partially resulted in the cancellation of MCL certification. The strict management regimes that are required under certification would have excluded other forest users who, in fact, were within the boundaries of the certified area.[7] In addition, FD (representing government) would have little control over the activities in the area when they are legally the mandated institution to manage and control all the forests in the country.

Both NWBP and MCL were developed as components of an initiative between the Zambian and German governments. The technical assistance to Zambia was aimed at incomes and livelihoods of the rural people in Northwestern province. At the end of the project the Zambian government decided to turn the two components into companies owned by the local communities. Since the objective remained the same, it was necessary to find markets that would offer higher prices for both bee and forest products.

[7] The total land area of Northwestern province is 12,582,000ha, out of which 800,000ha were certified. The certified areas include three of the six towns in the province towns, villages, and public roads. Although the province is sparsely populated, it does not mean that it is all forest. The people derive their livelihoods from the areas in which they live.

Table 5 Summary of certification in Zambia

	NWBP	MCL	MCOSC	NPP	WPI	NZG
Type of certificate	Forest product certification	FSC, Forest Management and chain of custody	Forest product certification	FSC, Forest and chain of custody	FSC Chain of custody	FSC Chain of custody
Area certified (ha)	7.5 million	800,000	185,000	1050	–	–
Certifier	Soil Association	Woodmark	Ecocert	SGS	SGS	SGS
Date Certified	1990	May 1998	1999	2003	2003	2003
Funding	Partners TPF, Oxfam	Donor (SNV)	CDC/EU	Own Resources	Own Resources	Own Resources
Motivation	To gain access to export markets and improve income for local inhabitants	To gain access to export markets and improve income for local inhabitants	Forest conservation and income generation for local people	To gain access to export markets		
Status	In operation	Suspended in 2000	In operation	In operation		
Certified products	Organic honey and beeswax	Sawn timber from indigenous tree species	Organic mushrooms	Pine saw logs and chip logs	Sawn timber and chipboards	Value added timber products
Export destinations	United Kingdom Germany	United Kingdom Germany	United Kingdom Switzerland USA Netherlands	Does not export directly[8]	Does not export directly[9]	USA Norway Far East

Source: Personal communication with managers of the companies.

[8] NPP does not export; they manage a forest from which WPI obtains their raw material.

[9] WPI is a mechanical forest-based industry that produces sawn timber and particleboard. A portion of these products are used by NZG to produce the value-added goods that are exported.

Mpongwe Coffee and Organic Stallholder Cooperative

Mpongwe Coffee and Organic Stallholder Cooperative holds a forest products certification for indigenous mushrooms covering a total forest area of 185,000 hectares. The certification, which was funded by Commonwealth Development Corporation and the European Union, was done by Ecocert in 1999. The motivation for certification was forest conservation and income generation for local people. The certification is still in force, and mushrooms have been exported to the USA, UK, Switzerland and the Netherlands.

Ndola Pine Plantations

NPP produces pine logs on a certified plantation. The logs are sold/transferred to NZG for processing. NPP does not sell to other companies. The incentive to certify the forest came from the expected higher prices and expanded market opportunities, as the local market could not absorb all of NZG's products.

This certification was done by SGS in 2003 using NPP's own resources. The motivation was to gain access to the American market for soft wood timber and value added timber products. This came after the company realized that the local market was restrictive and had no appreciation for the high quality products that were being produced. The certification covers 1,092 hectares of pine plantation and timber products derived from trees growing on this piece of land. The certified area represents only 2.73 percent of the total 40,000 hectares of pine plantations in the country.

As long as NZG manages to export its products and the group of companies reaps the benefits, certification will be funded. The group of companies is a purely commercial organization driven by the profit motive so as long as profits roll in, certification will be supported.

Table 5 summarises the certification picture for Zambia.

Current Status of the Certified Marketplace

The current status of the certified market in Zambia is that the domestic consumer does not care one way or the other about certified forest and forest products. On the other hand, producers of forest products are interested in the export of their products and see certification as a key to open up foreign markets. There is wide interest to certify and the existing certificates are being keenly observed to see if the practice will produce dividends. There is also interest from the Forest Department, which is the custodian of the country's forests. The interest arises from the fact that the 1998 policy recognizes the rights of the communities that live around the forests and has accepted their involvement in the management of forests. At the moment the Department is being cautious about handing over the forests. Certification could be one way to ensure that the forests are managed properly because the system is designed to be self-policing through the use of independent inspectors. There is evidence that new certifications are being organized in Western province (Shakachite 2004). The significant fact is that these are being pushed by private companies using their own funding.

EFFECTS OF FOREST CERTIFICATION

In Zambia, the effects of forest certification have been varied. The issue of certification has been pushed or initiated by the market; as a result, it has had little effect on government, which is the landowner in the country. Since the results of certification have not been dramatic, the government has kept a low profile on the matter. The contributing factors that hinder certification are the existence of strong markets for non-certified products and the high cost of the certification process. Most producers sell their products on the Zambian or South African markets, neither of which demand certification. Since the government is currently quiescent about certification, the few instances of certification have not changed Zambian forest practices significantly.

Power

The power dynamics in Zambia have remained unchanged to date. In the two cases of certification in Northwestern province where the local communities depend on forests for their livelihoods, life has continued as before. Beekeepers have always known that their livelihood is threatened by forest destruction, and over time they have developed strategies to live in harmony with the forest, strategies that were not due to certification. In fact, it was easy for the two companies to obtain certification because the forest was in good condition. The pit sawyers in Northwestern province operate in the same forest as the beekeepers. However, only two tree species are harvested. The most valuable timber species is *Pterocarpus angolensis*, which is valueless in terms of honey production, and the other one is *Guibortia coleosperma*, which is also not a popular tree with bees.

In the case of MCL, the certification was perceived as authorization to manage the forests to the exclusion of government and also to the exclusion of other forest users. In fact, the initial certified forest was 1.27 million ha and included villages and municipalities. Hence the resistance to certification by government even after the reduction of the area to 800,000 ha.

The land tenure system in Zambia vests all power and ownership in the President. This means that forests are common property although it is possible to obtain title to land and trees thereon. It is still not easy to clearly define forest ownership, and this will continue for some time until individuals and private companies begin to own forests, or at least have long term rights. The likely power conflict will arise from the traditional leaders, the government and the local people.

Social

The social effects of certification are currently mixed. Whereas the intention was to maximize profit from the sale of forest products, this may not have been realized in the case of forest products produced by the communities. For the plantations, however, there is the potential that they will continue to sell their value-added products to the foreign markets and thus increase employment in the country. This has, however, not yet been realized.

Economic

The economic benefits would have been in terms of cash accrued – to the local communities involved in collection and production of forest products, to company workers, and to the government (taxes). It is not easy to tell, however, whether there are economic benefits accruing so far. Thus far, certification is insurance for accessibility to foreign markets.

Environmental

There are no established or accepted management practices for Miombo forests. Research is still going on to determine which practices are beneficial, so the tendency

at the moment is to minimize disturbance to the natural processes and this is what is promoted by certification. There is a marked difference between ZAFFICO and NPP plantations even though these were one plantation only three years ago. NPP plantations are well managed, all silvicultural operations are being done, and the management plan is being followed, which is not the case in ZAFFICO plantations.

Currently there are a number of activities outside the certified area such as charcoal production, cultivation and forest harvest. These activities are under the control of the Zambian and Congolese governments. The surrounding area is therefore being rapidly converted to non-forestry uses although the plantation is well managed.

There are efforts to protect threatened and endangered species and also to maintain biodiversity. In the case of NPP, the start has been very good. Within the 1092 ha, some areas have been reserved as high conservation value while conservation corridors for animals have also been created. Although this is a monoculture plantation, other tree species (normally treated as weeds) are being allowed to proliferate. Impacts of usage of heavy equipment have been identified and remedial measures recommended are being implemented.

In Northwestern province people have always known the importance of maintaining the forests. The low population density (14 per km^2) has made this easy. Since forest certification has not survived there, it is not possible to tell whether it is a beneficial exercise for the forest.

For MCOSC on the Copperbelt, the opportunity to obtain money for the mushrooms through the market is an incentive to conserve the forests rather than convert the land to agriculture.

CONCLUSION

Two major forest problems — ecological and economic — have been identified in Zambia. The expectations are that forest certification should help solve these problems by forcing forest managers to manage their forests sustainably and in an environmentally acceptable manner. In return, products from the well-managed forests should fetch returns that would pay for the management of these forests as well as improve the livelihood of the communities that live in and around the forests. The following conclusions have been drawn from the author's observations and comments of those in the management of forests in Zambia.

Summary

Certification in Zambia emerged through the desire of local companies and development organizations to gain accessibility to foreign markets. The liberalization of the Zambian economy and introduction of a free market in all industries, coupled with the government's sale of controlling interests in the forest products industry through privatization, has led to a mushrooming of forest-based industries in the country.

Most of these forest industries are mechanical timber industries that are now competing within the small Zambian economy. This competition has been a motivating factor for companies to seek out foreign markets. The demand for certified products by the European and American markets is viewed simply as an economic trade barrier to prevent African products from entering those markets. In view of this, many other companies are closely watching the certified company to see if there are improved business prospects after certification. The cost of the certification process has forced many to approach this matter with caution.

Of the six certificates issued so far in Zambia, one was suspended, two are CoC certifications, and the other two are non-wood forest products certifications. In effect, there is only one forest management certificate case (by NPP) that involves actual forest management practices, and this is in a pine plantation.

The major expected benefit of certification has been the possibility of export business opportunities. The FSC certificate assures would-be importers of the quality of the products and the commitment of the exporter to sustainable management and an acceptable level of production ethics. Since there is no local certifier/inspection agency, certification is a very costly exercise for Zambian organizations, as they have to rely on foreign-based certifiers.

Roadblocks and Challenges

The low returns for local forest products are mostly due to lack of market or, where markets are available, the low prices offered for forest produce. In an effort to open up new markets and also to seek higher prices for the products, producers (in the case of companies) or those that are addressing poverty alleviation through sustainable forest utilization, have faced roadblocks and challenges. These roadblocks are at both international and international levels.

The international roadblocks and challenges arise from the fact that Zambian forest products cannot be accepted in the international markets because of two reasons, namely, the unacceptable quality of the products themselves and the environmental concerns of the informed consumers in those markets. Therefore, the importer wants quality assurance and the assurance that the source of the product is sustainably managed, and that consumption of the product will not promote environmental degradation elsewhere. Hence the need for certification by a widely recognized body to assure the origin and quality of the products.

Since forest certification is a new idea globally and there are many certifying bodies, some bodies may become over zealous to certify forest in an effort to gain recognition as the one that has certified the largest possible forest area or largest number of clients. In one instance, an FSC certification has been issued to a company that neither owns nor manages any forest. The company simply buys forest products that they want to export.

The local challenges arise from the fact that the certification issue is not well understood by the people who own and manage the forests. The implications may not be analyzed and understood by government officials. What, for example, is the

role of government in the certification process or as the owner of the forest being certified through a process initiated by a private company that does not own the forest?

Being a new phenomenon, there are no local agents and no local certifiers. This means that all technical expertise has to be imported at high cost. Holding a forest certificate is no guarantee to more markets and increased prices. Therefore funding for the initial and subsequent inspections has been a challenge. Even where the above roadblocks have been overcome, the next challenge is the choice of a certifier.

Local community projects depend on donor funding. In Zambia the challenges were sorted out by the donor. The identification of markets (sometimes even the price negotiations), identification of certifiers, and payment of the assessors has been done by the donor. The private sector industries have to overcome all the roadblocks on their own.

The Zambian government has adopted the policy of joint forest management (JFM) as a way to ensure sustainable management of forest resources. It is envisaged that, once fully operational, this policy will enable local communities or other organizations to enter into agreements with government to jointly manage the forests. This applies to the forest reserves. The objective is that the revenues realized from such forests will be shared among the stakeholders. Local forest fees are still low and the sharing of benefits will only be meaningful if better prices can be obtained for the forest products. This is where certification and research should look at how communities can benefit from communally-owned forest resources.

Future Developments

There are four critical factors that will influence future developments in certification in Zambia: the new forest policy, the government's economic diversification policy, increased environmental awareness, and the establishment of local initiatives.

- *The Forest Policy*. The 1998 forest policy emphasizes involvement of local communities and other stakeholders in forest management. In effect, the government is moving away from the ownership of the forest resource and transferring it to other stakeholders. It is expected that these stakeholders will manage the resource better since they are close to the resource and the benefits will accrue directly to them. Forests will therefore be easier to certify as the managers will be identifiable as owners and decision makers. The aim of the 1998 policy is to maximize productivity of the forests and distribute benefits fairly (GRZ 1998).
- *National Economic Diversification*. Prior to 1991, the emphasis has been on mining as the mainstay of the economy. The government is now encouraging "non-traditional sectors" to develop and this is seen in the amount of promotion that these sectors are receiving. Forestry is one such sector that has experienced an increased level of investment. Since the local market cannot absorb all the production, the target will be the foreign market and accessibility to this market requires certification of the source of the products.

- *Increased Environmental Awareness*. The citizens are becoming aware of the devastating effects of environmental degradation, which include deforestation and forest degradation. In response, the government in 1999 set up the Environmental Council of Zambia (ECZ) through the Environmental Pollution Control and Protection Act, which among other things, requires that for investment to be approved, there should be an environmental impact assessment (EIA). This Act compels all investors, including logging companies, to conduct an EIA of their activities. Forest certification will act as an assurance of proper environmental management.
- *Establishment of Local Initiative*. Realizing that there is a lot of interest in forest certification, local experts are seriously considering the establishment of a local certification initiative that will spearhead certification in the country. Various environmental NGOs and forest experts are consulting on this.

Future Research

Being a new practice to the country, there are still a number of issues that need to be resolved with respect to forest certification. Forest certification is expected to bring about better forest management and also enhance incomes of those dealing in products from certified forests. Research is needed in this area to ascertain the actual impact of certification in terms of improving forest management and improving incomes of forest products manufacturers and traders.

The following are important aspects of research that should be done in Zambia:

- *Ecological Baseline Studies*. A lot has been said about the degraded status of forests. This has, however, not been quantified and documented to provide comparative baseline data so that once certification has been implemented, it would be possible to measure the impact of management regimes on a particular forest area.
- *Economic Baseline Studies*. Whereas certification is hailed as bringing about increased economic returns, there is need to quantify the economic impact of certification on various economic sectors such as the community, the timber companies, and the economy as a whole, in order to ascertain whether the improvements in incomes are actually due to certification or better management of businesses.
- *Establishment of Better Practices/Standards*. Indigenous forest management practices do not exist in Zambia, although there is a lot of information on how to manage forest plantations. There is therefore a need to establish best practices and adopt these as standards of forest management. At the moment the best practice is to cause as little disturbance as possible to the forest environment. There is no data to justify this as the best practice for the Miombo forest that is prevalent in the country.

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ACRONYMS

AU	African Union
CDC	Commonwealth Development Corporation
CDO	Community Development Organization
COMESA	Common Market for Eastern and Southern Africa
ECAZ	Environment Conservation Association of Zambia
EIA	Environmental Impact Assessment
ECZ	Environmental Council of Zambia
FD	Forest Department of the Republic of Zambia
FSC	Forest Stewardship Council
GMA	Game management area
Ha	Hectare
IRDP	Integrated Rural Development Programme
JFM	Joint forest management
Km	Kilometer
Ltd	Limited
MCL	Muzama Crafts Limited
MCOSC	Mpongwe Coffee Organic Smallholder Cooperative
MDC	Mpongwe Development Company
MENR	Ministry of Environment and Natural Resources
NGO	Non-governmental organization
NPP	Ndola Pine Plantations Ltd
NWBP	North Western Bee Products Ltd
NWFP	Non-wood forest products
NZG	Norzam Glulam Limited
SADC	Southern African Development Community
SGS	Société Générale du Surveillance
SNV	The Dutch Development Agency
UK	United Kingdom
UMT	Uchi-Mukula Trust
UNCED	United Nations Conference on Environment and Development
USA	United States of America
VAT	Value-added tax
WPI	Wood Processing Industries Limited
ZAFFICO	Zambia Forestry and Forest Industries Corporation

Conclusion

Benjamin Cashore, Fred Gale,** Errol Meidinger,*** and Deanna Newsom*****

Forest certification has presented those seeking to ameliorate enduring environmental and social problems one of the most innovative policy designs of the last half-century. By turning to the market place, it sidesteps governmental arenas many criticize as inadequate, as well as gridlocked international negotiations that have consistently failed to achieve a binding global forest convention. While sometimes described as a narrow "policy instrument," forest certification has turned out to be considerably more, stimulating an intensified global dialogue on how to implement sustainable forest management, and fostering institutional dynamism at the international, national and local levels. At the same time, numerous challenges have emerged about how to institutionalize support for forest certification across the market's transnational supply chain, including the difficulty in simultaneously ensuring that the certification program's standards are strong enough to make a difference, while not being so burdensome that the costs of compliance outweigh existing and future economic benefits.

These dynamics provide the context in which to address three key questions surrounding the emergence and institutionalization of forest certification globally. First, why is it that certification has received considerable interest and support from industrial forest companies and commercial forest owners in North America, Western Europe, and Eastern European transitioning countries, but more limited, albeit variable, support within Oceania, Latin America, and Africa (with important exceptions such as in South Africa)? Second, why have some forest firms and owners chosen to support the Forest Stewardship Council, whose institutions do not permit business interests to dominate and which attempts to provide a global approach, and why have others chosen to support FSC competitors – now largely housed under the Program for the Endorsement of Forest Certification (PEFC) – whose policy processes give a greater role to forest owner and business interests and whose program explicitly champions national sovereignty?

The third question concerns the transience or durability of existing limited support for certification in developing countries. That is, does the explanation to our first and second questions have to do with the limited *time* that certification has had to institutionalize there (after all, in 1995 there was limited support for forest certification in industrialized countries), or are there factors within developing

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countries that simply make it impossible for widespread support and adoption to be obtained? Addressing this last question will also shed light on two competing viewpoints seen in international dialogues: the claim that certification can only work when governments have the capacity to oversee and develop democratic institutions and policy versus the claim that certification's greatest benefit is its influence over behavior in countries where governments lack the capacity to enforce, or in some cases develop, meaningful forestry regulations.

This conclusion reflects on these questions in the following analytical steps. First we review general support for forest certification in our cases – which, following our introductory chapter's review of the amount of land certified, undertakes a more qualitative assessment of the various types of support that emerge from the preceding pages. Second, reviewing the case studies, we identify the key factors that appear to facilitate and hinder efforts to build forest certification, and reflect on what this means for whether further institutionalization is possible or insurmountable. This section takes care to assess the factors we identified in the research template (see Introduction, page 20) as well as other factors, such as regime change, that were not explicitly incorporated in our original model. Third, we identify *existing* effects that forest certification *is* currently having which may not register as global trends, but which have been significant locally. This analysis ranges from whether certification improved a specific local resource problem to analysis of forest certification in fostering policy learning and enhanced multi-stakeholder participation in policy processes generally. Fourth, we reflect on the potential of forest certification in the future and associated research needs that arise. This section develops hypotheses about how support might eventually institutionalize, including such issues as whether certification in the tropics might need to follow a "Fair Trade" model and emphasize at least initially, social issues, such as community and rural livelihood (Taylor 2005).

Support for Forest Certification

Our case studies demonstrate considerable variation in support for forest certification across regions, subregions and actors.

Regional and Sub-Regional Support

The highest level of support for forest certification among the four regions is in Eastern Europe and Russia. This support is evident not only in the certification statistics presented in the introductory chapter (Figures 1 and 2, page 9), but also in the commitments recorded by our case study authors of state and non-state actors to the certification process. Within the region, Poland stands out as being highly committed to forest certification, but the major factor that motivated it to endorse FSC-style certification so heavily – defending state management against possible privatization – is also evident in Estonia and Latvia. In each case, this strategy was also reinforced by the expressed need to access European markets. Russia is more ambivalent toward certification and has been unwilling to endorse a particular scheme. However, there is

considerable and growing interest in certification in the western part of the country. This too reflects the importance of retaining access to Western European markets, which, accurately or not, are widely believed to demand certified products from Eastern Europe.

In contrast to Eastern Europe, forest certification is much less institutionalized in other regions, perhaps most especially in Africa. In Gabon, Uganda, and Zambia, forest certification has a tentative status. It is employed in Uganda as a mechanism to verify a Dutch-sponsored carbon offset project, and in Gabon and Zambia to support a small number of producers targeting overseas markets. South Africa is the big exception in this region, with strong support for certification from large, privately-owned plantation companies producing for EU and U.S. markets. We also note a correlation between Eastern Europe and Africa over market access issues. During the 1990s and early 2000s, the Eastern European countries under review that adopted forest certification dramatically improved their access to European markets, while at the same time, heavily export-dependent Gabon saw its European market share decline while its Asian market share increased (particularly in exports to China). While more research needs to be done to assess whether a direct relationship exists between the shifting markets of export-dependent countries in Africa and Eastern Europe, our cases illustrate the need to assess the impacts of certification in a global and comparative context.

Certification has received some support in Latin America and Asia. It is more strongly institutionalized in Latin America, with Bolivia standing out as a country that has invested heavily in certification to support sustainable forest management in conjunction with its New Forest Law, introduced in 1996. In Guatemala, too, the government used certification to negotiate with other civil society actors on arrangements to enable logging within the Mayan Biosphere Reserve (MBR) multiple-use zone, preventing it from becoming an exclusive conservation zone. In contrast, FSC certification has had difficulty becoming institutionalized in Brazil, where industry resistance has led to the development of an FSC competitor scheme, CERFLOR, although this may indicate that the institutional practice of certification is also taking root in Brazil.

In the Asia Pacific a tremendous amount of energy has been devoted to certification, but results on the ground are quite disappointing. In large measure the energy has been devoted—in Indonesia and Malaysia—to developing competitor schemes to FSC to meet the concerns of domestic industry and to satisfy demands for state sovereignty (although there is increasing interaction between the FSC and the domestic LEI program). Actual FSC certification on the ground in both countries is quite marginal. Recently, MTCC certified at the stroke of a pen the states of Peninsular Malaysia, dramatically increasing hectares certified, although the degree of environmental and social protection provided by this scheme remains in dispute.

Governmental Support

Across our case studies, huge variation exists in the degree of governmental support for forest certification. In several countries, governments have driven the process by

requesting FSC certification of state forested lands. While this is especially true of Eastern European countries like Poland, Latvia and Estonia, governments in Latin America and Africa have also seen FSC as a solution to specific policy problems. In Uganda, certification was used by the Dutch Electricity Generating Board (SEP) to verify the appropriateness of the forest management practices of a carbon offset project run by its subsidiary, the FACE Foundation. In Mexico, federal resources have been used in cooperation with NGOs to subsidize certification assessment costs, while in Guatemala, FSC solved the problem of balancing environmental conservation of the Maya Biosphere Reserve (MBR) with commercial logging to provide economic opportunities to local communities.

While some governments have wholeheartedly supported FSC certification, others have vigorously objected to this form of external civil society regulation by helping to develop alternative, competitor schemes such as CERFLOR in Brazil, MTCC in Malaysia and LEI in Indonesia. Such schemes are viewed by their respective governments as preserving national autonomy and sovereignty and as being more compatible with domestic circumstances. Invariably, however, such schemes have difficulty obtaining international recognition through the timber chain and have come under pressure from environmental and social actors for their deficiencies. The practical consequences are that those being certified under them also often seek certification under FSC, or defend their programs by claiming that they have the same, or similar, environmental and social benefits as the FSC would provide.

Finally, for a number of governments, certification has been a non-issue. Many remain mostly unaware of the approach, or if aware, simply indifferent, neither endorsing nor condemning the FSC. In the Solomon Islands and Papua New Guinea (PNG) for example, and despite some familiarity with certification via externally funded projects in the case of PNG, little interest has been shown to date in this new approach to forest management. Instead, government officials have focused much of their attention on traditional regulatory arrangements through the development of forestry codes of practice. The situation is similar in Africa, where governments likewise have not paid a great deal of attention to certification.

Industry Support

Large industry, like government, varies considerably in its support of forest certification. In South Africa, 80 percent of the plantation sector supports the FSC, which it has found to be a solution to market access difficulties. In Brazil, too, managers of plantations have been more responsive to certification than have many of the companies operating in the Amazon. In Russia, some large companies exporting timber to European Union markets have also endorsed FSC certification, having come under pressure, or influence, of Scandinavian companies.

Despite such endorsement, however, large industry in a number of other jurisdictions has vigorously opposed FSC and worked tirelessly through its industry associations (and at times with governments) to develop alternative schemes. The Indonesian timber industry, for example, initiated its own scheme in the early 1990s in response to the FSC threat—but later was obliged by the Indonesian government

to participate in a broader process that over time gave rise to LEI. Revealing the dynamic nature of the role of competitor schemes, the Indonesia study reveals that through policy learning and international pressure, the LEI now coordinates its efforts with those of the FSC. In Brazil, the industry worked through the country's national standards setting agency (INMETRO) to develop a scheme—CERFLOR—that would compete with FSC and better correspond to industry preferences.

While large industry support for FSC certification has been variable across and within regions, community-based operations have been generally more receptive. In most of our case studies, it is clear that community groups supported the idea of certification in principle, with many seeking to become certified, often assisted by external aid agencies. Community support for certification, however, has tended to wane after receiving FSC certification—with communities facing a range of problems in maintaining their certificates that result from high costs, low economic benefits, inadequate integration into global production chains and problematic management arrangements.

Civil Society Support

FSC certification has been most heavily endorsed by environmental organizations, which have played a crucial role in its initiation in several countries. In our case studies, WWF emerges as a key environmental NGO with national offices around the world that were pivotal in introducing the idea of certification within the local forest policy community and in funding practical projects to prove its worth. Likewise, the Rainforest Alliance has played an active role, with its SmartWood program certifying the first-ever developing country forest operation, Perum Perhutani, in 1990, and its TREES program assisting certified community forestry operations in Mexico and elsewhere to find international buyers for their products.

However, not all environmental NGOs support certification in all jurisdictions. In Indonesia, the World Rainforest Movement, allied with local forestry NGOs such as WALHI, called for a moratorium on FSC and LEI certification pending resolution of indigenous peoples' conflicts. In Gabon, environmental NGOs objected to the certification of Leroy Gabon due to the absence of a management plan, poor stakeholder consultation processes, and the presence of a neighboring protected area – efforts which ultimately resulted in Leroy Gabon's decertification. More recently, a large number of NGOs including the Native Forest Network, Robin Wood, World Rainforest Movement and the Swedish Society for Nature Conservation (Native Forest Network *et al.* 2005), have called for a moratorium on the certification of forest plantations pending the outcome of an FSC review of their environmental, social and economic consequences.

Perhaps most under-represented in our case studies are social actors – especially those that can claim to genuinely represent forest workers. This appears to reflect the relatively poor organization of social interests in the forestry sector. With respect to workers, some governments still do not permit independent unions to form, while in countries that do, forest workers still find it difficult to become organized, most often due to the seasonal and casual nature of the work. Even when forest workers are

organized and represented, however, union leaders often view environmental and conservation issues through a rather narrow lens, focusing on the potential negative impacts of supporting forest certification on jobs, wages and entitlements. Ironically, in many jurisdictions our case study authors report significant improvements in labor conditions – established wage rates, timely payment of wages, improved safety equipment and practices, better health and benefits packages, better training – but these appear to have occurred without the active involvement of the labor movement.

Factors Facilitating and Hindering Efforts to Institutionalize Certification

What factors account for the observed diversity in regional, sub-regional and actor support for forest certification? Our template identified four key factors: dominant forestry problems, public policy responses, land ownership patterns and market orientation. As a first approximation, interactions among these four factors, set out in Tables 1 through 4 below, explain why forest certification was facilitated or hindered in a specific region or sub-region.

Asia-Pacific

In the Asia-Pacific region, the general structural conditions for effective certification have not been present (see Table 1). Countries in the region are responding to a large number of domestic problems in the forest sector, most especially rampant deforestation and forest degradation due to corruption, illegal logging, lack of enforcement capacity and a heavy emphasis on the forests' timber values to the exclusion of their environmental and social values. In addition, in Papua New Guinea and Solomon Islands, the industry is in the hands of foreigners who lack a long-term commitment to forest operations. In response, governments in the region have generally sought to introduce reduced impact logging (RIL) via logging codes of conduct (PNG and SI) and through nationally-based forest certification schemes (LEI and MTCC). However, RIL only addresses the technical aspects of how logging is done—reducing the degree of collateral damage from forest activity but failing to tackle a myriad of other forestry, environmental and social issues. While FSC certification is well placed to bring stakeholders together to address these additional forestry, environmental, social and indigenous peoples issues, governments in the region, in collaboration with powerful industry groups, have constituted a formidable barrier to its introduction.

These forest problems and policy responses interact with two other factors that play an especially important role in the region—tenure arrangements and market orientation. The Asia-Pacific region is bifurcated with respect to official tenure arrangements, with land rights formally vested in the state in Malaysia and Indonesia and in traditional customary tenures in PNG and SI. While many environmental NGOs presume that customary tenure constitutes a suitable arrangement for the introduction of FSC-style certification, our case studies suggest a much more complex and problematic outcome. Communities operating on customary tenure lands encounter numerous difficulties implementing forest certification in practice,

despite their strong desire to do so. These difficulties relate to lack of community managerial capacity in general, as well as specific forest management capacity to produce sizeable volumes of good quality timber in a timely fashion for foreign markets. In addition, communities have found the direct and indirect costs of certification high in relation to the benefits, resulting in an increasing number of them deciding not to renew their certificates.

In contrast, large-scale operations in the region appear to be better positioned to engage with certification should the demand arise. Here, however, our fourth factor exercises a dominant influence—the overwhelming focus of all countries in the region on production for the non-environmentally sensitive timber markets of Asia, especially China, Japan and Korea. Given this orientation, whether for raw logs from PNG and SI or processed panels from Indonesia and Malaysia, most timber companies in the region do not see the need to adopt a high-level certification system like FSC. The general industry consensus is that FSC imposes high costs without resulting in tangible benefits in the form of increased market access, price premiums or competitive advantages.

Interestingly, our four factors can also be used to understand better those fascinating exceptions to the generally inhospitable climate for FSC certification in the Asia Pacific. Across the region, as noted in the Regional Overview of the Asia-Pacific section, there have only been a total of 12 FSC forest management certificates issued—five community forest, three plantation, and four natural forest operations—with only five operational in 2004. Of the five operational certificates, none was a community forestry operation, signaling the extraordinary difficulties confronting such organizations. While three of the five operational certificates were for natural forest management (the predominant source of most timber across the region), notably two of the five were for operating plantations.

Eastern Europe and Russia

Table 2 outlines the various factors affecting forest certification in the Eastern European and Russian cases. In comparison to the other regions, the adoption of forest certification in Eastern Europe and Russia has been relatively straightforward. Although some of the region's forests, particularly in eastern Russia, have suffered serious damage, most appear to be in relatively good shape. Management capacity, while seriously challenged by the transition process, is also fairly good. For all but central and eastern Russia, the desire to maintain ready exports to Western Europe eased the adoption of certification. In the Balkans and Poland, moreover, FSC certification seems to have been seen as a way of validating the quality and capacity of state forest management organizations, although it was also used as an avenue for policy and management. In this way, certification was able to attract broader social support necessary to the continuation of forest management operations. Finally, the transnational environmental NGOs often provided key resources to demonstrate the nature and viability of the international management standards embodied in the FSC system. They were also relatively skillful in drawing upon existing experts to bring these ideas into the larger policy world.

Table 1 Factors affecting the emergence of forest certification in the Asia-Pacific region

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
Indonesia	Widespread corruption; illegal logging; lack of enforcement capacity; over-emphasis on timber values; conflict over indigenous peoples' customary rights; shifting cultivation; plantation agriculture; large-scale forest fires.	Devolution of responsibility to sub-national levels; anti-corruption campaigns; improved practices via Indonesian Selective Logging and Planting System.	Land vested in the state and leased to forest concessionaires; customary tenure widespread but not recognized by the state leading to significant levels of conflict.	Focus on value-added production; substantial exports to non-eco-sensitive Asian markets (China, Japan, Korea); some eco-sensitive markets in Europe.	FSC certification mostly hindered due to non-resolution of indigenous peoples' rights question and lack of ecosensitive markets in Asia; National scheme (LEI) facilitated due to concerns over sovereignty, less emphasis on social and environmental issues, and avoidance of indigenous peoples rights issues.
Malaysia	Over-emphasis on timber values; lack of enforcement of existing legislation (especially Sabah & Sarawak); shifting cultivation; plantation agriculture; conflict over indigenous peoples' customary rights.	Marketing campaigns in eco-sensitive product markets; promotion of Malaysian silvicultural system.	Forest land vested in states, which lease to concessionaires; customary tenure widespread but not recognized in most cases leading to conflict, especially in Sabah & Sarawak.	Focus on value-added production, but less so in Sabah and Sarawak; substantial exports to non-eco-sensitive markets in Asia (China, Japan, Korea); some eco-sensitive markets in Europe.	FSC certification mostly hindered due to non-resolution of indigenous peoples rights questions and lack of eco-sensitive markets in Asia; National scheme (MTCC) facilitated due to concerns over sovereignty and less emphasis on social and environmental issues and avoidance of indigenous peoples rights issues.
Papua New Guinea	Foreign domination of forest industry; widespread corruption; illegal logging; lack of enforcement; shifting cultivation; over-emphasis on timber values.	Establishment of a resource development and allocation process; introduction of a Logging Code of Practice, emphasizing Reduced Impact Logging (RIL); work commenced on ITTO C&Is.	97 percent of land under customary tenure arrangements.	Focus on raw timber production; substantial exports to non-eco-sensitive markets in Asia (China, Korea, Japan); foreign domination of timber industry.	FSC certification mostly hindered by lack of interest of foreign dominated industry and government indifference; NGOs work to introduce FSC certification worthwhile but encounters several challenges related to fragmented, low-

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
					volume production, low community forest management and managerial capacity, lack of forward
					linkages to national and international timber product chains, and high cost of certification; ITTG facilitated community-based certification by providing small markets in New Zealand/Australia.
Solomon Islands	Foreign domination of forest industry; widespread corruption; illegal logging; lack of enforcement; shifting cultivation; plantation agriculture; over-emphasis on timber values.	Introduce Code of Logging Practice, emphasizing Reduced Impact Logging; incentives to establish forest plantations.	90 percent of land under customary ownership;	Focus on raw timber production; substantial exports to non-eco-sensitive markets in Asia (China, Korea, Japan); foreign domination of timber industry.	FSC certification mostly hindered by lack of interest of foreign dominated industry and government indifference; NGOs work to introduce FSC certification worthwhile but encounters several challenges related to fragmented, low-volume production, low community forest management and managerial capacity, lack of forward linkages to national and international timber product chains, and high cost of certification.

Table 2 Factors affecting the emergence of forest certification in Eastern Europe and Russia

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
Estonia	Poor forestry regulation and planning; over-harvesting; illegal logging.	Separation of regulation from management; discussion of best practices; growing involvement of NGOs.	40 percent state; 39 percent private; 20 percent still undetermined; private ownership very small and fragmented.	Rapidly growing timber industry; European market was significant, but internal development also important.	FSC certification of all state forests. Notable specific changes in forestry practices as a result of FSC standard setting process. Much of the political debate on forestry took place in the context of the FSC standard setting process.
Latvia	Need to satisfy green buyer demands; illegal logging; low transparency; socialist structure.	Radical reform of socialist structure 1999-2000; division into policy making, oversight, and management functions.	50 percent state; 42 percent private; 8 percent other; private ownership small and fragmented.	Need to keep green buyers.	FSC certification of state enterprises: certification has become a forum for national policy discussions.
Poland	Access to western European markets; coordination with EU policies; challenge to traditional state management system.	Consolidation of state forestry agency control; vigorous efforts to demonstrate best practices; rejection of privatization.	80 percent publicly owned, and the great majority of that managed by the State Forests Agency.	Western European markets key to viability of Polish forestry industry; exports include both finished and raw wood products.	FSC certification quickly adopted, but PEFC effort now also taking root.
Russia	Economic restructuring, ineffective state policy; illegal logging.	Continual restructuring; adoption of a leasing system; growing role of NGOs as external critics.	Complete federal ownership; undefined but often respected local rights to NTFPs.	Rapidly expanding; European market is fairly controlled, Asian very powerful and turbulent.	FSC certification growing relatively quickly in western Russia; much more tentative elsewhere in the country; prospects of other certification systems unclear.

While forest certification has been relatively rapidly accepted in much of the region, however, and is continuing to expand in Russia, it does not yet appear to be deeply embedded in management practices. Domestic public support for certification also appears to be tepid at best. Therefore it is difficult to be confident of its ultimate level of institutionalization.

Latin America

In Latin America, as Table 3 indicates, structural conditions for successful certification are present in some countries and sectors, but absent in others. In places where governments have seen certification as a means of reaching their own goals – such as technical assistance among community forestry operations or responding to outside pressure for forest sector reform – certification has generally been facilitated by government incentives and actions. In Guatemala, for example, the government used FSC certification to justify creating forestry concessions in the Maya Biosphere Reserve multiple use zone. In Bolivia, the government felt pressure for reform and created a forestry law that would facilitate certification, while in Mexico the government saw certification as a means of reaching its own goals of capacity building in community forestry operations, and created incentives to make certification accessible to this group.

However, the predominance of community forestry operations, as seen in Mexico and Guatemala, seems to have facilitated certification in the short term only. While governments and transnational NGOs in the mid- to late-1990s assisted community operations to achieve certification by subsidizing assessment costs and conducting training activities, in the long term, the dominance of community forestry in a region has tended to make certification more challenging. Community operations typically lack business experience and have low efficiency and product quality, making it difficult to access environmentally sensitive markets, which are almost exclusively international. On the other hand, those countries and forestry sub-sectors with high product quality and the business savvy to access international markets have seen more momentum behind certification. The Brazilian plantation sector, which dominates the global short-fiber cellulose market, industrial forest companies in Bolivia, as well as producers in northern Mexico that sell to green buyers in the U.S., have all successfully accessed environmentally-sensitive markets in the U.S. and Europe.

Perhaps the only hindrance to certification that was common to all Latin American case studies was illegal logging. In each of the countries studied, illegally logged forest products were blamed for flooding the markets with cheap alternatives to certified products and driving down prices, making the financial viability of certification even more tenuous. Current efforts to discourage illegal activity in Latin America must be supported and strengthened. Still, in some regions, such as Brazil, legal deforestation may be as destructive as illegal logging.

Table 3 Factors affecting the emergence of forest certification in Latin America

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
Bolivia	Illegal logging; high-grading of valuable species such as mahogany; social conflict over preferential access of industrial timber companies to forest.	Mounting societal outcry about unsustainable forestry and weak enforcement of forestry laws led to reform through the creation of the Forestry Law of 1996; changes to fee system reduced corruption in the concession allocation process and discouraged overharvesting.	All forests are owned by the government, which allocates 40-year concessions mainly to industrial companies but also to some local communities and indigenous peoples; minimal private land.	50 percent of production exported, mainly as secondary products (e.g. furniture) to U.S. and UK.	FSC certification facilitated by financial support from NGOs and by the Forestry Law of 1996, which prepared companies and landowners for certification by building a solid legal, technical and administrative forestry platform; certification of industrial companies also facilitated by strong sales to green markets in Europe and North America though community forestry operations have had difficulty accessing these markets; certification hindered by competition with products stemming from illegal logging.
Brazil	Illegal logging in the Amazon; conversion of endangered coastal forests to plantations; legal deforestation.	Federal Forest Code requires sustainable forest management but provides little specific guidance; federal enforcement activities are criticized as weak and sometimes corrupt; several state governments in the Amazon region have created pro-active forest policies, including support for community forestry operations and pilot concessions.	Widespread tenure disputes in the Amazon, although considerable amounts of forests there are in public lands; the federal government proposal to create a state "production forest" covering 10 percent of the Amazon involves these lands; tenure arrangements are better defined in the Atlantic Forest region.	Large majority (86 percent) of timber from Amazon consumed in Brazil, mostly for construction; Brazilian plantations export-focused (primarily Europe and Japan) and dominate global cellulose markets.	Green export markets, corporate social responsibility and image issues facilitated certification of plantation forests, which currently make up around two-thirds of certified forests in Brazil; certification is hindered in Amazon by domestic markets that are flooded by wood from rampant illegal logging and deforestation; CERFLOR certification scheme recognized by the PEFC in 2002 and developed with support from industry and participation of government.

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
Guatemala	Conversion of forests to agriculture; illegal logging, especially of high value species (mainly mahogany); use of forests for firewood.	In 1990, the government created the 2.1 million hectare Maya Biosphere Reserve to conserve biodiversity-rich forests of the Peten region and revoked all logging permits within the reserve.	An even mix of state, community and private lands; tenure conflicts on 5 percent of land.	Nearly all (90 percent) domestic production is consumed domestically; high quality products exported.	In an effort to assure NGOs that new industrial forestry concessions within the Maya Biosphere Reserve Multiple Use Zone were well-managed, the government made FSC certification a requirement of all concession holders within the reserve; financial support of FSC certification by international donors also facilitated the process; certification activity outside the reserve is minimal; low production volumes and technical capacity of community forests make accessing certified markets difficult.
Mexico	Illegal logging and legal deforestation; low technical capacity of community forestry operations.	Government initiatives (through CONAFOR) provide technical assistance and training for communities and ejidos and financial support for silvicultural activities, sometimes in partnership with NGOs; a government department was created to develop new markets for Mexican forest products.	80 percent forest lands community-owned, 15 percent private, 5 percent government.	Low level of value added, with the exception of a few firms in Durango and Chihuahua; 65 percent of production exported, primarily to the U.S.; recently, sharp increase in forest product imports to Mexico.	FSC certification facilitated by Mexican government, which sees it as a means of reaching community capacity-building goals and provides financial and technical assistance for certification, sometimes in partnership with NGOs; also, U.S. demand for certain certified products facilitated certification in northern Mexico; however, lack of approved FSC standard hinders certification and low production volumes and technical capacity of community forests make accessing certified markets difficult.

Table 4 Factors affecting the emergence of forest certification Sub-Saharan in Africa

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
Gabon	Degradation of forest land of "exceptional bio-diversity" which currently covers 20 million hectares or 4/5ths of land base; limited institutional design, low enforcement capacity, lack of trained staff, limited scientific knowledge of complex forest ecosystems; (low population density means that deforestation is not as significant a problem as in other African countries.)	In 1992 Gabon government took a "top down" approach, reforming institutional and legal frameworks, including development of forest planning and harvesting. New forest code adopted required private concessionaires to manage forests according to specified sustainable forestry goals; creation of community forestry and local development initiatives financed by logging operations.	All forests part of publicly owned "national forest domain" comprised of two sections: permanents forests that cannot be converted to other uses and non-permanent forests: rights to harvest forests come through forest concessions (between 50,000-200,000? hectares (which cover 11 million hectares); "associated forest permits" for Gabon nationals that cannot exceed 50,000 hectares, but can be managed in conjunction with concession lands; and "mutual agreement" permits that Gabonese citizens can obtain to harvest 50 trees or fewer.	Strong reliance on timber export markets has resulted in forest sector being second largest source of Gabon's export revenues; the domestic market remains very small – and only small scale businesses are interested in supplying wood products to the national market traditionally, France and other European countries constituted Gabon's dominant timber market; however since 1995 Gabon's most important market has shifted to China and other parts of Asia; in 2001 Gabon exported more than 2.5 million cubic meters of raw round logs, with about 45 percent of it going to China (OIBT 2002).	Limited demand for certification has come from external markets; aid projects from external NGOs have focused on non-timber products such as honey and wild mushroom certification; one pine plantation certified in anticipation of higher prices they would command in foreign markets.

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
South Africa	South African plantation forest industry practiced in high rainfall, mostly grassland sites, with no natural forests; concerns about impact of forest operations on reduction of stream runoff on ecologically sensitive mountain catchments; forest work force affected by extremely high HIV/AIDS infection rates.	Since 1972, permits must be obtained for any new tree plantings; since late 1990s forestry has been classified as a Stream Flow Reduction – afforestation permits replaced with water-use licenses; forestry companies also required to pay a water tax; these efforts, alongside requirement that new afforestation must pass intensive environmental impact assessment, have reduced expansion of plantation industry.	Forestry comprises 1.1 percent of South African's land base of 122.3 million hectares; private ownership-dominated, with 12 timber companies holding vast majority.	Forestry among South Africa's top exporting industries; products for export included pulp, packaging, paper and board and wood chips; Europe important market.	FSC acceptance of plantations established pre-1993 and government regulations of plantations in 1990s created climate highly hospitable for industry to seek FSC certification; more than 80 percent of South Africa's timber plantations are FSC certified.
Uganda	Historically overharvesting of forests with exceptional biodiversity – estimate at loss of 13-15 percent per decade; illegal logging, inadequate capacity to enforce existing laws; poaching of bush-meat in protected areas; White Rhinos extinct in the wild.	In 1974, Amin government land decree declared all land to be under state control; in 1990s championing of decentralization and established Uganda Wildlife Authority & privatization occurred; then National Forest Authority to oversee enhanced system of protected areas and plantations; establishment of "timber stamping" tracking to stop illegal trade, control harvesting in plantations and natural forests, and overall data improvement.	Gazetted (protected areas) managed by "parastatals," government (public) owned land, and private ownerships consisting of four types of tenures: *Customary* (limited to a description or class of persons); *Freehold* (holding of land in perpetuity subject to statutory and common law qualifications); *Mailo*: under specific requirement of the "Uganda Agreement;" *Leasehold*: (holding of land for a given period).	Government 1994 ban of round wood timber (logs) exports has limited role of external markets; most if not all timber consumed locally; Kenya, Sweden, China, Belgium, Germany top list of export markets which FAO ranks as "insignificant."	Government ownership facilitated early support of NGOs in helping National Resistance movement government to achieve conservation objectives; idea of forest certification has not threatened government, given historical NGO participation in facilitating government objective; given lack of external markets, certification could be used to seed "certified emissions reductions" (CER) status, as carbon credits under Kyoto's Clean Development Mechanism (CDM) for protection of some of its

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
					critically important areas of forest biodiversity; public land ownership and reliance on export markets is expected to facilitate future certification efforts; however, shift from Europe to China during 1990s may lessen this influence; exceptional biodiversity has led to concerns about certifying operations in Gabon, with the only FSC certificate awarded eventually withdrawn following international criticism.
Zambia	Deforestation and forest degradation; illegal logging; poverty in forest dependent communities; lack of enforcement and resources.	Development of new forest policy in 1998 which introduced "Joint Forest Management" as a practice to encourage communities and other stakeholders participation in management of forest resources.	All land is publicly owned, divided among State land (six percent); Reserve (no open access) land, 35 percent; Trust land (open access), 50 percent; National Parks (no forest extraction allowed, managed for biodiversity), 9 percent.	Before 1964 net importer of forest products (mainly softwood for construction); development of forest plantation led to net exporter (softwood timber and other forest products) after 1964; major timber export markets as of 2001 were South Africa (38 percent). the United States (27.15 percent); and Zimbabwe 15.48 percent); firms and communities are granted the right to harvest through "forest certificates."	

Sub-Saharan Africa

The African cases are important for revealing, with the exception of South Africa, the significant challenges for institutionalizing forest certification in Sub-Saharan Africa, but also the unique obstacles and opportunities within each country. One facilitating factor is that, with the exception of South Africa, the land is publicly owned – a feature which poses fewer transaction costs than is the case for smaller ownerships considering certification. However, government capacity to enforce existing laws and to employ forestry experts is so weak that, until addressed, it is unlikely that public ownership can be used to Africa's competitive advantage. Ironically, FSC-style certification in South Africa was supported by its privately-owned plantation industry, which covers just over one percent of this country's land base, for highly unusual reasons – it wanted to get approval for operations that have been criticized for negatively impinging on natural, treeless ecosystems. In this case, plantation owners, who did come under significant scrutiny from European export markets, saw FSC certification as a way to maintain existing foreign markets.

The role of export markets in the other cases varied considerably – Uganda's export market has been deemed "insignificant" by the Food and Agricultural Organization. Zambia has become a net exporter, owing to its 1964 policy to encourage plantations, but its three leading export markets are South Africa, the United States, and Zimbabwe, respectively, rendering insignificant the real and/or perceived higher demand from European markets for certified products. Arguably as a result, the limited interest in forest certification was sparked through aid projects promoting forest certification as a way of expanding markets for non-timber forest products such as honey and wild mushrooms. As curious, while Gabon relies more heavily on export markets than any of our other cases, its market share of the European market, as discussed above, declined after the mid-1990s as FSC-friendly Eastern European countries increased their access. Instead, Gabon shifted its emphasis to Asia, with 45 percent of its export market going to China, which currently places almost no emphasis on certified products (although recognition of this has led to increased NGO effort to create interest in, and awareness of, forest certification in China).

Certainly the forestry policy problems would seem to give support to encouraging certification, since issues of biodiversity (especially Gabon), deforestation (especially Uganda and Zambia) and subsistence use confront basic worldwide concerns about global forest degradation. Indeed, concerns exist that previous efforts, including 1970s efforts that emphasized "top down" approaches, followed by 1990s "bottom up" decentralization efforts championed by the World Bank and other international aid agencies, (Glück, Rayner and Cashore 2005) cannot, by themselves, be completely effective and appear to provide an opening for certification as part of a suite of policy options.

Finally, factors such as regime change, poverty, famine, disease and civil war that challenge this continent on every level have significant impacts on what any kind of policy initiative – public or private – might accomplish in the current context. What our review does show is that if these fundamentals are tended do, it is possible, though not inevitable, that forest certification could still emerge as an important tool for promoting responsible forest management.

Existing Effects

Despite its very uneven institutionalization across the globe and within regions, it is clear that where it is being implemented, forest certification is having a range of positive effects on power relations, workers and communities, business, and the environment. In this section we present an aggregated analysis of what we consider to be forest certification's major effects, drawing examples from all case studies.

Forest Policy Network Effects

FSC certification – and certification more generally – has exercised one of its most important effects on power relations within the forest policy network. These changes in power relations have taken two forms broadly – an increase in the inclusiveness of the forest policy network and a rebalancing of power relations away from business-industry clientelist networks to more pluralistic arrangements involving environmental, community, and indigenous peoples' interests. Another observed effect of FSC certification as a consequence of the creation of a larger, more inclusive forest policy network is an increase in cross-interest deliberation, leading parties not merely to articulate their positions but also to alter them based on a greater appreciation of the complexity of the problems and consequences of proposed actions.

We observe an increase in the inclusiveness of forest policy networks in several case studies. It is most clearly evident, perhaps, in the Latin American and East European/Russia cases, where case study authors highlight shifts in authority from government and industry partnerships to a broader array of actors. In Mexico, Fonseca argues that certification has increased forest communities' and *ejidos*' access to national and state-level resources, with the latter now viewing community forestry management as important and deserving of attention. In Guatemala, too, Carrera *et al.* observes a substantial increase in the activity of individuals and organizations in relation to decision-making. This observation is confirmed by Ahas *et al.* for Estonia, where discussion occurred among more than 40 organizations across a diversity of sectors. Tysianchiouk observes that in Russia, especially in the Arghangelsk region, the working group formulating the FSC regional standard included forestry specialists, environmental NGOs, business representatives and administrative officials, a stark contrast to the previous arrangements that included only forestry experts and governmental agencies.

While FSC-style certification has been hindered in much of the Asia-Pacific, competitor schemes have had to respond to criticisms concerning the narrowness and exclusivity of their consultative arrangements. These criticisms were especially evident in Indonesia, where the decision to pursue a national forest certification scheme through LEI included a commitment to move beyond a narrow business-government policy circle and adopt a broader, multisectoral approach. As Muhtaman and Prasetyo note in their study, the process of establishing and developing LEI, as well as endeavoring to make it more compatible with FSC, led to a steady increase in the range of stakeholders being consulted and integrated into the process,

culminating in LEI's stated intention to become a constituency-based organization. While this ratcheting-up effect on the forest policy network is not quite so evident in Malaysia, Shahwahid argues that proponents of MTCC are having to reckon with the shifting power relations among actors, especially to NGOs as a consequence of the pressure they can apply in foreign markets for action to deal with the social and environmental consequences of unsustainable and illegal logging.

In addition to the simple increase in the size and diversity of the forest policy network, an even more interesting effect of FSC certification is the promotion of cross-stakeholder dialogue and deliberation on the meaning of "sustainable ecosystem-based forestry management" that has in some settings resulted in a reconfiguration of interests. While this point is most clearly made in the case study of Estonia by Ahas *et al.*, their observation is recapitulated in other studies. Ahas *et al.* note that their interviews "indicate that certification has caused changes in the very thinking and attitudes of many people in the Estonian forestry sector" with "more attention given to environmental and social issues." This reconfiguration of interests is evident in the Latvian case, where Actins and Kore observe that "the certification process has opened the doors for collaboration among the various forest sector groups" and the certification process has been "helpful in improving cooperation and communication among forest sector groups."

The capacity of forest certification processes such as FSC's to transform the social construction of interests is not confined to Eastern Europe/Russia. A similar translation in attitudes to specific constituencies is evident in Mexico, where Fonseca observes how government perspectives on the significance and importance of forest communities and *ejidos* changed with the introduction of forest certification. Such attitudinal change is not limited to those participating in the certification process, and extends at times to a reappraisal by the public of the contribution forestry makes to the economy and to society more generally. In a number of our case studies, it is evident that the overall image of the forestry profession has improved as a consequence of forest certification. This is a point made by Quevedo in the Bolivian case study, where he observes that "credibility has increased, at least for certified companies" and that "in general, the forestry sector has a better reputation than 10 years ago." A similar point is made by Carrera *et al.* for Guatemala, when he observes that "with more than half a million hectares certified, the image of the forest sector has considerably improved, bringing together representatives from conservation groups and forest management operations." This transformation in public attitudes to forestry is significant — in part vindicating the view of foresters who point out that practices in agriculture, mining and infrastructure development can be far more environmentally and socially damaging. However, the image of forestry can only be improved once foresters themselves move beyond an exclusively technical focus on growing trees to better understanding of the environmental and social consequences of their actions.

Notwithstanding these generally positive effects of forest certification on the national forest policy networks, some case study authors introduce notes of caution, observing that some constituencies can be empowered, perhaps to the overall

disadvantage of others. In the Brazilian case study, May intimates that "the effect of certification has enhanced the market power of those firms that have assumed leadership in the global market," resulting in the possibility of a "greater degree of concentration in the industry over the past few years." Likewise, Ham notes in relation to the South African case: "Certification has had a negative effect on small-scale timber growers and placed them in a situation where their very existence is threatened." The reasons relate to the economics of certification and, especially, to the high direct and indirect costs per hectare for small operations and the lack of price premiums to compensate.

Social Effects

Certification has had important social effects, especially in terms of community and workers rights. Our case studies clearly reveal some consistency across regions and countries in these social effects, which include improved pay and conditions for workers, the development of community infrastructure, and the provision of training. Country case studies that especially focus on improved social conditions include Gabon and Uganda in Africa, Bolivia and Guatemala in South America, and Estonia, Latvia and Russia in the Eastern Europe/Russia region. Even in the Asia-Pacific region, where FSC certification is much less developed, some improvements in social outcomes have been noted.

Perhaps the most important social effect has been increased attention to worker safety. Quite a number of our case studies observe improvements in certified companies in this regard. In Guatemala, for example, Carrera *et al.* reports an increase in the use of safety equipment, the availability of first-aid kits in logging camps, and the provision of life insurance for workers. In Estonia, Ahas *et al.* note that certification of the state forest agency, RMK, significantly improved arrangements for training, security and health care of staff. In Latvia, worker safety improved too, with the provision of helmets.

In addition to worker safety, several other social benefits have been reported from certification. In Malaysia, Shahwahid reports that a certified operation, PITC, developed two programs to meet its social obligations under FSC, one for the Orang Asli that lived in proximity to PITC's concession and another aimed at developing local industry through the Bumiputra Entrepreneur Development Program. In Gabon, communities have also benefited by increased transparency in the provision of a range of community benefits including roads, schools and health centers. Eba'a Atyi notes that while it is normal practice for forest companies to provide these facilities, "forest certification has made the process more transparent and companies that have certificates are more open to showing records of their contributions to local development." And Tysiachniouk notes that a timber company, Kozikhinski Leskhoz, has contributed money to a "Life Without Drugs" program, financed a hospice, and reconstructed and equipped a local kindergarten in Russia.

Not all social effects have been positive, however. Some of our case studies highlight the potential for certification to have negative social effects. In Solomon Islands, for example, Wairiu notes that women have concerns about their husbands

spending more time on timber production (in part as a consequence of certification) and less time in food production. Other studies report industry concern about the costs of improving social arrangements when, at most, marginal economic benefits can be derived from certification. This was an issue in Estonia, where our authors cite concerns from forest industry representatives and government officials about the negative social effects of certification in reducing timber harvesting levels resulting in lower rates of employment than otherwise.

Economic Effects

Certification has also had important economic effects, both at the level of the firm and more widely. To examine these effects as they are reflected in our case studies, we have divided this section into microeconomic and macroeconomic effects. As a broad generalization, certification is having quite a number of positive effects at both the level of the firm and the level of the economy as a whole. However, the case studies present contradictory data at both levels, indicating the need for further research to clarify more precisely the nature of the effects.

Microeconomic Effects

At the level of the firm, our case studies identify a wide range of positive effects of certification that include improved market access, better prices, more stable contracts, favorable credit arrangements, improved production efficiency, and enhanced public image. Perhaps the most consistent finding across our case studies is reports of improved market access. Fonseca notes that this has been an important benefit to charcoal producers in northern Mexico, who have been able to access markets in the EU and U.S. as a result of becoming certified.

Market access was also increased for Guatemalan producers, reflected in increased production of certified products over the 1998 to 2003 period. Ham notes in the case of South Africa that certification has assisted firms to consolidate and secure existing markets as well as to obtain new orders from overseas companies keen to purchase certified products. Shahwahid makes a similar observation in the case of Malaysia, where he reports that markets for certified timber have been "brisk," with some orders not being met as demand exceeds supply. In Eastern Europe and Russia, too, our case study authors remark on this market access effect. Actins and Kore note that some Latvian producers have benefited from certification by accessing niche markets, while Ahas *et al.* are quite positive about the Estonian case, reporting that "new markets and competition opened for certain products, such as garden and various 'do-it-yourself' products sold on UK markets."

In addition to improved market access, our case studies report the existence in some instances of price premiums for certified forest products. Price premiums appear to be available to most producers in the Asia-Pacific, with Shahwahid drawing on his own ITTO study to report that PITC, for example, received a price premium of 37 percent for sawn timber exported to niche markets. While this premium includes a margin that would normally go to marketing firms (PITC sold its timber

directly, not through an intermediary), it signals nonetheless the existence of a substantial price premium. Shahwahid further observes that different price premiums are associated with different overseas markets, with the highest prices available in Germany. Muhtaman and Prasetyo report that Perum Perhutani in Indonesia received a 15 percent price premium on its timber when it was certified, and these observations on the existence of a price premium are substantiated by Wairiu for Solomon Islands and Bun and Bwang for PNG. Wairiu reports an increase in price from $US100 to $US297 per cubic meter for SIEF timber marketed through VETE.

Despite these positive reports from the Asia-Pacific, price premiums in other regions appear much less evident. In Eastern Europe, the consensus view from the case studies is that price premiums are not being earned, perhaps because there are already quite large volumes of certified timber available from other sources in EU markets. In Africa, Ham quotes a spokesperson from the Department of Water Affairs and Forestry to the effect that no price increase of certified over non-certified wood was observed at auction. In Latin America, Quevedo cites a study by Sandoval indicating that better prices were not received, although this was contradicted by another study by Nebel *et al.* who found price premiums existed and varied between 5 and 51 percent. The overall conclusion is unclear: some producers in some places are clearly receiving very high price premiums for certified timber, while others are not receiving any margin whatsoever. The apparently contradictory findings likely reflect the extremely small samples used, variations in methodology, a focus on different products at different points in forest product chains, with production targeted for different markets and at different times.

While improved market access and price premiums are the two most important theoretical effects of certification, our case study authors draw attention to a number of other important microeconomic benefits. One is increased stability of contracts in the highly competitive and globalizing forest products industry, which enables companies to engage in forward planning and investment, leading to future increases in production and efficiency. Another, noted in several studies (Bolivia, Guatemala, Mexico), is improved efficiency at the level of the firm as a consequence of the need to engage in more planning, inventorying and managing of the forest operation. Finally, several case study authors point to better access to credit markets as a consequence of obtaining certification.

Against these positive effects of certification, however, are several negative effects to which our case study authors also draw attention. The most obvious negative effect of certification is increased costs to the firm. These are identified in the majority of case studies, with several attempts made to quantify the increase. Shahwahid estimates that production costs increased between 15-50 percent based on a study of costs incurred by PITC and KPKKT respectively. Interestingly, Shahwahid's KPKKT study apportions these costs to different groups, with just over one-tenth incurred by the forestry department, two-tenths by the concessionaire, and the remaining seven-tenths by the harvesting contractor. The increased forestry department costs result from incremental expenditures on supervision and monitoring of operations during tree marking, mapping and road design; for concessionaires, in terms of wages on

supervision and monitoring; and for logging contractors, for wages, materials and machinery rental. Ahas *et al.*, while not able to quantify the additional costs, report that there was substantial consensus in Estonia that forest certification increased costs related to training, safety and technology. Staff costs increased as well since it became more important to recruit staff with appropriate technical qualifications. Likewise, Paschalis-Jakubowicz lists the increased costs in Poland as due to restrictions in certain forestry practices (especially the use of pesticides and herbicides) and the introduction of new safety equipment. Finally, Actins and Kore report that forest owners in Latvia incur increased costs from certification ranging from $US0.3 per hectare in state forests and $US6.00 per hectare in private forests.

Turning to Africa, it is clear that the economic effects have thus far been minimal – since the potential of certification, except in South Africa, has yet to be realized. There is no question that in the South African case, certification has been a powerful tool in maintaining and enhancing market access for the controversial plantation industry and for giving it economic advantages following stringent government regulations enacted in the 1990s.

Macroeconomic Effects

A range of macroeconomic effects are theoretically possible from the introduction of certification and our case studies identify some of these. Data limitations do not enable a definitive analysis to be made of these effects. There is evidence from our case studies, however, of the following positive and negative consequences for the economy in introducing forest certification. On the positive side, improvements are noted in taxation collection, market transparency, employment and wages, and investment. Tax collection can be improved via certification since companies undertake to comply with all laws of the country, including those related to tax. This is the most important economic benefit of certification noted in the Gabon case study, where Eba'a Atyi reports that certified companies pay taxes on time, unlike non-certified companies. Paschalis-Jakubowicz also observes improved local tax collection in Poland.

A number of studies suggest that certification has the effect of increasing market transparency, generating positive, economy-wide effects. Ham notes improvements in the operation of the timber chain in relation to South Africa, where defects in production can be traced to individual producers, improving overall quality. Eba'a Atyi notes how certification has made companies more open to showing records of their contributions to local development projects, ensuring that commitments made are implemented, improving overall compliance with contracts. Transparency aids in combating illegal logging, too, which is an endemic problem in many of our case study countries. Ahas et al note that volumes of illegal logs in the Estonian market appear to have dropped following the introduction of certification, since the State Forest Management Centre (RMK) can only purchase timber from legally established companies.

Two other economy-wide effects of certification are suggested in our case studies. The first relates to employment and wages, where several authors observe an increase in employment (in the Ugandan case, for example, the FACE project has become the

major employer in the Mt. Elgon region) or an improvement in wages and working conditions. Increased wages clearly improve purchasing power in local areas, potentially boosting demand for locally produced commodities. Improved working conditions can also have important positive economywide effects, reducing working days lost to sickness and injury. Finally, evidence in our case studies suggests that certification may improve a company's investment attractiveness related to the greater security of its markets, improved management systems, and lower perceived risk. May makes the point in the case of Brazil that private bankers in the country (ABN-AMRO/Banco Real and BASA) are offering investment credit to firms committed to certification. Obviously, if such an observation proves to be more generally true, it would have economy-wide effects in channeling resources that might go to sectors other than forestry.

Offsetting some of these potential positive macro-economic effects of certification are examples from our case studies of negative economic consequences. Perhaps the most widely reported of these is the effect certification has on overall production of timber as a consequence of moving towards a more explicitly ecosystem-based approach to forest management in natural forests. The consequences of this approach, as Ahas et al note for Estonia, is a decline in hectares available for timber production as well as in the per hectare volume produced. A substantial decline in the volume of timber produced clearly has important system-wide consequences, resulting in fewer jobs, increased demand over supply, potentially higher prices in the absence of imports, and potentially reduced processing efficiencies if mills designed for large volumes must make do with less.

It is not possible at this stage to make any definitive comments about the net economic effects of certification. While our case studies do highlight many positive effects, more detailed micro- and macro-economic studies are required to tease out the interactions at both the level of the firm and the level of the economy. There are significant research design issues involved in undertaking such studies that require close attention.

Environmental Effects

Our case studies identify numerous positive environmental effects of forest certification. These come under the headings of forest planning and inventorying, silviculture, biodiversity protection, and monitoring and compliance. While there is broad agreement across our case studies that these effects are real, some authors note a degree of skepticism among a minority of industry and environmental groups, the former arguing that the effects are real but unnecessary and the latter that the effects are illusory and examples of corporate or governmental public relations.

Planning and Inventorying

Several of our case studies argue that an important effect of certification is improved forest planning and inventorying. The point is made forcefully in Carrera *et al*'s. account of certification in Guatemala, where improved management planning in

previously weak operations is cited as a major environmental benefit of certification. Better planning is reflected in more appropriate estimates of harvesting rates, adjusting the length of the rotation and the volume logged to better match local conditions. In addition, five-year plans were developed for each forest operation, preventing "high grading" of stands, and NFTPs were included for the first time in the Petén region. A similar point is made in Ahas *et al.*'s account of certification's environmental effects in Estonia, where RMK is keeping records and engaging in systematic planning to protect endangered species and improve road construction.

Eba'a Atyi notes a similar focus on planning of forest management operations in Gabon, where forest operations have implemented a 30-to-40 year cutting cycle based on growth and mortality estimates and logging damage, and more attention to the impact of the forest road network. Shahwahid also notes an improvement in forest management planning in Malaysia based on reviews of certification audits and comments from state forestry departments. For the state of Terengganu, forest plans had to be redrafted to take account of certification audits and include environmental and social concerns. Indeed, the format for completing the forest management plan itself was changed by the Terengganu State Forestry Department to provide more information on environmental features and community and social participation.

Silviculture

Linked to improved forest management planning and inventorying are changed silviculture practices. Shahwahid notes that in Indonesia mother trees and threatened or endangered trees were marked to protect them against felling, with at least four mother trees required to be retained for every hectare felled. Ahas *et al.* note that prior to the introduction of certification, logging rules and methods were virtually absent in Estonia. Certification has ensured their introduction to minimize negative impacts on ecosystems and soils. In Zambia, Njovu notes a marked contrast between a certified and an uncertified operation, with the former (NPP) being well managed with all silvicultural operations completed and a management plan that is being followed. The contrast is significant, since the two companies were originally one single company only three years earlier and management practices diverged significantly as one became certified and the other did not. In several countries in the Asia-Pacific, certification has improved silviculture practices through the introduction of Reduced Impact Logging (RIL). This is also one of the major environmental effects of certification noted in May's account of Brazil, where, in one example, low rates of timber extraction coupled with low impact extraction methods that use animals rather than machines mitigate excessive biodiversity loss.

Biodiversity Protection

A number of our studies note improvements to forest management practices from certification aimed at biodiversity protection. Njovu notes how NPP in Zambia has reserved areas for their high conservation values and created conservation corridors to improve connectivity through the landscape. Carrera *et al.*, notes that certification

has focused the attention of Guatemalans on the identification of threatened species, protection of seed trees, and habitat conservation. In Estonia, Ahas et al describe the development of an Estonian methodology for biodiversity protection involving reserving key biotopes and leaving snags and dead wood. In Estonia, too, a unique "Spring Truce" has been arranged where no logging takes place between April 15 and June 30 to minimize the disturbance to animals during the breeding season. Tysiachniouk describes how certified companies are required to identify and protect high conservation value forests in Russia, reducing threats of biodiversity loss on certified lands.

Monitoring and Compliance

Several case studies draw attention to how certification has improved forest monitoring and compliance. Ham notes in the South Africa case study how forest certification led to improvement in the system of checks and balances, including the formalization of previously ad hoc adherence to company policies and the systemization of processes to ensure consistent implementation. Practical mechanisms included the development of internal checklists and the addition of staff with environmental expertise. Monitoring has improved in Malaysia as state forestry departments are now committed to incorporating information monitoring environmental impacts, including areas lost or destroyed after logging, the number and length of second roads and skid trails, and the area of log yards.

Training

There is also evidence that much more training is taking place to ensure that staff are aware of environmental issues, can recognize endangered species, and incorporate biodiversity protection into their job requirements. In Estonia, senior corporate managers in certified operations are more interested in environmental issues than previously and extensive training exercises have been held and manuals produced. According to Ahas et al, "These initiatives have in turn changed behavior in everyday forest management and resulted in more close-to-nature forest management practices." Muhtaman and Prasetyo note that companies involved in certification "continuously conduct training of employees and community participants in various topics relating to sustainable development." In community forest operations too, such as those in PNG, Solomon Islands, Indonesia, and Mexico, NGOs have established training schemes to encourage local people to employ better management practices. Thus, for example, Wairiu notes in the Solomon Islands case study that "some communities managed to halt commercial logging in their forest areas through awareness training in certification standards."

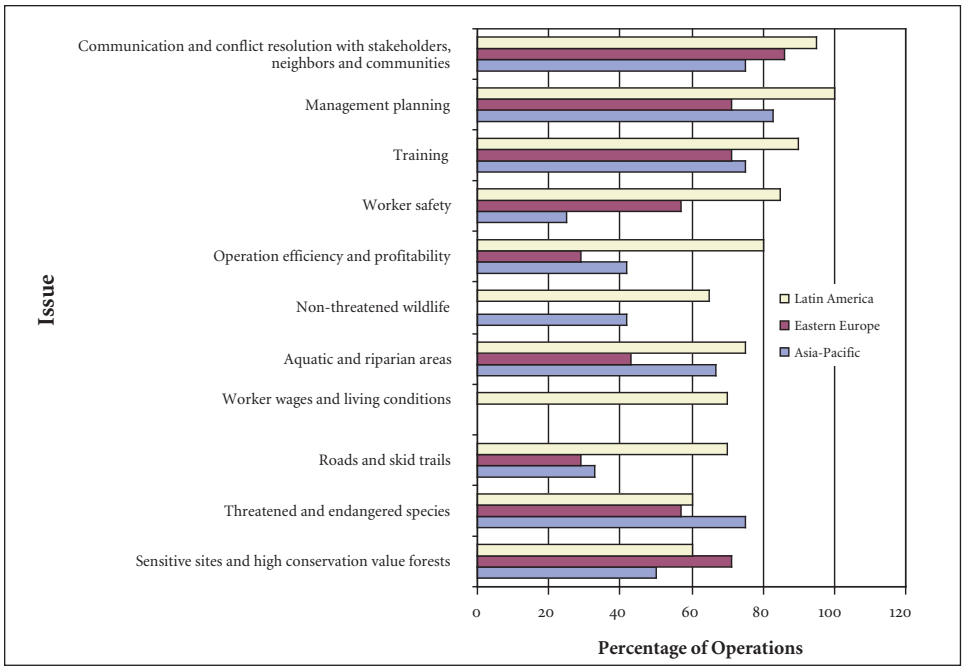
Attitudinal Change

While difficult to measure formally, many of the case studies also draw attention to certification's role in generating significant attitudinal change, especially in forest managers. Paschalis-Jakubowicz makes this point in the case of Poland, where he

notes that certification provoked extended debates in the forestry community about the technical soundness of the certification rules, resulting in increased appreciation of environmental issues and greater awareness of the multifunctional nature of forests. Ahas et al identify how certification has raised the profile of environmental issues, a point strengthened by Ham in the South Africa case study, where stakeholders came to appreciate the possibility that plantations could be managed for a diversity of values. Actins and Kore also comment on the way in which certification promotes attitudinal change because it legitimizes concern about the environment as a central activity of forest management.

The effects of certification described above are also observed in a recent study by Newsom and Hewitt (2005). The study explores the effects of certification by examining the changes that 129 SmartWood-certified operations in 21 countries were required to make as a result of the certification process. The following graph summarizes the portion of Newsom and Hewitt's data that pertains to certified operations in Asia-Pacific, Eastern Europe and Latin America (there were no SmartWood-certified operations in Africa). In line with our own observations, it illustrates that SmartWood has requested companies to make numerous changes to their operations to improve social (conflict resolution with stakeholders, training and worker safety and wages), economic (management planning and operation efficiency and profitability), and environmental (protection of aquatic and riparian areas, high conservation forests, and threatened and endangered species) outcomes.

Table 5 Percentage of SmartWood-certified operations in Asia-Pacific (n=12), Eastern Europe (n=7) and Latin America (n=20) required to make changes to various issues during their certification assessment



Future Potential

Forest certification appears to have considerable potential to improve forest management in developing countries and countries in transition. However, to realize that potential, some significant difficulties need to be overcome, requiring focused action by FSC, sympathetic industry, national governments, environmental NGOs and certification supporters. The major issues that need to be addressed are market demand, illegal logging, foresters' attitudes, community capacity, certification standards, certification costs, and closed forest policy networks.

Market Demand

Market demand has been a driver of certification in many of the case study countries. Future efforts will have to focus on spurring additional demand for certified products, especially in regions whose export markets have not shown an interest in green products, such as Asia. The approach of creating more "pull" for certified products appears to have more potential than approaches that create more "push" by subsidizing certification costs for operations with questionable market access. Also, studies of marketing strategies will be very beneficial to those certified operations that are struggling to sell their product.

Illegal Logging

Illegal logging is a problem that not only destroys forest ecosystems in its own right, but also threatens the viability of forest certification by depressing the price of timber and creating extremely low-priced competitor products. New EU efforts under the Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan appear to have significant potential for curbing this problem. Such efforts should be supported and also expanded to encompass more countries, especially major consumers such as Japan, China, Korea and the United States.

Foresters' Attitudes

Forest certification is often resisted by foresters, in part because they perceive it as an incursion on their traditional authority. Yet many of our cases demonstrate that forest certification has served ultimately to bolster the authority of foresters, provided they are prepared to practice to emerging global standards. Given the critical importance of foresters to the adoption and implementation of certification, more effort should be devoted to explaining the process and its benefits to them. "Model forests," such as those that have been developed in Russia and elsewhere, are an effective method of doing so. These have served to reorient the thinking of many foresters and to persuade them of the feasibility and benefits of more ecologically and socially responsible forestry.

Community Capacity

Many of the case studies—in particular Mexico, Guatemala, Solomon Islands, and Papua New Guinea—emphasize the difficulties faced by certified community forestry

operations, which often lack the resources and capacity to fully engage with this new mode of regulation. There is a large group of community operations whose FSC certificates have expired (or are soon to expire), but who choose not to re-certify given the low level of economic benefits to have materialized. While some case studies document new efforts by NGOs to address this problem and connect community groups with international markets, greater effort is required to avoid losing this important group.

Certification Standards

FSC has a "one size fits all" set of generic P&Cs which can be modified to fit local circumstances. It has also introduced a variety of mechanisms (group certification and SLIMFs) to address the requirements of small and community operators. A number of phased or "step-wise" approaches to certification have also emerged, which generally outline a series of phases or steps that a candidate operation must achieve, usually beginning with legality and culminating in FSC certification. This approach provides recognition and market incentives to operations that have committed to sustainable forestry, but require extra time and effort to come into full compliance with the standards. Originally developed by ProForest under the auspices of the WWF-IKEA Partnership on Forest Products, the phased approach is also offered by groups such as the Rainforest Alliance, whose SmartStep program currently has clients in Bolivia, Brazil, China and Ghana. The ecoforestry standard supported by the International Tropical Timber Group (ITTG) is likewise enabling community operators in PNG and Solomon Islands to export certified timber to New Zealand. To ensure that these initiatives constitute genuine steps towards full FSC certification rather than competing programs in their own right, it will be important to more clearly integrate these initiatives into the FSC approach, establishing criteria and timelines for moving from a lower to a higher step.

Certification Costs

In a number of cases discussed in this book the costs of certification appear to outweigh the benefits, especially for smaller operations. This is due to a variety of factors, including those listed above (lack of demand, illegal logging, etc). How can the costs of certification be reduced and the benefits increased so that more companies, communities and individuals will have an incentive to embrace it? One approach being tested by the FSC and its accredited certifiers is a lower-cost, more streamlined assessment procedure for low risk operations under its SLIMF program. Other groups—such as the Global Forest & Trade Network (GFTN)—are focused on developing markets for certified products. This is being done by increasing consumer demand, but also by assisting certified operations to access those markets through, for example, group marketing strategies for small landowners. The Asian market—especially China, Japan and Korea—is key here and the efforts,already commenced, to convince Chinese, Japanese and Korean consumers to consider the ecological shadow of their actions must be redoubled.

Another initiative, again already commenced, would work with governments to reduce the flow of illegal timber around the world that unfairly competes with legally produced timber by ensuring that existing forest laws are obeyed. This is the objective, as noted above, of the FLEGT, but this initiative is currently limited to Europe and needs to be expanded. Forest certification could make a major contribution here if governments were to review different schemes and rank them as to their ability to differentiate legal from illegal timber and make this information publicly available. While such a step is, ultimately, quite modest because mere legality does not ensure that the timber is, in fact, sustainably produced, it constitutes a significant step forward within the global timber market from where we currently are.

Our case studies suggest that larger producers can offset some of the costs of certification from improved efficiencies in production that emerge from a systematic analysis and restructuring of their corporate operations. These efficiencies are not, however, being achieved by smaller and community-based operations where numerous hurdles confront managers related to lack of capital, management ability, and market access. More systematic study of the barriers confronting small operators is required, and the results linked to loan and technical support schemes to secure the production of reasonable volumes of high-quality timber for global markets.

Forest Policy Networks

In many parts of the world, forest policy networks remain either closed or semi-open, with environmental ideas vilified and ridiculed in an attempt to preserve the status quo. For these reasons the more inclusionary processes associated with forest certification appear to provide a new model with which to promote innovative and constructive dialogues. Future research efforts, we believe, ought to explore the role of forest certification in the discourse of forest science, the relationship between a forest policy network and the practice of democracy and good governance within which it is embedded, and the concept of tolerance (where governments and civil society organizations accept the rights of others to dissent).

Certification as Part of a Sustainable Future

The sixteen cases in this book reveal complex interrelationships among a range of macro political, micro-institutional, and economic factors. Perhaps the broadest lesson to be drawn is that, given that certification represents such an exceedingly dynamic field, it would be a mistake to make decisions solely based on existing support and immediate effects. Instead, environmental groups, forest companies, forest owners, workers and governments ought to make decisions thinking not only of the present, but also about the future and potential of forest certification. Moreover, forest certification is best understood as part of a larger ensemble of forest management institutions, which, if aligned correctly, could significantly help to improve sustainable forest management and conserve biodiversity. Our cases reveal considerable challenges, but also untapped possibilities, that anyone who cares about the world's biosphere and the role of forests within it can feel justifiably motivated to unlock.

This volume has revealed many types of keys that might open this door. One key, with arguably the most transformative potential, concerns the potential role that consumers of forest products can play. Indeed, we discern a narrow window of oppoortunity for consumers of forest products to drive improvements in global forest management. While there is widespread support from forest owners for some type of forest certification in Europe and North America, the ambivalent economic signals from consumers in these same countries has placed the future role of forest certification on an uncertain path. Yet, given limited government capacity and persistent poverty in many developing and transitioning countries, market-based efforts could arguably have the greatest influence. As the market's supply chain becomes increasingly transnational – with some developing countries acting as suppiers of raw material to other developing countries, who in turn manufacture products destined to wealthy Northern consumers – certification's emphasis on tracking along the market's supply chain could offer a more efficient, effective and fairer solution for curbing global forest deterioration. These trends are illustrated by developments in China, where White and others (2006) found that while China's increasing demand for forest products is often seen as encouraging forest deterioration by indiscriminately importing forest products from Indonesia, Myanmar, Papua New Guinea, and the Russian far east, as well as African countries such as Gabon, its exports of manufactured forest products have been climbing as fast. Indeed, White and others (*ibid*) found that the U.S. is China's largest importer of forest products – the volume of which increased 1000 percent between 1997 and 2005 and now accounts for 35 percent of China's total forest products exports. Similarly exports to Europe, China's second largest market – increased 800 percent during this same time.

These trade relationships, and the cases in our book, highlight the need for all customers of forest products, but especially those in North America and Europe – from big box shoppers to institutional customers such as home builders, universities, and governments – to undertake an immediate transformation in their purchasing behaviour if forest certification is to move to the next stage of institutionalization. For years customers had no way of knowing whether the products they were purchasing were contributing to the destruction of the world's most critical forests. Now that this ability exists, consumers are facing a narrow window of opportunity to be part of a solution to the problem about which they are understandably concerned. Depending on these choices, certification could become relegated to yet another failed policy instrument that serves to legitimate, rather than improve, existing practices. Alternatively, if consumers in the wealthiest countries, whose purchasing habits currently feed forest degradation, can move themselves to demand environmentally and socially responsible behavior from the firms whose products they purchase, we could witness, in the next decade, one of the most important innovations in global forest management.

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Author Biographies

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Rein Ahas is a Senior Researcher at the Institute of Geography, University of Tartu, Estonia. He has coordinated several forestry projects and has been a board member of the Estonian Green Movement-Friends of the Earth. He has worked with the FSC and its Estonian initiative since 1996. Dr. Ahas' main scientific interests include: impact of climate change, natural resource use policy, environmental management, sustainable forestry, mobile positioning and environmental planning. The topic of his Ph.D. work (completed in 1999) studied climate change impacts on the phenology of trees. In 2001, he was a Visiting Scholar at Oxford University and a Fulbright Scholar at University of Wisconsin, Milwaukee. He has published 25 scientific works in the above-mentioned fields of interests. Dr. Ahas currently lectures and supervises students in human geography, EIA, environmental management, and environmental planning.

Salvador Anta Fonseca is currently an independent consultant involved in evaluating a number forestry-related projects and institutions, including the adoption of forestry certification by communities in Mexico. He has also participated in World Bank forestry studies, forestry programs of the Mexican government, and organization and training projects for certified and non-certified communities. Mr. Anta founded and is a current member of the Advisory Council for the Mexican Civil Council for Sustainable Silviculture and has recently been named Executive Director of the Civil Council for Sustainable Coffee Production in Mexico. From 1995 to 2002, Mr. Anta

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Richard Eba'a Atyi is currently the Regional Coordinator of the ITTO project, *Promotion of Sustainable Management of African Forests.* This project covers ten central and western African nations and promotes the sustainable management of African forests through the use of Principles, Criteria and Indicators developed by ITTO and the African Timber organization (ATO). Recent studies conducted by Dr. Atyi on forest certification include: *Forest Certification: Pending Challenges for Tropical Timber* (ITTO 2002); *The Potential Role of Phased Approaches to Certification in Tropical Timber Producer Countries as a Tool to Promote Sustainable Forest Management*, (ITTO 2003); and a strategic study for the establishment of a regional Office for FSC in Africa (2003). Dr. Atyi has a Ph.D. from The Wageningen University, The Netherlands, a Master of Science from the School of Forestry at Oregon State University, and a degree in Forestry from the University of Dschang, Cameroon.

Israel Bewang is the Forest Certification Officer of Foundation for People and Community Development Inc. in Papua New Guinea. He has been assisting in facilitating the FSC Forest Certification National Initiative in Papua New Guinea, especially in developing the National FSC Standards. Mr. Bewang graduated with a Bachelors Degree in Forest Science from the Papua New Guinea University of Technology in 2001 and has been working on certification-related activities ever since. He is a member of Madang Forest Resource Owners Association (MFROA), an indigenous association that is one of the larger, better-organized community groups in Papua New Guinea. He aims to see communities managing forests themselves and obtaining possible maximum benefit from them. He comes from Piun Village in the Nankina Tribe, Saidor, District Madang Province, Papua New Guinea. His future interest is in further research on forest certification in the region.

Byamukama Biryahwaho holds a Bachelor of Forestry and Master of Science in environment and natural resource management from Makerere University in Kampala, Uganda. He works as a Program Officer of Special Projects at The Environmental Conservation Trust of Uganda (ECOTRUST). He is involved with design and implementation of programs that promote market-based mechanisms for financing of natural resource management in Uganda. He has, in particular, been instrumental in the design and implementation of Payment for Ecosystem Services (PES) programs mainly on carbon trade working with small landholder farmers in southwestern Uganda. He also leads a program for promotion of private land management for biodiversity conservation. He has previously worked on developing institutional mechanisms for collaborative management of protected areas in Uganda's afromontane forests of Bwindi and Mgahinga focusing on human-wildlife conflict management.

Gerard Bouttoud is currently a professor of forest policy at the French Institute of Forestry, Agricultural and Environmental Engineering in Nancy, France as well as chairman of the scientific board of the European Observatory of Mountain Forests. He holds a Ph.D. from the French Institute of Agronomy in Paris, later becoming a fellow in the University of Nancy. Dr. Buttoud's scientific work mainly focuses on the formulation and assessment of national forest policies in Europe and developing countries. He has developed the "mixed model" for forest policy formulation in various countries, especially Kyrgyzstan, where he has a permanent mandate that supports such forest policy elaboration and evaluation at the national level.

Vilis Brukas is a coordinator of the international M.Sc. program 'Sustainable Forestry in the Baltic Sea Region'. Run at the Swedish University of Agricultural Sciences, the program is a joint effort of 12 universities in Estonia, Latvia, Lithuania, Poland, Germany, Russia, Denmark, and Sweden. Dr. Vilis Brukas earned his M.Sc. at the Lithuanian University of Agriculture and the Ph.D. degree in the Royal Veterinary and Agricultural University in Copenhagen, Denmark. His research focuses on various forest policy issues in the Baltic Sea region, which holds the largest share of certified forest area worldwide.

Janette Bulkan was the first Chairperson of the Guyana National Initiative for Forest Certification (GNIFC) that was formally launched in 2003. She participated in the development and field testing of successive drafts of the Guyana National Standard for Forest Certification, based on the FSC's generic standard. She participated in an FSC training program for Latin American National Initiatives in developing national forestry certification standards in October 2002 and in an Assessor Training Program of the Rainforest Alliance/SmartWood Program in 2004.

Yati Bun has aimed throughout his professional career to involve communities in community forestry operations. Currently he is Executive Director of a national organization, the Foundation for People and Community Development Inc. He is on the ITTO civil society advisory group and the World Bank External Advisory Group on implementation of the World Bank Forest Strategy. Mr. Bun is also the National Coordinator of the FSC working group that developed PNG's national standards for forest management. He served until October 2003 on the FSC board representing the southern social chamber. In 1999 he collaborated on a study for the World Bank on strategies for community-based forestry and conservation in PNG. In 1993 Mr. Bun carried out the FSC-commissioned PNG study on forest certification and timber labeling. He holds a degree in Forestry from the PNG University of Technology, Lae and a Master's degree in Forest Resources Management from Edinburgh University (UK).

José Joaquín Campos is Deputy Director General and Director of Natural Resources at CATIE. He is Professor at CATIE, Adjunct Professor at the University of Laval and Affiliated Professor at the U.N. University for Peace. His work on forest certification began in 1994 with the Costa Rican initiative as well as through advising and training graduate students. He has been member and chair of the Costa Rican Forest

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Fernando Carrera Gambetta is currently working as scientific researcher and CUSO cooperator for the Regional Network of Model Forests in the LAC region at CATIE, Turrialba, Costa Rica. He earned an M.Sc. in Forest Management and Biodiversity Conservation from CATIE and serves as a member of the FSC environmental chamber of the South. Former project assignments include his work as leader of the CATIE/CONAP project that designed and implemented the community forestry concessions in Petén. He has conducted various consultancies related to forest certification in Latin America, with publications on the certification process in Guatemala and elsewhere.

Benjamin Cashore is Associate Professor of Environmental Governance and Sustainable Forest Policy, and Director of the Program on Forest Certification at Yale University's School of Forestry & Environmental Studies in New Haven, CT, USA. His research interests include: the privatization of environmental governance (forest certification/eco-labeling); the effects of globalization on domestic policy choices; forest resource policies of Canada, the United States, and globally; and firm level environmental/sustainability initiatives. He earned B.A. and M.A. degrees in political science from Carleton University, a certificate from l'Université d'Aix-Marseille III in French studies, and a Ph.D. in political science from the University of Toronto. He was a Fulbright scholar at Harvard University during 1996-7. Dr. Cashore is the author of several articles and books on forest and environmental policy, including *Governing Through Markets: Forest Certification and the Emergence of Non-State Authority* (with Graeme Auld and Deanna Newsom), which won the International Studies Association's Sprout Prize for best book of the year on international environmental policy and governance.

Gerald Eilu is a Senior Lecturer in Forest Ecology and Biodiversity Conservation at the Faculty of Forestry and Nature Conservation at Makerere University in Uganda, where he also received an M.Sc. in Environment and Natural Resources. He is involved in teaching and supervision in aspects of Forest Ecology and Biodiversity Conservation. Dr. Eilu has carried out research and consultancy work in forest ecology, conservation of biodiversity, and plant taxonomy. He has conducted studies on forest tree regeneration, plant diversity, and endemism in the Albertine Rift. Dr. Eilu has worked with local communities in various parts of Uganda, including the Budongo Forest Reserve to promote the conservation of natural forests. He is involved in efforts aimed at enhancing plant conservation outside protected areas, protection of private forests, and documenting plants in Uganda. He has been part of the efforts to promote forest certification in Eastern Africa.

Fred Gale lectures in political economy, Third World development and regional economic integration at the School of Government, University of Tasmania, Australia. He researches global forest governance, product certification and the political economy of trade and the environment. His publications include *The Tropical Timber Trade Regime* (Macmillan/Palgrave, 1998); *Nature, Production, Power: Towards an Ecological Political Economy* (Edward Elgar 2000, co-edited with Michael M'Gonigle); and *Setting the Standard: Forest Certification in British Columbia and Beyond* (forthcoming, with Chris Tollefson, David Haley and Denise Allen). With funding from the Australian Research Council, he is undertaking comparative research with Marcus Haward on state responses to forestry and fisheries certification in Canada, Australia and United Kingdom.

William Gombya-Ssembajjwe, is an associate Professor and Head of Forest Management at the Faculty of Forestry and Nature Conservation, Makerere University, in Kampala, Uganda. He obtained his Ph.D. from University of Wales, Bangor, UK, his Master's degree in Forest Management from the Australian National University, Canberra, Australia and his Bachelor's of Science degree in Forestry from Makerere University. He is the leader of Uganda Forestry Research Centre (UFRIC), a collaborating research centre of the International Forestry Resources and Institutions (IFRI) based at Indiana University USA. His current research interests are the total valuation of tropical moist forests, indigenous knowledge and sustainable forest management, institutions and incentives for sustainable forest management and effects of urbanisation on sustainable forest management. Dr. Gombya-Ssembajjwe has over 20 publications and carries out consultancy work in the field of forest management. He is the 2005 recipient of the American Biographical Institute's Man of the Year Commemorative Medal for dedication toward his profession and the example he has set for his peers and community.

Elizabeth Gordon served as the Yale Program on Forest Certification's Program Associate until 2005, where she oversaw all aspects of the program, managing program staff and projects, coordinating main events, and serving as a liaison to Yale and the outside community. She has a BA from Stanford University in Human Biology and a Master's of Environmental Management from Yale's School of Forestry & Environmental Studies. Her graduate work focused on an interdisciplinary approach to wildlife conservation and advocacy, earning her recognition as a Doris Duke Conservation Fellow and a Teresa Heinz Scholar for Environmental Research. Previously she pursued a range of environmental efforts, from grassroots organizing and local wildlife rehabilitation to research and outreach with national non-profits such as the Environmental Law Institute and Environmental Defense.

Hando Hain has an M.Sc. degree in Landscape Ecology and Environmental Protection and is presently studying to acquire a Ph.D. degree in human geography at the Institute of Geography, University of Tartu, Estonia. His professional experience includes managing several forestry-related projects in Estonian's largest environmenal NGO, Estonian Green Movement-Friends of the Earth. He has also

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Cori Ham is the Founding Member of Ukwazisa Consulting, a closed corporation specialising in sustainable forest management and forestry development projects. He is involved in social development research and consults on subjects such as non-timber forest products, farm forestry, enterprise development, indigenous product commercialisation, community resource use, sustainable forest management, forest mensuration and FSC certification. He is also a Lecturer for community forestry students at the Department of Forest Science, University of Stellenbosch and B. Tech community forestry students at the Saasveld campus of the Port Elizabeth Technicon. He has travelled extensively throughout southern Africa for his research and consulting work.

Mara Kore first traveled to Latvia in 1985, the country from which her mother had emigrated in 1944, and since then has returned as often as possible. She became involved with sustainable development issues, including forestry, while working for WWF Latvia in 1998-1999. She then returned to the U.S. to pursue graduate studies at the University of Michigan, in the dual degree program at the School of Natural Resources and Environment, and the Russian and East European Studies department. Her most recent work in Latvia has been research for her Master's thesis on private forest owners and land restitution in Latvia's largest national park. Currently she is teaching environmental science at Southwestern Michigan College and experiencing life as a private forest owner. She earned a B.A. in Biology from Brown University, Providence, Rhode Island USA.

Peep Mardiste works in the Estonian Green Movement-Friends of the Earth, one of the strongest environmental NGOs of Estonia. Being active in the NGO sector since 1991, he has worked on a range of issues, including European environmental policy, greening of international financial institutions and assessing the impacts of the EU enlargement. He is a well-known lobbyist both in Estonian and in EU institutions. He is currently also running a Ph.D. course at the University of Tartu on environmental policy while also lecturing on development geography. His key academic interest is the assessment of environmental impacts of complex national development plans and strategies.

Peter May has dedicated his professional career to research, administration and training in the economics and management of natural resources for equitable rural development in the tropics. Dr. May's experience encompasses 20 years of program administration, field research, graduate level teaching and economics consultancy in Brazil, Latin America and the Caribbean, Southeast Asia and the United States. He holds a Ph.D. in Resource Economics and an M.R.P. in City and Regional Planning,

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Bill Maynard has been a practitioner in the area of forest certification and standards development in forestry and the timber industry for 15 years. He worked first for a timber importer in the UK before gaining an M.Sc. in Resource Management from the University of Edinburgh and then spending most of his professional life in Asia. He has participated as a team member and team leader in forest certifications in natural forests, community operations and plantations in many countries in the region and has been involved in a number of pre-assessments and surveillance for FSC. He has also been active in developing national standards in countries in both Asia and Africa. After working extensively with WWF to set up the Global Forest & Trade Network in Asia, he has set up Global Forestry Services, a company explicitly designed to help all members of the timber trade chain reach the standards of certification.

Constance McDermott is a Postdoctoral Associate and Program Director for the Yale Program on Forest Certification. She has conducted research and applied work in social forestry, forest certification and environmental and social policy in North and Central America, South Asia, and globally. She completed a B.A. in Anthropology at Amherst College, an M.S. in Social Forestry at the University of Washington, and a doctorate in Forestry at the University of British Columbia.

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Guatemala. Since 1994, he has been working with various NGOs in the fields of natural forest management, community organization, protected areas, and forest certification. He worked as manager of Fundacin Naturaleza para la Vida (NPV) and elaborated jointly with WWF project proposals for the development of tools to facilitate group certification in the Maya Biosphere Reserve. He has also been participating in certification assessments, training, and the strengthening of community-based forest management.

Dwi Rahmad Muhtaman, a certification specialist, has been working in forestry issues and biodiversity policy for more than ten years. He has conducted social audits of certification and assessments of fifteen forest concessions, plantations and community-private partnership companies in Indonesia. He is actively involved in chain of custody certification assessments. Mr. Muhtaman is lead writer of a book *Criteria and Indicators for Sustainable Plantation Forestry in Indonesia* published by CIFOR. He has written a manual on certification for practitioners in collaboration with The Nature Conservancy, LATIN and SmartWood Indonesia. He has been facilitating meetings and workshops for companies, government, communities and NGOs as well as multi-stakeholders events. He is now an independent auditor for Indonesia Forest Trade Network (WWF Indonesia) and Technical Advisor for Sustainable Supply Chain Linkage Program, Program for Eastern Indonesia Small-Medium Enterprises Assistance of the International Finance Corporation (the World Bank Group). He was LEI caretaker during 2004-March 2005. He is a founding member of the Indonesian Tropical Institute (LATIN), and the former Director of the Certification and Consulting Division. He served as a coordinator for SmartWood-LATIN Initiative and was a SmartWood international collaborator in Indonesia. He currently works as an independent consultant. He holds a Master of Public Administration from Auburn University, Alabama, USA.

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Deanna Newsom is a specialist in forest certification and sustainable forest management, with a research focus on certification's impacts and systems. She is author (with Benjamin Cashore and Graeme Auld) of the book *Governing Through*

Markets: Forest Certification and the Emergence of Non-State Authority (Yale University Press), recipient of the International Studies Association's 2005 Harold and Margaret Sprout Award for the best book of the year on environmental policy and politics. Ms. Newsom holds a M.Sc. in Forestry (2001) and a B.Sc. in Biology (1995) and has published articles in *Forest Policy and Economics* and *Business and Politics*, as well as chapters in edited books from CAB International and Transaction Press. She has worked for the Rainforest Alliance since 2001.

Felix Chilekwa Njovu is currently a Lecturer in Economics, Forest Economics and Biometry at Copperbelt University, Kitwe, Zambia, Head of the University's Forest Resource Management Department and Acting Dean of the School of Natural Resources. He has worked extensively on beekeeping projects and has researched the social and economic importance of a variety of non-timber forest products in Zambia. He has contributed to national and provincial Forestry Action Plans, analyzing the role of forestry within the economy. Other consultancy work includes socioeconomic studies of management plans for the certification of the Ndola Pine Plantations. He is a member of the Steering Committee for CIFOR (Southern Africa) on Management of Miombo Forestry project and a board member for the Institute of Environmental Management. He holds a Master of Science in forest economics from the University of Helsinki, Finland, a Bachelor of Science from Sokoine University of Agriculture (Tanzania), and a Diploma in forestry from Zambia Forest College.

Piotr Paschalis-Jakubowicz is a Professor in the Faculty of Forestry at Warsaw Agricultural University. He has been head of the Department of Forest Utilization since 1998. Major international appointments have included: Chairman of the Forestry Sector of COST; member of the Forestry Standing Committee-European Union; President of European Union of Foresters (1998-2005); Polish representative to the Convention on Biological Diversity; Program Coordinator to the Global Environment Facility in Poland and Program; Consultant to the Belarus, Slovak and Ukraine GEF Projects. He has published widely, including a number of textbooks, scientific articles and other publications.

Gustavo Pinelo graduated as Forest Engineer at the University of San Carlos, Guatemala. Currently he works as coordinator at the Petén office of TREES/ RAINFOREST ALLIANCE, in particular as regards added value to lesser known timber and non-timber species. He has more than 10 years of experience in forestry, including the design and implementation of integrated forest management plans in the Maya Biosphere Reserve. He has conducted various consultancies regarding the accomplishment of certification requirements by community groups, including assessments of forest management, chain of custody and annual audits (SmartWood Program), along with the evaluation of the development of small and medium forest enterprises (CATIE/MIF Project).

Lincoln Quevedo was born in Santa Cruz, Bolivia. He obtained his B.Sc. in forestry at the Universidade Federal de Vicosa, Brazil, in 1981, and his M.Sc. in forest management at CATIE, Costa Rica, in 1986. His professional experience is in sustainable forestry development, tropical forest ecology, silviculture and forest management with national and international non-government organizations, as well as with Bolivian government agencies. He is a faculty member of the Forestry School at the Universidad Autónoma Gabriel René Moreno, in Santa Cruz, Bolivia. He has been engaged in forest management certification since the beginning of the Forest Stewardship Council (FSC) process, serving one term as a member of the Board of Directors of the FSC-International for the environmental southern chamber, and two terms as a member of the Board of Directors of the FSC Bolivian National Initiative, where he worked on the development of national standards for timber and non-timber management certification.

Mohd Shahwahid H.O. holds a Ph.D. from the State University of New York, Syracuse in Resource Management and Policy. He is a prominent teacher and researcher in the area of forest economics and economic valuation of environmental resources in Southeast Asia. His interest is to disseminate the concept of sustainable forest management and the conservation of natural resources and the environment through collaboration in research and professional training. Dr. Shahwahid has published more than 150 research, technical and policy papers in the area of forestry economics and valuation. Research topics include: price competitiveness of Malaysian timber products, incremental costs of wetland conservation, trade-offs on competing uses of forested catchment, economic impacts of the Indonesian forest fires upon Malaysia, and valuation of the forest and marine resources of Samoa. Most rewardingly, he served as a leading consultant for an International Tropical Timber Organization commissioned study on the incremental cost of compliance to the ITTO/Malaysian criteria and indicators for sustainable forest management.

James Gustave Speth is Dean and Sara Shallenberger Brown Professor in the Practice of Environmental Policy at the Yale School of Forestry & Environmental Studies. Dean Speth holds a B.A. from Yale University, an M.Litt. from Oxford University and a J.D. from Yale University. From 1993 to 1999, Dean Speth served as administrator of the United Nations Development Programme and chair of the UN Development Group. Prior to his service at the UN, he was founder and president of the World Resources Institute; professor of law at Georgetown University; chairman of the U.S. Council on Environmental Quality; and senior attorney and cofounder, Natural Resources Defense Council. Throughout his career, Dean Speth has provided leadership and entrepreneurial initiatives to many task forces and committees whose roles have been to combat environmental degradation, including the President's Task Force on Global Resources and Environment; the Western Hemisphere Dialogue on Environment and Development; and the National Commission on the Environment. Among his awards are the National Wildlife Federation's Resources Defense Award, the Natural Resources Council of America's Barbara Swain Award of Honor, a 1997 Special Recognition Award from the Society for International Development, the

Lifetime Achievement Award of the Environmental Law Institute, and the Blue Planet Prize. Publications include *Global Environmental Governance*, *Red Sky at Morning: America and the Crisis of the Global Environment*, *Worlds Apart: Globalization and the Environment*, and articles in *Foreign Policy*, *Foreign Affairs*, *Environmental Science and Technology*, the *Columbia Journal of World Business*, and other journals and books.

Dietmar Stoian heads the Center for Competitiveness of Ecoenterprises (CeCoEco) at CATIE, Turrialba, Costa Rica. He earned his Ph.D. in Forest Economics from Freiburg University. In 1993 he analyzed the potential of exporting certified wood furniture from Brazil into Europe. In the late 1990s he formed part of the group that elaborated the Bolivian standards for Brazil nut certification. In 2001 he published the article "Forest Certification at the Crossroads: Between Panacea and Impasse" (in Spanish). CeCoEco runs various projects that seek to foster the trade in certified wood products, including the bilingual website *EcoNegocios Forestales – Forest EcoBusiness* (www.catie.ac.cr/econegociosforestales).

Maria Tysiachniouk holds a Master of Science in Environmental Studies from Bard College, NY, a Ph.D. in Biology from the Russian Academy of Sciences and a Certificate in Nonprofit Studies from Johns Hopkins University. She has taught at Herzen Pedagogical University in St. Petersburg, St. Petersburg State University, Johns Hopkins University, Dickinson College, PA, Ramapo College of New Jersey, Towson University, and short courses at several universities in Europe. Dr. Tysiachniouk has written more than eighty publications on topics related to the third sector and has had fieldwork experience in Kamchatka and the Far East. She is currently chairing the Environmental Sociology group at the Center for Independent Social Research, St. Petersburg, Russia and doing field research on global forest governance as well as investigating the role of non-profit organizations in social transformation. Dr. Tysiachniouk studied the role of transboundary environmental organizations in promoting forest certification in Russia, Brazil and China. She recently published a book, *Ecological Modernization of the Forest Sector in Russia and the United States*, in which certification is a key component.

Morgan Wairiu is currently Deputy Director of Environmental Concerns Action Network of Solomon Islands (ECANSI), a local NGO, which promotes eco-forestry and community forest management in collaboration with Solomon Islands Development Trusts (SIDT) eco-forestry and forest certification program. He has served as Secretary to the Ministry of Agriculture and Livestock (Solomon Islands) and Manager of Secretariat of the Marau Communities Association (MCA) involved in promoting sustainable livelihood projects. He completed his Ph.D. from Ohio State University, Columbus, Ohio, USA in 2001, having studied erosion and land use effects under subsistence agriculture on sloping lands in Solomon Islands. He served as head of Kolombangara Forest Products Limited's (KFPL) Technical Services Department and directed its forest silvilcultural operations and Environmental Monitoring. He collaborated in the initial process towards FSC certification of KFPL plantation in 1998. For his Master of Science research, he worked with the Scottish Forest Commission.

FSC Principles and Criteria for Forest Stewardship[1]

[1] FSC reference code: FSC-STD-01-001 (April 2004).

CONTENTS

INTRODUCTION

It is widely accepted that forest resources and associated lands should be managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations. Furthermore, growing public awareness of forest destruction and degradation has led consumers to demand that their purchases of wood and other forest products will not contribute to this destruction but rather help to secure forest resources for the future. In response to these demands, certification and self-certification programs of wood products have proliferated in the marketplace.

The Forest Stewardship Council (FSC) is an international body which accredits certification organizations in order to guarantee the authenticity of their claims. In all cases the process of certification will be initiated voluntarily by forest owners and managers who request the services of a certification organization. The goal of FSC is to promote environmentally responsible, socially beneficial and economically viable

management of the world's forests, by establishing a worldwide standard of recognized and respected Principles of Forest Stewardship.

The FSC's Principles and Criteria (P&C) apply to all tropical, temperate and boreal forests, as addressed in Principle #9 and the accompanying glossary. Many of these P&C apply also to plantations and partially replanted forests. More detailed standards for these and other vegetation types may be prepared at national and local levels. The P&C are to be incorporated into the evaluation systems and standards of all certification organizations seeking accreditation by FSC. While the P&C are mainly designed for forests managed for the production of wood products, they are also relevant, to varying degrees, to forests managed for non-timber products and other services. The P&C are a complete package to be considered as a whole, and their sequence does not represent an ordering of priority.

This document shall be used in conjunction with the FSC's Statutes, Procedures for Accreditation and Guidelines for Certifiers.

FSC and FSC-accredited certification organizations will not insist on perfection in satisfying the P&C. However, major failures in any individual Principles will normally disqualify a candidate from certification, or will lead to decertification. These decisions will be taken by individual certifiers, and guided by the extent to which each Criterion is satisfied, and by the importance and consequences of failures. Some flexibility will be allowed to cope with local circumstances.

The scale and intensity of forest management operations, the uniqueness of the affected resources, and the relative ecological fragility of the forest will be considered in all certification assessments. Differences and difficulties of interpretation of the P&C will be addressed in national and local forest stewardship standards. These standards are to be developed in each country or region involved, and will be evaluated for purposes of certification, by certifiers and other involved and affected parties on a case by case basis. If necessary, FSC dispute resolution mechanisms may also be called upon during the course of assessment. More information and guidance about the certification and accreditation process is included in the FSC Statutes, Accreditation Procedures, and Guidelines for Certifiers.

The FSC P&C should be used in conjunction with national and international laws and regulations. FSC intends to complement, not supplant, other initiatives that support responsible forest management worldwide.

The FSC will conduct educational activities to increase public awareness of the importance of the following:

- improving forest management;
- incorporating the full costs of management and production into the price of forest products;
- promoting the highest and best use of forest resources;
- reducing damage and waste; and
- avoiding over-consumption and over-harvesting.

FSC will also provide guidance to policy makers on these issues, including improving forest management legislation and policies.

Principle #1: Compliance with laws and FSC Principles

Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.

1.1 Forest management shall respect all national and local laws and administrative requirements.

1.2 All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid.

1.3 In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.

1.4 Conflicts between laws, regulations and the FSC Principles and Criteria shall be evaluated for the purposes of certification, on a case by case basis, by the certifiers and the involved or affected parties.

1.5 Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.

1.6 Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.

Principle #2: Tenure and use rights and responsibilities

Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.

2.1 Clear evidence of long-term forest use rights to the land (e.g. land title, customary rights, or lease agreements) shall be demonstrated.

2.2 Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies.

2.3 Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights. The circumstances and status of any outstanding disputes will be explicitly considered in the certification evaluation. Disputes of substantial magnitude involving a significant number of interests will normally disqualify an operation from being certified.

Principle #3: Indigenous peoples' rights

The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.

3.1 Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.

3.2 Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.

3.3 Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.

3.4 Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their free and informed consent before forest operations commence.

Principle #4: Community relations and worker's rights

Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.

4.1 The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.

4.2 Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.

4.3 The rights of workers to organize and voluntarily negotiate with their employers shall be guaranteed as outlined in Conventions 87 and 98 of the International Labour Organisation (ILO).

4.4 Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups (both men and women) directly affected by management operations.[1]

4.5 Appropriate mechanisms shall be employed for resolving grievances and for providing fair compensation in the case of loss or damage affecting the legal or customary rights, property, resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.

[1] Criterion modified by FSC 2002 General Assembly.

Principle #5: Benefits from the forest

Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.

5.1 Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest.

5.2 Forest management and marketing operations should encourage the optimal use and local processing of the forest's diversity of products.

5.3 Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.

5.4 Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.

5.5 Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.

5.6 The rate of harvest of forest products shall not exceed levels which can be permanently sustained.

Principle #6: Environmental impact

Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

6.1 Assessment of environmental impacts shall be completed – appropriate to the scale, intensity of forest management and the uniqueness of the affected resources – and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.

6.2 Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping and collecting shall be controlled.

6.3 Ecological functions and values shall be maintained intact, enhanced, or restored, including:

a) Forest regeneration and succession.

b) Genetic, species, and ecosystem diversity.

c) Natural cycles that affect the productivity of the forest ecosystem.

6.4 Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.

6.5 Written guidelines shall be prepared and implemented to: control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and protect water resources.

6.6 Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.

6.7 Chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off-site locations.

6.8 Use of biological control agents shall be documented, minimized, monitored and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.

6.9 The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.

6.10[2] Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion:

a) entails a very limited portion of the forest management unit; and

b) does not occur on high conservation value forest areas; and

c) will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit.

[2] Criterion 6.10 was ratified by the FSC Members and Board of Directors in January 1999.

Principle #7: Management plan

A management plan – appropriate to the scale and intensity of the operations – shall be written, implemented, and kept up to date. The long term objectives of management, and the means of achieving them, shall be clearly stated.

7.1 The management plan and supporting documents shall provide:

a) Management objectives.

b) Description of the forest resources to be managed, environmental limitations, land use and ownership status, socio-economic conditions, and a profile of adjacent lands.

c) Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories.

d) Rationale for rate of annual harvest and species selection.

e) Provisions for monitoring of forest growth and dynamics.

f) Environmental safeguards based on environmental assessments.

g) Plans for the identification and protection of rare, threatened and endangered species.

h) Maps describing the forest resource base including protected areas, planned management activities and land ownership.

i) Description and justification of harvesting techniques and equipment to be used.

7.2 The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.

7.3 Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plan.

7.4 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the primary elements of the management plan, including those listed in Criterion 7.1.

Principle #8: Monitoring and assessment

Monitoring shall be conducted – appropriate to the scale and intensity of forest management – to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.

8.1 The frequency and intensity of monitoring should be determined by the scale and intensity of forest management operations as well as

the relative complexity and fragility of the affected environment. Monitoring procedures should be consistent and replicable over time to allow comparison of results and assessment of change.

8.2 Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators:

a) Yield of all forest products harvested.

b) Growth rates, regeneration and condition of the forest.

c) Composition and observed changes in the flora and fauna.

d) Environmental and social impacts of harvesting and other operations.

e) Costs, productivity, and efficiency of forest management.

8.3 Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody."

8.4 The results of monitoring shall be incorporated into the implementation and revision of the management plan.

8.5 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the results of monitoring indicators, including those listed in Criterion 8.2.

Principle #9: Maintenance of high conservation value forests[3]

Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.

9.1 Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.

9.2 The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.

9.3 The management plan shall include and implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. These measures shall be specifically included in the publicly available management plan summary.

9.4 Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.

[3] The FSC Members and Board of Directors ratified the revised Principle 9 in January 1999.

Principle #10: Plantations[4]

Plantations shall be planned and managed in accordance with Principles and Criteria 1 - 9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.

[4] The FSC Members and Board of Directors ratified Principle 10 in February 1996.

10.1 The management objectives of the plantation, including natural forest conservation and restoration objectives, shall be explicitly stated in the management plan, and clearly demonstrated in the implementation of the plan.

10.2 The design and layout of plantations should promote the protection, restoration and conservation of natural forests, and not increase pressures on natural forests. Wildlife corridors, streamside zones and a mosaic of stands of different ages and rotation periods, shall be used in the layout of the plantation, consistent with the scale of the operation. The scale and layout of plantation blocks shall be consistent with the patterns of forest stands found within the natural landscape.

10.3 Diversity in the composition of plantations is preferred, so as to enhance economic, ecological and social stability. Such diversity may include the size and spatial distribution of management units within the landscape, number and genetic composition of species, age classes and structures.

10.4 The selection of species for planting shall be based on their overall suitability for the site and their appropriateness to the management objectives. In order to enhance the conservation of biological diversity, native species are preferred over exotic species in the establishment of plantations and the restoration of degraded ecosystems. Exotic species, which shall be used only when their performance is greater than that of native species, shall be carefully monitored to detect unusual mortality, disease, or insect outbreaks and adverse ecological impacts.

10.5 A proportion of the overall forest management area, appropriate to the scale of the plantation and to be determined in regional standards, shall be managed so as to restore the site to a natural forest cover.

10.6 Measures shall be taken to maintain or improve soil structure, fertility, and biological activity. The techniques and rate of harvesting, road and trail construction and maintenance, and the choice of species shall not result in long term soil degradation or adverse impacts on water quality, quantity or substantial deviation from stream course drainage patterns.

10.7 Measures shall be taken to prevent and minimize outbreaks of pests, diseases, fire and invasive plant introductions. Integrated pest management shall form an essential part of the management plan, with primary reliance on prevention and biological control methods rather than chemical pesticides and fertilizers. Plantation management should make every effort to move away from chemical pesticides and fertilizers, including their use in nurseries. The use of chemicals is also covered in Criteria 6.6 and 6.7.

10.8 Appropriate to the scale and diversity of the operation, monitoring of plantations shall include regular assessment of potential on-site and off-site ecological and social impacts, (e.g. natural regeneration, effects on water resources and soil fertility, and impacts on local welfare and social well-being), in addition to those elements addressed in principles 8, 6 and 4. No species should be planted on a large scale until local trials and/or experience have shown that they are ecologically well-adapted to the site, are not invasive, and do not have significant negative ecological impacts on other ecosystems. Special attention will be paid to social issues of land acquisition for plantations, especially the protection of local rights of ownership, use or access.

10.9[5] Plantations established in areas converted from natural forests after November 1994 normally shall not qualify for certification. Certification may be allowed in circumstances where sufficient evidence is submitted to the certification body that the manager/owner is not responsible directly or indirectly of such conversion.

[5] The FSC Members and Board of Directors ratified Criterion 10.9 in January 1999.

GLOSSARY

Words in this document are used as defined in most standard English language dictionaries. The precise meaning and local interpretation of certain phrases (such as local communities) should be decided in the local context by forest managers and certifiers. In this document, the words below are understood as follows:

Biological diversity: The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems. (see Convention on Biological Diversity, 1992)

Biological diversity values: The intrinsic, ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity and its components. (see Convention on Biological Diversity, 1992)

Biological control agents: Living organisms used to eliminate or regulate the population of other living organisms.

Chain of custody: The channel through which products are distributed from their origin in the forest to their end-use.

Chemicals: The range of fertilizers, insecticides, fungicides, and hormones which are used in forest management.

Criterion (pl. Criteria): A means of judging whether or not a Principle (of forest stewardship) has been fulfilled.

Customary rights: Rights which result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted acquiescence, acquired the force of a law within a geographical or sociological unit.

Ecosystem: A community of all plants and animals and their physical environment, functioning together as an interdependent unit.

Endangered species: Any species which is in danger of extinction throughout all or a significant portion of its range.

Exotic species: An introduced species not native or endemic to the area in question.

Forest integrity: The composition, dynamics, functions and structural attributes of a natural forest.

Forest management/manager: The people responsible for the operational management of the forest resource and of the enterprise, as well as the management system and structure, and the planning and field operations.

Genetically modified organisms: Biological organisms which have been induced by various means to consist of genetic structural changes.

Indigenous lands and territories: The total environment of the lands, air, water, sea, seaice, flora and fauna, and other resources which indigenous peoples have traditionally owned or otherwise occupied or used. (Draft Declaration of the Rights of Indigenous Peoples: Part VI)

Indigenous peoples: "The existing descendants of the peoples who inhabited the present territory of a country wholly or partially at the time when persons of a different culture or ethnic origin arrived there from other parts of the world, overcame them and, by conquest, settlement, or other means reduced them to a non-dominant or colonial situation; who today live more in conformity with their particular social, economic and cultural customs and traditions than with the institutions of the country of which they now form a part, under State structure which incorporates mainly the national, social and cultural characteristics of other segments of the population which are predominant." (Working definition adopted by the UN Working Group on Indigenous Peoples).

High Conservation Value Forests: High Conservation Value Forests are those that possess one or more of the following attributes:

a) forest areas containing globally, regionally or nationally significant: concentrations of biodiversity values (e.g. endemism, endangered species, refugia); and/or large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance

b) forest areas that are in or contain rare, threatened or endangered ecosystems

c) forest areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control)

d) forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health) and/or critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).

Landscape: A geographical mosaic composed of interacting ecosystems resulting from the influence of geological, topographical, soil, climatic, biotic and human interactions in a given area.

Local laws: Includes all legal norms given by organisms of government whose jurisdiction is less than the national level, such as departmental, municipal and customary norms.

Long term: The time-scale of the forest owner or manager as manifested by the objectives of the management plan, the rate of harvesting, and the commitment to maintain permanent forest cover. The length of time involved will vary according to

the context and ecological conditions, and will be a function of how long it takes a given ecosystem to recover its natural structure and composition following harvesting or disturbance, or to produce mature or primary conditions.

Native species: A species that occurs naturally in the region; endemic to the area.

Natural cycles: Nutrient and mineral cycling as a result of interactions between soils, water, plants, and animals in forest environments that affect the ecological productivity of a given site.

Natural Forest: Forest areas where many of the principal characteristics and key elements of native ecosystems such as complexity, structure and diversity are present, as defined by FSC approved national and regional standards of forest management.

Non-timber forest products: All forest products except timber, including other materials obtained from trees such as resins and leaves, as well as any other plant and animal products.

Other forest types: Forest areas that do not fit the criteria for plantation or natural forests and which are defined more specifically by FSC-approved national and regional standards of forest stewardship.

Plantation: Forest areas lacking most of the principal characteristics and key elements of native ecosystems as defined by FSC-approved national and regional standards of forest stewardship, which result from the human activities of either planting, sowing or intensive silvicultural treatments.

Precautionary approach[6]**:** Tool for the implementation of the precautionary principle.

Principle: An essential rule or element; in FSC's case, of forest stewardship.

Silviculture: The art of producing and tending a forest by manipulating its establishment, composition and growth to best fulfil the objectives of the owner. This may, or may not, include timber production.

Succession: Progressive changes in species composition and forest community structure caused by natural processes (nonhuman) over time.

Tenure: Socially defined agreements held by individuals or groups, recognized by legal statutes or customary practice, regarding the "bundle of rights and duties" of ownership, holding, access and/or usage of a particular land unit or the associated resources there within (such as individual trees, plant species, water, minerals, etc).

Threatened species: Any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Use rights: Rights for the use of forest resources that can be defined by local custom, mutual agreements, or prescribed by other entities holding access rights. These rights may restrict the use of particular resources to specific levels of consumption or particular harvesting techniques.

[6] The definition of Precautionary Approach was ratified during the 1999 FSC General Assembly in June 1999.

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