TECHNICAL SERIES

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DEVELOPING FOREST CERTIFICATION

Towards increasing the comparability and acceptance of forest certification systems worldwide

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INTERNATIONAL TROPICAL TIMBER ORGANIZATION

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DEVELOPING FOREST CERTIFICATION

TOWARDS INCREASING THE COMPARABILITY AND ACCEPTANCE OF FOREST CERTIFICATION SYSTEMS WORLDWIDE

ITTO Technical Series #29

INTERNATIONAL TROPICAL TIMBER ORGANIZATION

International Tropical Timber Organization

Developing forest certification
Towards increasing the comparability and acceptance of forest certification systems

ITTO Technical Series No 29

by Alan Purbawiyatna and Markku Simula

The International Tropical Timber Organization (ITTO) is an intergovernmental organization promoting the conservation and sustainable management, use and trade of tropical forest resources. Its 60 members represent about 80% of the world's tropical forests and 90% of the global tropical timber trade. ITTO develops internationally agreed policy documents to promote sustainable forest management and forest conservation and assists tropical member countries to adapt such policies to local circumstances and to implement them in the field through projects. In addition, ITTO collects, analyzes and disseminates data on the production and trade of tropical timber and funds projects and other actions aimed at developing forest industries at both community and industrial scales. All projects are funded by voluntary contributions, mostly from developed consumer member countries. Since it became operational in 1987, ITTO has funded more than 750 projects, pre-projects and activities valued at more than US$320 million. The major donors are the governments of Japan, Switzerland and the United States. ITTO contact details are given on the back cover.

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Foreword

ITTO is among the pioneers to address the issue of forest and timber certification as a voluntary market-based tool for promoting trade in tropical timber from sustainably managed and legally harvested forests and as a preferred alternative to bans and boycotts on the products.

From the beginning, ITTO has highlighted that promoting forest and timber certification in the tropics is a formidable and daunting task. This is principally due to tropical forests being the richest and most diverse terrestrial ecosystems whose criteria and indicators for sustainable management are far more complex and demanding than non-tropical forests. Tropical forests are also to be found virtually entirely in developing countries where constraints to development including poverty have resulted in heavy reliance being placed on forests in meeting the social needs in these countries.

This has spurred ITTO to commission a series of studies on forest and timber certification since 1993. It has also developed guidelines, criteria and indicators and auditing systems for sustainable forest management; funded projects and activities aimed at building capacity of ITTO member countries in strengthening the management of tropical forests and developing approaches to certification including phased approaches; and promoted dialogues, discussions and consultations on key and relevant aspects of the evolving issue by participating in and organizing international meetings, seminars and workshops on certification. The underlying purpose of these efforts is to extend support to ITTO member countries that wish to engage in forest and timber certification and labelling to promote sustainable forest management and to enhance market acceptance of their tropical forest products.

Consequently, some progress has been made by ITTO producer countries in the development of forest and timber certification. However, the rate of achievement still pales in comparison with the advancement gained by developed countries. While certified forests in ITTO producer countries have expanded 2.6 times from 6.4 million hectares in 2002 to 16.3 million hectares in 2007, their share of the world's certified forests has in fact fallen from 7% in 2002 to 5% in 2006.

This latest ITTO study highlights lack of skills and adequate management systems in forest management units, barriers in accessing certification services, limited awareness of the importance of certification and lack of certifiable forests as the main factors inhibiting progress in forest and timber certification in the tropics. It also updates the status of implementation of forest and timber certification, developments toward comparability and acceptance of certification systems and schemes as well as emerging issues on verification of legality and certification of community forests and smallholder forest owners that may have some significant implications for ITTO member countries.

This study also offers a host of recommendations for consideration and implementation by ITTO, governments in producer and consumer countries, the tropical timber trade and industry and certification systems. ITTO will take heed of these while continuing to assume a facilitating role through its policy work and project activities in further promoting on a voluntary basis the development of forest and timber certification in the tropics.

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Abbreviations and acronyms

ABNT	Associação Brasileira de Normas Técnicas
APHI	Association of Forest Concession Holders of Indonesia
ATO	African Timber Organization
ABIMCI	Brazilian Association of Mechanically Processed Timber Products
ASEAN	Association of South East Asian Nations
BREEAM	Building Research Establishment Environmental Assessment Method
BRL	Dutch National Assessment Guidelines
BSN	National Standardization Body (Indonesia)
CEPI	Confederation of European Paper Industries
CERFLOR	Programa Brasileiro de Certificação Florestal
CERTFLOR	Sistema Chileno de Certificación de Manejo Forestal Sustentable
C&I	Criteria and Indicators
CTE	Committee on Trade and Environment
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CoC	Chain of custody
COFRAC	Comite Francais d'Accreditation (French Accreditation Committee)
CONAFOR	Comisión Nacional Forestal (Mexico)
CE marking	Conformité Européene marking
CPET	Central Point of Expertise on Timber
CSA	Canadian Standards Association
CSAG	Civil Society Advisory Group
DSM	Department of Standards Malaysia
EPFI	Equator Principles Financial Institutions
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCAG	Forest Certification Assessment Guide
FEBO	European Confederation of Timber Importing Associations
FERN	Forests and the European Union Resource Network
FLEG	Forest Law Enforcement and Governance
FLEGT	Forest Law Enforcement, Governance and Trade
FMCSC	Forest Management Certification Standards and Checklist (Ghana)
FMU	Forest Management Unit
FSC	Forest Stewardship Council
GATT	General Agreement on Tariffs and Trade
GFTN	Global Forest Trade Network
GPA	Government Procurement Agreement
ha	hectare
HCVF	High conservation value forest
IAF	International Accreditation Forum
ICFPA	International Council of Forest and Paper Associations
IEC	International Electrotechnical Commission
IFC	International Finance Corporation
IFIR	International Forest Industries Roundtable
IPF	Intergovernmental Panel on Forests
ILO	International Labour Organization
ISEAL	International Social and Environmental Accreditation and Labelling
ISO	International Organization for Standardization
ITTA	International Tropical Timber Agreement
ITTC	International Tropical Timber Council
ITTO	International Tropical Timber Organization

LEED	Leadership in Energy and Environmental Design
LEI	Lembaga Ekolabel Indonesia (Indonesian Ecolabelling Institute)
m3	cubic meter
MC&I	Malaysian Criteria & Indicators for Forest Management Certification
MTCC	Malaysian Timber Certification Council
NGO	Non-governmental Organization
NLBI	Non-legally Binding Instrument
NTTA	Netherlands Timber Trade Association
OP	Operational Policy
PAFC	Pan African Forest Certification
P&C	Principles and Criteria
PCI	Principles, Criteria and Indicators
PEFC	Programme for the Endorsement of Forest Certification
PEOLG	Pan-European Operational Level Guidelines
PPM	Processes and production methods
QACC	Questionnaire for Assessing the Comprehensiveness of Certification Schemes/Systems
RCF	Regional Consultation Forum (Indonesia)
SA	Soil Association
SCS	Scientific Certification Systems
SFI	Sustainable Forestry Initiative
SFM	Sustainable forest management
SGEC	Sustainable Green Ecosystem Council (Japan)
SGS	Société Générale de Surveillance
SLIMF	Small and Low Intensity Management Forests
SME	Small and medium-sized enterprise
SW	SmartWood
TAG	Trade Advisory Group
TBT	Technical Barriers to Trade
UK	United Kingdom
UKWAS	UK Woodland Assurance Standard
UNFF	United Nations Forum on Forests
USA	United States of America
US$	United States dollar
WBCSD	World Business Council for Sustainable Development
WTO	World Trade Organization
WWF	World Wide Fund for Nature (in the USA, World Wildlife Fund)

Executive summary

This report reviews and assesses progress in the comparability and equivalence of forest certification systems, particularly in view of the promotion of tropical timber certification. It is needed because of the proliferation of both certification systems and the market requirements for such systems in the public and private sectors of tropical timber importing countries.

Current situation

Developing countries continue to lag behind developed countries in achieving forest certification. In June 2007, 306.3 million hectares of forests were certified worldwide. Of this, developing countries accounted for 7%, about the same percentage as in 2002; International Tropical Timber Organization (ITTO) producer member countries had no more than 5% of the world total. Developing countries produced 27.4% of world industrial roundwood production in 2007, which was almost four times higher than their share of the world's certified forests.

In total, 8% of the world's forests are certified, a considerable increase over 2002, when 2.8% were certified. Certification has become a mainstream activity in many developed countries, but in few tropical timber-producing countries. The share of certified forests varies between tropical regions, from 0.6% of forests in Africa, to 1.2% in Latin America, to 1.4% in Asia.

Most (82%) of the world's certified tropical forests are in forest concessions or are otherwise owned or managed by the private sector in large forest management units (FMUs). The total area of certified forests held by smallholders is small. Community owned or managed forests account for just 14% of the certified tropical forest estate.

National certification schemes exist in 32 countries, of which four are developing countries. Among the tropical timber producing countries, national systems are operating in Brazil (Programa Brasileiro de Certificação Florestal – CERFLOR), Indonesia (Indonesian Ecolabelling Institute – LEI) and Malaysia (Malaysian Timber Certification Council – MTCC). Several other developing countries, including Cameroon and Gabon, are in the process of developing national systems.

At the global level, there are two competing certification schemes with different operating modalities. The Forest Stewardship Council (FSC) provides all the necessary elements of certification through centralized decision-making on standards and accreditation. The Programme for the Endorsement of Forest Certification (PEFC), on the other hand, operates as a system for mutual recognition between national certification systems. Almost two-thirds (65%) of the world's certified forests (in 22 countries) carry a PEFC certificate, while the FSC's share is 28% (in 78 countries); the remaining forests are certified solely under national systems. Most of the certified forests in the tropics are FSC-certified.

In June 2007 there were more than 9,000 chain-of-custody (CoC) certificates, and the number continues to grow steadily. The FSC is the market leader, having issued more than 6,000 such certificates, while the remaining 3,000 are from PEFC-recognized systems. There are 374 CoC certificates in ITTO producer member countries, which is only 4% of the world total and less than those countries' share (5%) of the total certified forest area. The number of CoC certificates in ITTO producer member countries has not increased significantly since 2005. Engaging in-transit processing countries in Asia, particularly China, in certified supply chains will be critical for the mainstreaming of certification in the tropical timber trade.

The potential roundwood supply from the world's certified forests is approximately 405 million m^3, which is one-quarter of the world's total industrial roundwood supply. Most of this timber is sold without label or reference to certification and statistics are scarce or non-existant. Developing countries produce an estimated 6% (24 million m^3) of the certified timber supply; the small volume is a cause of concern for tropical timber-producing countries because certification is rapidly becoming necessary for maintaining access to certain market segments. Despite increasing global awareness of inequality of certification development, insufficient actions have been taken to help them implement forest certification.

The global demand for certified timber is growing. In some key European import markets, at least, it is significant, although the volume consumed is unknown. Tropical timber is apparently under-represented in this market segment, due mainly to limited supply. In relative terms, the impact on suppliers is strongest in Africa, which depends more on Europe than do the other tropical regions.

The key drivers of certification in the marketplace are public procurement, business-to-business demand supported by corporate social responsibility, and sustainability initiatives in the building and construction sector. Many key buyers are strongly committed to procuring only legally sourced timber, give preference to products from sustainable sources, and have long-term policies to obtain all supplies from such sources. In some markets and market segments, demand for certified timber exceeds supply, particularly in the case of FSC-certified hardwood products. Price premiums would be required to pay for the additional costs of certification but the market is unlikely to pay them in the long run, particularly if certification becomes a prerequisite for market access.

Many buyers and consumers appear willing to give preference to sustainably produced timber in their purchases. In order to tap this potential demand, targeted market promotion is needed. With the exception of CERFLOR, national schemes in the tropical timber-producing countries have made little progress in obtaining endorsement or market acceptance and their resources for market promotion are generally very limited.

For wood supply and marketing reasons, many companies have been forced to seek double certification under two systems, both for forest management and CoC, which unduly increases costs with limited or no environmental benefit. For cost-efficiency reasons, traders have a clear preference for stocking only one certified brand.

Certification systems

Five certification systems operate in tropical timber-producing countries (FSC, PEFC, CERFLOR, LEI and MTCC) and work to develop national systems is well advanced in several other countries. The evolution of the existing systems shows that significant changes have taken place to strengthen procedures. Several factors have contributed to this: (i) external assessments; (ii) public procurement rules in importing countries; (iii) the schemes' changing market and other strategic objectives; and (iv) stakeholder pressure. These factors have influenced the developments in different directions but as a whole have led to greater convergence between schemes.

The FSC has evolved into a highly complex, centrally led forest certification system, the provisions for which are scattered among a large number of standards and other normative documents. The FSC is strongly supported by leading international environmental non-government organizations (NGOs), which is attractive to large forest-industry corporations and internationally operating trading companies. On the other hand, the FSC has been unable to obtain the large-scale participation of small-scale private forest owners and, despite being the leading system among tropical timber producers, its progress is still limited in developing countries, with few exceptions. This indicates the difficulty in reconciling different stakeholder views in a globally operating, voluntary certification scheme that must simultaneously meet several objectives.

The membership of the PEFC Council includes 33 independent national forest certification systems, of which 23 have gone through an assessment process for mutual recognition and the remainder are at various stages of the process. In Europe and North America, PEFC systems have been able to mobilize many smallholder private forest owners, together with industry and public forest owners, but they have been less successful in this regard in the tropical timber-producing countries.

LEI and the MTCC have both made progress in certifying significant areas of large FMUs in their respective countries. Although they have important differences, they also have many elements in common and face similar challenges. The experience of these two schemes shows that the development of a fully-fledged national certification system is a time-consuming and costly exercise and suggests that a critical mass of production forest and timber exports might be needed to justify investment in it. All national schemes created in developing countries to date have been in countries with major timber exporting sectors.

Comparison of certification schemes

Despite inevitable competition, the many similarities between certification schemes offer a basis for cooperation. The PEFC and its national schemes have harmonized procedures, while the FSC, LEI and the MTCC have their own peculiarities. The main differences between schemes are related to forest management standards, standard setting, logo rules, and accreditation.

Regarding forest management standards, different approaches have been applied. The FSC draws on its own principles and criteria (P&C), while the other systems use internationally agreed, regional-level criteria and indicators (C&I) for sustainable forest management, including the guidelines and C&I developed by ITTO, as a framework for their standards. While national standards (including those endorsed by the PEFC) are tailored to local situations, concerns have been raised about the interpretation of the FSC P&C that certifying bodies must make in the absence of national FSC-endorsed standards.

Current forestry standards have a tendency to treat ecological and social aspects of sustainable forest management (SFM) independently, but the two aspects are interlinked. Certification standards should not be considered as cast-iron measures of sustainability but as evolving tools in an adaptive management system, the ultimate aim of which is sustainability. Regardless of the differences between individual standards, it can be safely assumed that the achievement of certification standards has had a positive impact on forest management.

Participation in standard setting has proved problematic in countries where relevant stakeholders (including civil society, forest communities and private, small-scale forest owners) are weakly organized. Crucial differences in standard setting between schemes appear to be related to: (i) the meaningfulness or effectiveness of participation by interested parties; (ii) interpretation of situations in which a stakeholder group does not participate even though it is invited to do so; and (iii) the possible dominance of certain parties. These three aspects are all considered to be important elements of credibility. Despite differences, standard-setting processes under various certification systems have had a positive impact on stakeholder participation in all the countries where national standards have been developed.

Government support is often required to develop a national certification standard independently from the certification system. Standard-setting processes in tropical timber producing countries to meet international criteria tend to be time-consuming and can easily get stranded; therefore, external support is often justified.

The verification procedure for the CoC is essentially the same in all the various schemes. CoC standards are largely similar and differences are mainly in the identification and treatment of different material/product categories. These differences have a bearing on labelling rules, with significant implications. The existence of parallel international systems with different CoC certificates is a barrier to the increased volume of certified products because it adds cost, and often increases emissions due to additional transportation of timber in order to meet mill level minimum percentages of certified fibre content in products. To a certain extent, the development of a generic CoC standard focusing on CoC verification could address this while allowing certification systems to continue operating under their own labelling rules.

The main difference in system procedures is in accreditation. The FSC provides centralized accreditation for its standards and certification bodies, while the PEFC relies on existing recognized national accreditation bodies with the aim of keeping standard setting separate to avoid conflicts of interest. To date, both the MTCC and LEI have carried out the accreditation function but are in the process of revising this. While the FSC is unable to accredit national schemes, the only option for the MTCC and LEI to obtain international-level endorsement or mutual recognition is through the PEFC.

Assessment criteria and acceptance of certification systems

Due to its unique nature as a policy instrument, the desirable or acceptable elements of forest certification have been debated since its inception. Governments, NGOs and the forest industry and trade have all tried to set out the parameters of credible or acceptable certification. It has become clear that there is no perfect system that satisfies the needs of all stakeholders. The study compares five sets of forest assessment criteria: (i) the International Council of Forest and Paper Associations (ICFPA), representing the view of the global forest industry; (ii) the World Wildlife

Fund (WWF)/World Bank Forest Certification Assessment Guide (FCAG), and the Performance Standards of the International Finance Corporation, representing the view of financial institutions; (iii and iv) the public procurement policies of Denmark and the United Kingdom, which present government views; and (v) the Keurhout Protocols for the validation of certification systems – an example of an approach taken by private-sector timber importers.

All the various sets of assessment criteria have a considerable degree of commonality and cover the relevant aspects of forest certification schemes in a comprehensive way. However, the requirements are uneven between sets. Some emphasize details while others focus on key factors. This is partly understandable; in assessing certification schemes, "the devil is (often) in the details". These details are expressions of stakeholder values and their interpretation of sustainability and how it should be defined. Most such differences are related to forestry standards and their development processes; less variation applies to other aspects.

Most sets of assessment criteria employ a holistic approach derived from the seven global thematic elements of SFM, which themselves are drawn from existing internationally agreed regional C&I processes. This is also desirable from the perspective of those ITTO producer member countries in the process of implementing SFM within the framework of the ITTO C&I. Any new structures or approaches tend to be seen as an additional hurdle for implementation and might lead to confusion about what SFM means in practice.

Different assessment frameworks propose somewhat different criteria for the standard-setting process, but all enlist the same principles of consultation, participation, and inputs from stakeholders. The detailed requirements, or indicators, specified in various sets are mostly additional to ISO [International Organization for Standardization] Guide 59, and some of them are mentioned in the ISEAL [International Social and Environmental Accreditation and Labelling] Code. Our analysis shows that it would be relatively easy to harmonize the criteria sets without changing their intent by simplifying and rewording them.

Although there are differences between schemes in the explicit requirements for CoC and labelling, these do not represent different approaches. The various provisions are compatible with each other and can therefore be considered complementary.

Based on the various assessment frameworks, it would be possible to develop a common set of comprehensive requirements for CoC certification and labelling, while labelling rules could still be subject to the internal regulation of each particular scheme.

As in the case of standard-setting procedures, the accreditation requirements of some assessment frameworks appear to give some preference to one international system over another. The ICFPA framework, for example, specifies PEFC-endorsed and other national systems due to the close linking of indicators with the ISO framework, and FCAG could be interpreted to favor the FSC due to strong linkages with the ISEAL rules. Apart from these issues, the various accreditation requirements are compatible with each other and could be considered complementary; nevertheless, their harmonization would require changes in the provisions related to international rules.

Acceptance of certification schemes

Public sector

Different criteria and assessment processes have led to differing levels of acceptance of the forest certification systems operating in tropical timber-producing countries. MTCC certification, for example, is recognized as a proof of legality but not sustainability in Danish, New Zealand and UK procurement policies, but it is referred to without such limitations in the Japanese policy. The Danish public procurement policy did not consider certificates of the LEI scheme to be sufficient evidence of either sustainability or legality, but in the Japanese policy they can be proof of both.The assessment of certification schemes is an evolving process, however, and the situation is likely to change.

Tropical timber-producing countries are concerned that the processes by which procurement policies derive the level of acceptance of various schemes is not always transparent. The Central Point of Expertise on Timber (CPET) procedure in the UK is exemplary in its clarity and transparency and in the possibility of participation that it offers to certification schemes and stakeholders. Many policies are interim or under review, creating a situation in which 'goalposts' can move before they are achieved by tropical timber producers. Even though probably well intentioned (to make

implementation more flexible), vague provisions concerning 'comparable' or 'alternative' evidence, 'individual specifications', etc, create uncertainty about how tropical timber producers are dealt with in the absence of a recognized certificate. In the case of non-recognized certificates, comparability or equivalence with the FSC or the PEFC is required (eg in the Belgian and German procurement policies), but the practical assessment of this will be difficult. Moreover, there are generally no provisions for appeals. This is ironic: most policies require that the certification systems themselves have appeals procedures.

Norway recently adopted a quite different approach, issuing a public procurement policy which effectively bans the use of tropical timber in the management and construction of all public property. The spread to other countries of this kind of policy, which apparently contravenes World Trade Organization rules, could have a devastating impact on the international trade of tropical timber and timber products, be they produced in natural forests or plantations.

The proliferation of public procurement requirements for certification systems is a cause of concern for tropical timber producers due to the differences between them. The extent to which such policies are justified to ensure credible certification merits careful consideration by decision-makers and stakeholders to avoid creating an unnecessary obstacle to trade. Convergence in the acceptability criteria of various certification schemes would eliminate the need for producers to use different certification strategies in different export markets.

Private sector

Several large corporations have developed their own policies on forest certification, some referring to individual schemes (often FSC only) and some defining the criteria with which acceptable certification should comply. Significant differences in the requirements of individual corporations present difficulties for tropical timber producers. The proliferation of corporate requirements may be more of a barrier to the trade than the proliferation of certification systems. In addition, corporate requirements for certification systems are not always transparent and it is often unclear how the assessment of compliance has been carried out.

The added value of introducing new 'own' terms in requirements should be considered carefully; they may cause unnecessary additional costs or present other hurdles to suppliers. Moreover, there is no alignment in the criteria of public and private procurement policies. Since many of the public policies have been legitimized through transparency and the participation of stakeholders, they offer a useful basis for private-sector policies, thus avoiding individual costly assessment work. This would also improve the transparency of private-sector policies. When developing their procurement policies, buyers should strive to understand the difficulties faced by tropical timber producers in meeting diverse requirements and they should allow adequate time for production practices and management systems to be adjusted.

Harmonization of forest certification

There are at least five possible avenues for the harmonization of certification in the forestry sector: (i) international standards; (ii) recognition of equivalence (eg through mutual recognition between existing systems); (iii) regional or international cooperation; (iv) the bottom-up harmonization of standards; and (v) unilateral recognition. The FSC uses the first approach and the PEFC the second. Regional cooperation (eg the African Timber Organization – ATO, Association of South East Asian Nations - ASEAN) has not yet resulted in any practical arrangements. Some countries have employed a bottom-up approach by developing their certification standards in a way that could meet the requirements of the two international systems, but experiences are mixed. Unilateral recognition would be applied when a system recognizes another system (or parts of it) without mutual arrangements.

Further convergence between certification systems would undoubtedly contribute to their consistent treatment in different policies and evaluations of acceptability. Convergence between certification schemes has been increasing but the process is far from complete. From the point of view of tropical timber-producing countries, mutual recognition within the PEFC framework requires the establishment of fully-fledged national certification systems. Seeking recognition for a national scheme on an individual basis under public timber procurement policies has proved problematic. The bottom-up harmonization of standards might also be feasible as it would offer

exporters the flexibility to supply timber under different international labels depending on demand. It would also allow the commencement of the national standard development process in the absence of a decision on which international system to apply during implementation.

Compatibility with trade rules

The key contentious issue related to trade in forest products in general, and also to forest certification, is how the requirements of legality and forest management sustainability can be applied within international trade rules. There is, however, a common view that the SFM and CoC certificates of voluntary programs can be used to demonstrate compliance with requirements of legality and sustainability. On the other hand, options for other means of demonstration should also be provided. In public procurement, the extent to which, or the situations in which, the contracting authorities might require bidders to submit additional proof, is unclear. There is a need for further work in public timber procurement policies to clarify the use of forest certification schemes as references and how to define acceptable alternative proofs.

Inclusion of social criteria

From a legal point of view, there is insufficient clarity about the requirements of public procurement policies with respect to social criteria. Social aspects of forest management are inherent in the concept of SFM and, in one way or another, are therefore included in all forest management standards. Some parties see the inclusion of social criteria in procurement policies as permissible as long as it is done in a transparent and timely manner and as long as the criteria are objective and, when they deal with fundamental rights identified in relevant international conventions, satisfy the principles of transparency, non-discrimination and equal treatment.

Since social improvements – particularly related to workers' rights, occupational health and safety and child or forced labour – are also needed in the processing industry, Building and Wood Workers International has proposed that the assessment of social standards be included in CoC certification. This well-justified initiative would be a significant change and would have important implications for the role of certification as a tool for promoting social sustainability in the timber sector.

The MTCC has already made provision for assessing compliance with two International Labour Organization (ILO) conventions as part of CoC certification, PEFC is considering this option and the FSC is carrying out a feasibility assessment. This is an area in which certification systems should cooperate in order to avoid the creation of different rules and procedures. This is even more important because a number of substantive and practical issues need to be considered during implementation: (i) the scope of the social criteria and their interpretation in country conditions; (ii) the need for adjustments in the certification procedure; and (iii) the need for the inclusion of necessary competence in the audit team. Moreover, cost impacts should be clarified, as should the possible need for cooperation at the international level.

Forest certification as a governance tool

Several governments have made legislative provisions for voluntary certification. This has established a clear link between national regulations and international criteria for SFM, which is highly desirable because it avoids the imposition of parallel criteria on FMUs and the risk of creating confusion among forest owners and managers. Depending on the robustness of certification systems in the face of fraud and corrupt influences, forest certification can also help address illegal logging and associated trade. Experience has shown, however, that, without 'sticks', certification is unlikely to be effective as a carrot. In fact, certified, legally operating FMUs are at a disadvantage due to the additional costs that they have to bear in complying with both national legislation and the additional requirements of a certification standard. The regulatory framework should be designed in such a way that it provides tangible incentives for certified FMUs. On the other hand, there is a need to align the legality requirements of forest management and CoC certification standards with legal provisions, as has been done in some tropical countries.

Verification of legality

There are strong apparent synergies between the verification of legality and the certification of SFM in tropical timber-producing countries. They merit careful consideration, as complex timber supply chains are difficult to control through mandatory means. In addition, certification is a potential way

for governments to reduce bureaucracy and minimize costs. Harnessing these synergies will depend on how certification schemes and certifiers develop their provisions and procedures for the verification of legal compliance and how the above-mentioned issues are addressed.

On the other hand, there is also a risk that the current attention given to addressing illegal logging through verification (eg within the context of the European Union's Forest Law Enforcement, Governance and Trade (FLEGT) Voluntary Partnership Agreements) will divert the attention of tropical timber producers from sustainability to a lower level of performance: ie legal compliance. Therefore, it is inadvisable to lose sight of the SFM goal and, when the market demands it, its verification through certification. This calls for an integrated approach that fully capitalizes on the synergies between the certification and legality verification instruments.

One option is to include the issuance of attestations of both legal origin and legal compliance within the structure of certification schemes. The current CoC standards are adequate for making claims on the origin of timber and timber products and they would only need a minor adjustment to include a new category of products ('legally produced') in the certification procedure. For verifying compliance with relevant national legislation, an international framework standard or similar instrument could be developed to serve as the basis for assessing the legality of forest management and CoC. In this field, competing certification schemes have common interests that would justify a cooperative approach. In addition, to meet the market demands for 'legal' timber, a harmonized approach would be highly desirable and would help to avoid the controversies that have negatively affected the progress of certification.

Appropriateness of certification systems in tropical timber-producing countries

Country analyses

Six country case studies were carried out to assess the appropriateness of active certification systems in their specific conditions. These studies suggested that: (i) the implementation of all the schemes suffers from inadequate regulatory and institutional conditions; (ii) national schemes are, by definition, adapted to local conditions; (iii) the national (or regional) standards are appropriate in all countries, irrespective of the system applied; (iv) separate standards at the country level for natural forests and plantations as well as for community forests can be justified; (v) there are a number of limitations in applying the FSC P&C in country conditions; (vi) differentiation by FMU type and social category improves local appropriateness but, due to significant trade-offs, might not be broadly applicable; and (vii) a general problem of all the systems is their unsuitability for small and medium-sized enterprises, smallholders and, with the exception of LEI, community forests. Only LEI has a formal procedure for a phased approach that lowers the barrier of entry to certification.

Data are lacking on the extent to which the different certification standards and systems lead to different impacts on the ground. Most available studies have inherent limitations. More objective research is needed on the impacts of certification at the FMU level.

Community forests

A significant share of forests in ITTO producer countries is under community tenure or management, but only the FSC and LEI have been able to certify community forests. If markets for timber and non-timber forest products cannot reward SFM and forest certification, other mechanisms are needed to ensure tangible long-term benefits for community enterprises. Capacity-building through technical assistance and financial support should focus on building competitive production chains, rather than solely on certification. Promoting a direct interface between communities and buyers so they can better understand each others' constraints and priorities can also be useful. Experience shows that both the requirements of the standard and the certification procedures themselves have to be adapted to suit community forestry conditions.

Another, more fundamental constraint is a commonly held, deep mistrust among forest authorities of the capacity of communities to manage their forests; such mistrust is slowing the transfer of legally provided use or management rights. In these situations, a strong political commitment to promote community forestry is needed to create the necessary preconditions for the use of certification as a tool for achieving sustainability.

Smallholder forest owners

Through their involvement in plantation development, smallholder private forest owners are increasingly important as a source of timber supply. The certification of small-scale forest owners has proved to be particularly difficult, however, even though their forest management could often meet requirements. Small landowners in tropical timber-producing countries rarely have formal management systems and the market benefits of introducing them have been nil or marginal at best. Increasing the benefits of certification to these forest owners would help boost their interest in it.

Measures that would facilitate the access of small-scale forest owners to certification in tropical timber-producing countries include: (i) strengthening the organization of owners through regional associations, cooperatives, and similar arrangements; (ii) fully recognizing these owners in national forest policies and public support; (iii) improving the transparency of timber markets; (iv) extending communication and extension services to these owners; and (v) improving information on private forest owners and their resources as well as their awareness of and motivation towards SFM.

A special issue to be solved is the certification of tree crops like rubberwood, which play an important role in timber supply, particularly in Southeast Asia. One option would be to develop a specific standard and an appropriate, simplified assessment procedure within existing certification schemes with the purpose of ensuring that timber harvesting in tree crop plantations complies with legal requirements, does not have harmful social and environmental impacts, and is implemented within a sustainable development framework. The on-going work on certification under the Sustainable Palm Oil Roundtable offers a useful starting point for certifying other tree crops like rubberwood.

ITTO's role

ITTO policy work has been used widely as a framework reference for several certification standards (PEFC, CERFLOR, LEI and the MTCC), which has added significant value to the ITTO normative documents. The ITTO guidelines and C&I have provided an avenue by which certification schemes can link with an internationally agreed framework on the principles, criteria and indicators of SFM and, for national certification systems, by which they can achieve international recognition.

ITTO has also made significant efforts, including studies and international workshops, to promote comparability between certification schemes. This work has contributed to awareness among the certification schemes and tropical timber producers. In addition, ITTO's policy work has contributed, at least indirectly, to the development of the procedures of individual schemes and the requirements for recognized or acceptable certification schemes.

In 2003–2005, ITTO undertook analytical work and extensive stakeholder consultations to promote phased approaches to certification. Subsequently, certification systems have devised policies and developed procedures to promote such phased approaches. Several other actors (eg the Global Forest Trade Network, the Tropical Forest Trust and the Timber Trade Action Plan) are also helping in various ways to implement phased approaches. ITTO's policy work has contributed to these developments; apart from monitoring, the exchange of information and capacity building, the Organization is unlikely to need to take further action in this regard.

Because of the global public goods that certified SFM provides, there is a strong case for funding mechanisms other than the market to support the certification of tropical timber-producing countries. In this situation, official development assistance for SFM and forest certification can be justified but, to date, the financial support received by producers has been limited. There is a need to accelerate the process through targeted financial support using new mechanisms. In exploring various compensation arrangements and taking into account the opportunities emerging in climate change mitigation, the bundling of various global goods and services should be considered. SFM certification could be a feasible instrument for such bundling.

Recommendations

ITTO

(i) As a priority, continue to support the development of voluntary national certification standards and capacity-building in ITTO producer countries, capitalizing on the various instruments that have been produced under ITTO projects on auditing, training, etc.

(ii) Drawing on its competitive advantage, and together with other relevant international organizations (eg the Food and Agriculture Organization of the United Nations – FAO, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora – CITES), explore the feasibility of developing a common approach to standards of legal origin and legal compliance as well as their verification procedures. This would be highly synergistic with the implementation of SFM certification in tropical timber-producing countries, because implementation could be within, or linked to, existing certification schemes and would help them to respond to market demand for legal timber in major importing countries. The exercise, possibly involving a preliminary scoping study, would complement initiatives such as FELGT and provide a positive solution for exporters in those countries which do not have the preconditions for bilateral agreements with importing countries.

(iii) Prepare a discussion paper on the feasibility of including social criteria in CoC certification standards. Together with ILO, FAO and other relevant organizations, organize an international workshop involving the participation of forest certification schemes and other stakeholders to explore the inclusion of social criteria in CoC certification in a way that increases the contribution of forest management to social goals.

(iv) Support objective research on the positive and negative impacts of forest certification, including on the demand, supply and prices of tropical timber and timber products and on forest management at the FMU level. Comparative studies should be designed carefully in order to obtain defendable results that can guide policy design, operator decision-making, and the future periodic revision of forest management standards.

(v) Conduct a study on alternative funding sources and differentiated concessional financing mechanisms for SFM, with a focus on natural tropical forests and their global public goods. The study could contribute to the development of a future financing mechanism for SFM under the United Nations Forum on Forests. The study should explore the complex issue of accounting the combined carbon, biodiversity and social benefits of SFM and their verification through certification, as well as options for compensation mechanisms.

(vi) Continue to monitor the comparability and equivalence of forest certification schemes operating in tropical timber-producing countries, including emerging issues such as the verification of carbon sequestration within the context of the Clean Development Mechanism and other existing or proposed carbon finance mechanisms (particularly compensation for reduced emissions from deforestation and forest degradation), as well as the certification of sustainable forest-based and other biofuels. Possibilities for promoting further convergence between certification systems should be explored in future monitoring work and, if deemed appropriate, international workshops should be organized, together with other interested parties, such as FAO, in order to facilitate cooperation and convergence.

(vii) Conduct a study on strategies and measures for promoting SFM and forest certification in community forests and smallholdings. The study should identify and assess options for assisting communities and small-scale private forest owners to manage their forests sustainably, and to solve social conflicts that frequently occur between communities and forest concessionaires in developing countries.

Governments in producer and consumer countries

(i) Implement appropriate timber procurement policies for the promotion of legally and sustainably produced tropical timber.

(ii) Governments in consumer countries: work towards the further harmonization/convergence of timber procurement policies, considering specific provisions to enable tropical timber producers to comply more easily with the requirements of these policies, including those related to alternative evidence.

(iii) Governments in tropical timber-producing countries: recognizing the value of voluntary forest certification as an instrument to promote SFM and tropical timber products from legal

and sustainably managed sources, establish clear timber procurement policies and provide supporting measures for the implementation of certification, giving particular emphasis to the involvement of community forests and small-scale private forest owners.

(iv) Governments in member countries of the ATO: make a clear and firm decision on the future role of the ATO, including the eventual provision of a regional framework for forest certification, in order to enable countries to make informed decisions on their certification development strategies, and, if necessary, to arrange eventual sub-regional cooperation through other mechanisms.

Tropical timber trade and industry

(i) Promote the alignment of enterprise-level purchasing policies with relevant public procurement policies as a measure for reducing the proliferation of requirements for legal and sustainable supplies of tropical timber and timber products. As a minimum, avoid introducing terms, concepts and requirements that are not in line with those already agreed internationally. Legal provisions for anti-trust laws and regulations should be respected in these efforts.

(ii) To respect the principles of transparency and openness, make public any assessment criteria and reports on the acceptability of certification systems.

Certification systems

(i) Consider further arrangements to facilitate the implementation of forest certification in developing countries, with particular emphasis on tropical timber-producing countries.

(ii) Consider measures to shorten national standard-setting processes (so that they take one year or less) in order to provide a firm, locally appropriate basis for FMUs in moving towards certification.

(iii) FSC: improve communication on and, if needed, adjust FSC rules and policies related to the recognition of nationally developed certification standards and schemes, with the aim of enabling enterprises and other stakeholders to make more-informed decisions on forest certification.

(iv) PEFC: consider arrangements for accelerating PEFC development in developing countries, including in community forests and in situations where national certification systems are unviable.

(v) National schemes in tropical timber producing countries: make further efforts to communicate internationally on the scope and contents of their schemes, the progress made on the ground, and obstacles encountered, and, in key markets, undertake promotional initiatives to ensure that these markets have the necessary information to assess and recognize their schemes.

(vi) Recognizing that certification schemes are competing with each other in the marketplace, explore opportunities to further increase convergence between schemes for the benefit of tropical timber-producing countries, including the verification of legal compliance and origin, the inclusion of social criteria in CoC standards, etc.

I. Introduction

Since 1994, the International Tropical Timber Organization (ITTO) has been monitoring the progress of forest certification and its implications for tropical timber-producing countries. After a relatively slow start in the 1990s, when there was only one international certification system for verifying forest management and the chain of custody (CoC) of certified timber and timber products, certification has become a mainstream activity in the forest sectors of many countries.Progress in most tropical timber-producing countries, however, has continued to be slow. This is a cause of concern, since demand for certification is now perceived as a barrier to access to many tropical timber import markets.

Forest certification has had a significant impact. Not only has it become a major issue among forest stakeholders, the model is now also being applied in other sectors, such as fisheries.[1] Due to its innovative character as a 'soft' policy instrument, forest certification has inspired a wealth of studies, analyses and reports. Several private companies also offer services for monitoring developments in forest certification worldwide.

Forest certification is a tool that can contribute significantly to the development of sustainable forest management (SFM). As a voluntary private-sector instrument, it can bypass weaknesses in public-sector governance. It has been interpreted as representing a non-state, market-driven governance system which offers an alternative to regulation (Cashore 2002; Cashore et al. 2004). This makes it interesting to governments, some of which are using certification as a tool to complement regulation and enforcement. It can supplement government surveillance of forest operations, limit the extent to which timber derived from illegal logging gains access to markets, and ensure that sustainably produced timber receives preferential treatment in public purchasing.

For the trade and industry, certification continues to be mainly a marketing and communication tool to ensure access to environmentally sensitive markets and to mitigate risks related to stakeholder concerns on the origin of timber products. Certification is also being used to implement corporate social responsibility policies, to differentiate SFM-certified enterprises in the marketplace and create a more positive image. In addition, forest certification is increasingly used as an investment safeguard; financing institutions have defined various sets of requirements for acceptable certification systems, which their clients should implement in order to access funding. From the perspective of the forest industry and trade, it is important that certification does not become a non-tariff barrier to trade and that its benefits are commensurate with its costs. Traders feel that certification efforts are jeopardized by recent measures to address illegal logging, such as the Forest Law Enforcement, Governance and Trade (FLEGT) initiative and the proliferation of uncoordinated public procurement policies with diverse requirements concerning tropical timber. This has created a sense of uncertainty among producers and traders.

For stakeholders like environmental non-governmental organizations (NGOs), community-based organizations, Indigenous groups, forest workers and others, certification offers a way to influence large-scale forest management through participation in the standard-setting process and during the certification process. For these groups, certification can help protect their rights and promote well-being. On the other hand, many small-scale operators, including Indigenous groups, are suspicious of certification, partly because of the difficulty of obtaining it for their operations and the costs associated with doing so.

Forest certification continues to be one of the most contentious issues in international forest policy because it is a trade-related instrument that can influence the competitiveness of tropical timber-producing countries and their access to markets. In particular, producers are concerned about difficulties in achieving certification and the associated increase in production costs, while market benefits are uncertain. Another concern is the compatibility of certification with international trade rules.

Forest certification features in several recent international agreements. The International Tropical Timber Agreement (ITTA), 2006 refers to certification in its objectives:

(o) Encouraging information sharing for a better understanding of voluntary mechanisms such as, inter alia, certification, to promote sustainable

[1] The Marine Stewardship Council was established in 1997, largely following the model of the FSC.

management of tropical forests, and assisting members with their efforts in this area. [Article I]

The Non-Legally Binding Instrument on All Types of Forests (NLBI) negotiated at the Seventh Session of the United Nations Forum on Forests (UNFF) in May 2007 goes beyond information-sharing by encouraging certification in national measures:

(x) Encourage the private sector, civil society organizations and forest owners to develop, promote and implement in a transparent manner voluntary instruments, such as voluntary certification systems or other appropriate mechanisms, to develop and promote forest products from sustainably managed forests harvested according to domestic legislation and to improve market transparency [Paragraph 6]

The NLBI's Global Objective on Forests #3 calls for an increase in protected areas and other sustainably managed forests and an increase in products from such forests. The ITTA, 2006 emphasizes the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests. Both instruments raise the issue of demonstration or proof of products coming from such sources, which is one of the roles of forest certification.

The G8 Action Programme on Forests recognizes that new alliances between environmental NGOs, financial institutions, industry associations and private forest owners have established national, regional and international voluntary certification schemes that provide for third-party audits and in some cases the labelling of products from sustainable sources. G8 members are encouraging such efforts and supporting the dialogue on mutual recognition among voluntary certification schemes.

The steady expansion of forest certification worldwide has involved the development of a range of forest certification standards and schemes. Progress in tropical forests has been slow, however, due to the complexity of forest ecosystems as well as a lack of resources, skills and price premiums for certified products. While there are commonalities among various standards and schemes, there are also significant differences. This is because forests and forest management standards must be based on, and adapted to, regional and local ecological and socioeconomic conditions. Establishing globally applicable standards for SFM appears neither possible nor desirable, especially because of the huge differences between tropical and temperate and boreal forests. Establishing comparability and acceptance between forest certification standards and schemes is a measure to address the problem of proliferation and the particular difficulties encountered by tropical timber-producing countries in implementing certification. Several efforts have been undertaken (including by ITTO) to address the issue of comparability, taking into account practices in other fields of standardization and conformity assessment as well as the critical role of market requirements and acceptance.

Forest certification and associated labelling address the earlier phases of a product's life cycle: ie processes and production methods (PPMs). Even though forest certification was originally introduced to promote SFM with an emphasis on environmental conservation, social, economic and governance objectives have, over time, been incorporated. This adds complexity to forest certification as a policy instrument (Rametsteiner & Simula 2003). Certification is voluntary, but producers and exporters do not always feel that it is. Even when compliance to a standard is voluntary *de jure,* in many cases it is needed if exporters are to gain access to certain markets. As the requirements of certification are, by definition, above (or at least at the level of) mandatory requirements, they can influence the competitive position of suppliers and impose a heavy cost burden on developing country producers. On the other hand, if market incentives are insufficient, sustainable production in countries where illegal logging is common will have difficulty competing with unlawful competition.

The proliferation of certification systems is compounded by the proliferation of market requirements for such systems in both the public and private sectors of the tropical timber-importing countries. Various stakeholders are setting their own acceptability criteria, often without giving due consideration to the implications for tropical timber producers. For developing countries, the proliferation of market requirements has become an additional hurdle in implementing national schemes. The situation calls for a greater degree of convergence of and harmonization between certification systems and standards.

Objectives of the study

The main purpose of this study is to review and assess progress in the comparability and acceptance of forest certification standards and systems and particularly the promotion of certification with respect to tropical timber.

Specifically, the study aimed to:

(i) collect and analyze information on forest certification and CoC certification, including economic implications and incentives under different schemes;

(ii) identify and recognize the appropriateness of each system, taking into account local, social, economic and forest conditions and institutional arrangements;

(iii) review various mechanisms and initiatives with respect to the comparability and acceptance of forest certification standards and systems, including criteria and the requirements used or proposed for assessing such standards and systems;

(iv) review current and emerging market requirements and preferences both in public procurement and the private sector with regard to certified/legally produced timber, particularly tropical timber, with particular emphasis on identifying commonalities and differences in these requirements;

(v) assess the implications of market requirements and preferences, and various initiatives, for tropical timber producers and their competitiveness;

(vi) present the main findings on progress in comparability and acceptance of forest certification systems and standards and related market requirements;

(vii) make full use of available information and studies on certification. The Food and Agriculture Organization of the United Nations (FAO), the private sector and civil society will be invited, including through the International Tropical Timber Council's Trade Advisory Group (TAG) and Civil Society Advisory Group (CSAG) to provide input to the study; and

(viii) suggest areas of cooperation with regard to the certification of tropical timber, including arrangements and possible incentives in implementation by phases, which include legal compliance.[2]

[2] Appendix 1 gives the full terms of reference for the study.

Approach and methodology

All operational certification systems relevant to tropical forests were identified. The extent to which these systems are being applied was established in terms of certified forest area and the number of CoC certificates issued (Chapter 2). An overview of the markets for certified products was prepared based on available studies and other sources (Chapter 3). Information was collected from available published and internet sources, complemented by interviews with managers of certification systems. Views and guidance was sought from members of TAG and CSAG. The main issues for stakeholders related to the appropriateness of the systems were identified.

The existing operational systems in the tropical timber-producing countries (Forest Stewardship Council – FSC, Programme for the Endorsement of Forest Certification – PEFC, Programa Brasileiro de Certificação Florestal – CERFLOR, the Indonesian Ecolabeling Institute – LEI, and the Malaysian Timber Certification Council – MTCC) have evolved significantly in the last few years, in response partly to stakeholder criticism and partly to market requirements. It was therefore deemed useful to review the current provisions of each system, since up-to-date information is not readily available elsewhere (Chapter 4). Data were collected from published sources, the internet and, through interviews, certification scheme representatives.

Chapter 5 presents a comparison of certification systems with the aim of identifying the main areas of difference in procedures for standard setting, standard contents, certification and accreditation, and labelling rules. The approach was to map the existence of various provisions rather than to identify detailed differences in system provisions.

Several international initiatives have developed assessment frameworks or criteria for certification standards and systems. These include the International Council of Forest and Paper Associations (ICFPA) Matrix (previously known as the CEPI Matrix), the requirements of the World Bank Group (World Bank and the International Financial Corporation – IFC), the public-sector timber procurement policies of Denmark and the UK (the only public-sector policies that have set specific requirements for the acceptability of certification schemes), and the requirements of Keurhout (Netherlands), a private-sector body. The five frameworks are summarized and compared in Chapter 6. Also in this chapter,

the acceptability of certification systems is assessed according to the specifications of public-sector timber procurement policies in six countries. This is complemented by four examples of large corporations which have timber-buying policies that specify certified timber. A number of issues related to the comparability and equivalence of certification schemes are identified and analyzed.

In view of the high priority given to international measures to control illegal logging and associated trade, certification's possible role as a governance tool is analyzed in Chapter 7. The analysis is based on the experience of tropical timber-producing countries in linking certification with regulation and in using it as a monitoring and verification instrument.

Chapter 8 assesses the appropriateness of systems was carried out in terms of local, social, economic and environmental aspects, forest management and institutional arrangements. The assessment is based on the analysis of the evolution and status of the systems, the extent of their application and trends, and stakeholder interviews. Six country case studies (Brazil, Congo, Gabon, Ghana, Indonesia and Malaysia – Annexes I to VI) were carried out to provide background information. The appropriateness of applying certification in community forests and smallholdings was also analyzed.

ITTO's earlier certification-related policy and project work was reviewed based on available documentation to provide an additional basis for recommendations (Chapter 9). Project completion and ex-post evaluation reports were used as a source of information for key lessons learned. Chapter 10 contains recommendations for various stakeholders.

Unless otherwise specified, the term forest certification (usually abbreviated to certification) is used in this study to cover the certification of forest management, CoC certification, and associated labelling.

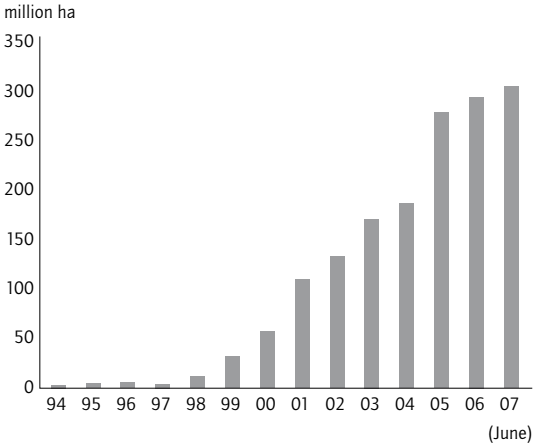
Source material for the study was collected from published sources, internet and interviews in the period July to September 2007. The data presented in this report correspond to the situation prevailing in June 2007 unless otherwise stated.

2. Current Situation and Trends in Implementation of Forest Certification

Certified forests

In June 2007, certified forests covered 306.3 million hectares globally (Figure 2.1), more than double the level in 2002. Nevertheless, the growth rate has slowed since 2005, falling by more than half to about 10% per year.

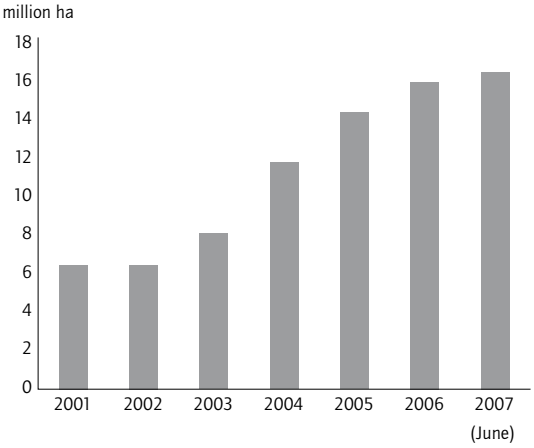
Figure 2.1 Global certified forests, 1994–2007



Source: Indufor

In 2007, the certified forest area in ITTO producer countries was 16.3 million hectares, or 2.6 times the level in 2002 (Figure 2.2). ITTO's 2005 assessment of sustainable management of tropical forests (ITTO 2006) used independent certification (or progress towards it) as one of four criteria of sustainability. The total area of sustainably managed production forest was estimated to be 26.9 million hectares[3], of which 39% (10.4 million hectares) was certified. The current growth rate of certified forest area in ITTO producer countries is about 10 to 20% per year.

Figure 2.2 Certified area in ITTO producer countries, 2001–07



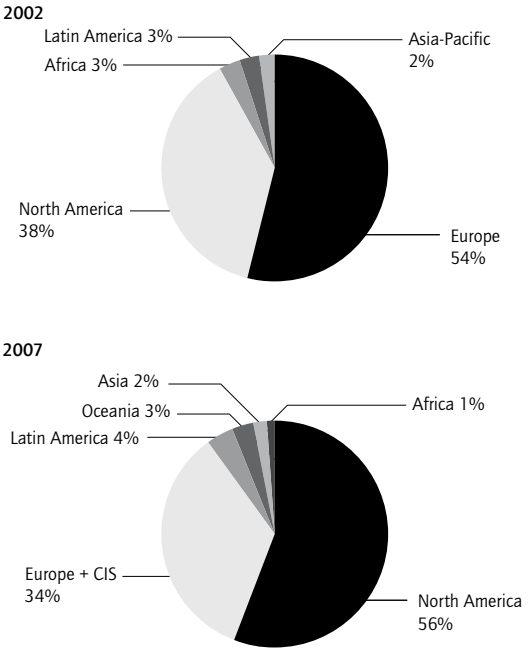
Source: Indufor

Most (84%) of the world's certified forests are located in North America and Europe (Figure 2.3). Developing countries account for 7% of the world total, about the same proportion as in 2002. In 2006, developing countries produced 27.4% of world industrial roundwood production, which was almost four times higher than their share of the world's certified forests. ITTO producer countries account for no more than 5% of the world total, while ITTO consumer members have 84% (Figure 2.4). The producers' share has declined slightly since 2002, while other developed countries (non-ITTO members) have increased their share.

The main reasons for the slow progress in certification in tropical countries are a lack of skills and adequate management systems in forest management units (FMUs), barriers in accessing certification services, limited awareness of the importance of certification, and a lack of certifiable forests (Lescuyer 2006).

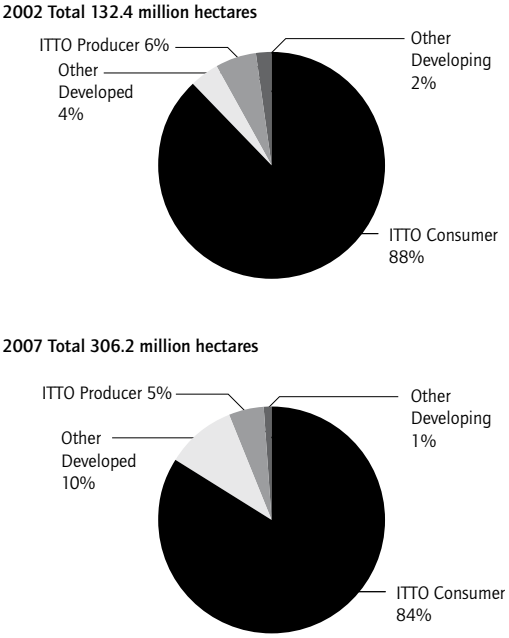
[3] 25.2 million hectares of natural forest and 1.8 million hectares of planted forest.

Figure 2.3 Certified forests, by region, 2002 and 2007



Source: Based on data from the FSC and national systems elaborated by Indufor. CIS refers to Commonwealth of Independent States

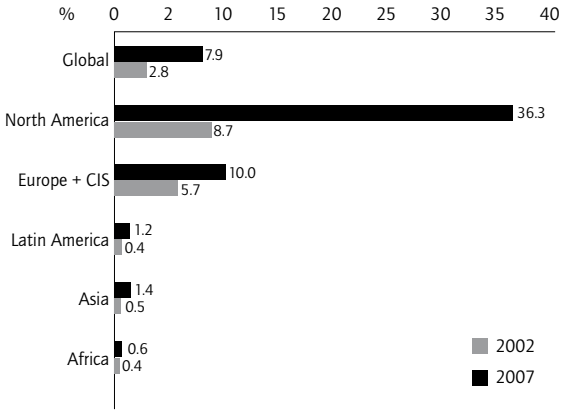
Figure 2.4 Certified forests in ITTO member countries, 2002 and 2007



Source: Based on data from the FSC and national systems elaborated by Indufor

Of the world's total forest area (3.9 billion hectares), 7.9% is certified, a considerable increase over 2002, when 2.8% was certified (Figure 2.5). North America has the highest percentage (36.3 %), followed by Europe (10.0%).[4] In the developing world, 0.6% of Africa's all forests are certified, 1.2% of Latin America's forests and 1.4% of Asia's forests. The rate of increase has been highest in the latter Latin America and Asia, while Africa has only seen a marginal expansion.

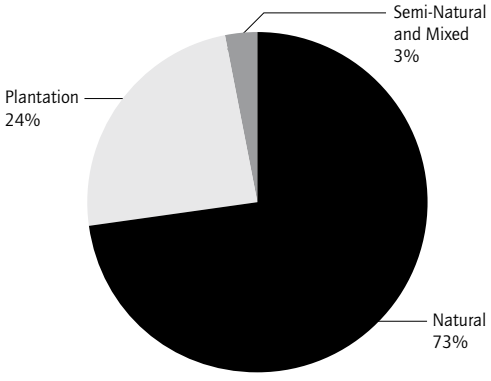
Figure 2.5 Percentage of forests certified, by region, 2002 and 2007



Source: Indufor

The majority (73%) of certified tropical forests are natural forests and about one-quarter is planted (Figure 2.6); a small area – 3% – is categorized as 'semi-natural and mixed'. Large areas of certified natural forests are not used for production and therefore do not contribute to the tropical timber supply.

Figure 2.6 Certified tropical forest, by type, 2007

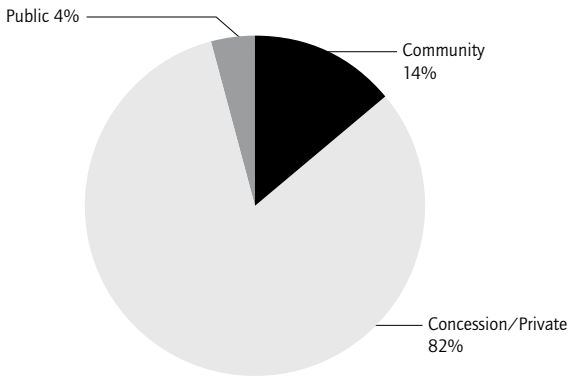


Source: Based on data from FSC and national systems elaborated by Indufor

[4] If Russia is excluded from the European total, the certified area accounts for 47% of all forests.

Most (82%) of the world's certified tropical forests are in concessions or are otherwise owned/managed by the private sector (Figure 2.7), mostly in large FMUs. The smallholder share of the certified tropical forest estate is small. Only 14% of certified tropical forests are community owned or managed, which is much smaller than the area of such forests as a proportion of the total tropical forest estate (White & Martin 2002). Molnar (2004) estimated that only about 1% of community forests were certified, which was well below the average in other ownership categories. Most certifications of community forests have been financed by donors or other external sources. Forest certification also appears to be beyond the reach of many small and medium-sized concessions, particularly in West and Central Africa, where local entrepreneurs play an important role (Parker 2004).

Figure 2.7 Certified tropical forest, by ownership category, 2007



Source: Based on data from the FSC and national systems elaborated by Indufor

Gunneberg (2007) estimated that the total area of certified forest could reach 512 million hectares, or 14% of the total global forest area and 45% of the global industrial roundwood production, within ten years. This would suggest that growth in certified forest area will level off at about 5% per year, which is quite possibly an under-estimate. Of the new certified forest area, about half will be in Russia, where the area of certified forest could reach 100 million hectares by 2017 (ibid.).

The current inequality in the distribution of certified forests and recent trends that suggest this is unlikely to change soon are cause for concern among tropical timber-producing countries, who suggest that insufficient actions have been taken to help them implement forest certification.

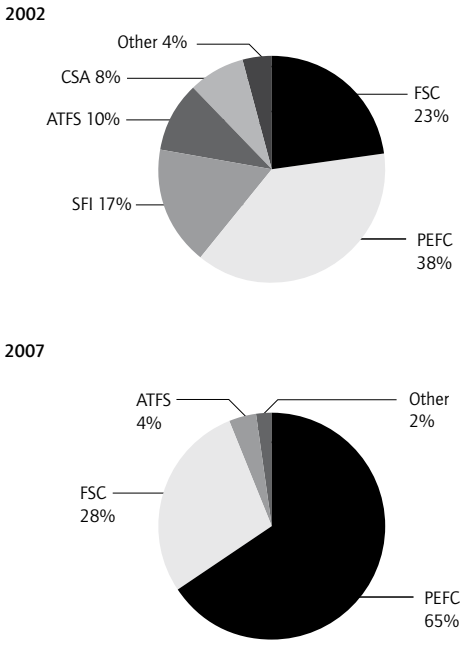
Certification systems

National certification schemes exist in 32 countries, of which four are developing countries. Among the tropical timber-producing countries, national systems are operating in Brazil (CERFLOR), Indonesia (LEI) and Malaysia (MTCC). Several other developing countries, including Cameroon and Gabon, are in the process of developing national systems. Appendix 4 summarizes the status of certification initiatives in Africa, Asia and the Pacific, and Latin America and the Caribbean.

At the global level, there are two competing certification schemes with different operating modalities. The FSC provides all the necessary elements of certification through centralized decision-making concerning national standards and accreditation. The PEFC, on the other hand, operates as a system for mutual recognition between national certification systems.

Almost two-thirds (65%) of the world's certified forests carry a PEFC certificate; the FSC's share is 28% and the rest are under other national systems (Figure 2.8). The FSC's share increased slightly in the five years to 2007, while the PEFC area expanded significantly as a result of the endorsement of the two leading national systems in North America – Sustainable Forestry Initiative (SFI) and the Canadian Standards Association (CSA). The third system in the region, the American Tree Farm System, is undergoing an assessment by the PEFC and, as it has already established a mutual recognition agreement with SFI. Its endorsement would raise the current PEFC share of total certified area to almost 70% (in 2002, the forest area certified under the PEFC, SFI, CSA and ATFS combined accounted for 73% of all certified forest). The PEFC expects that, over the next ten years, its share will stabilize at about 60% (Gunneberg 2007). Figure 2.9 shows the regional contribution of various systems to the certified forest area.

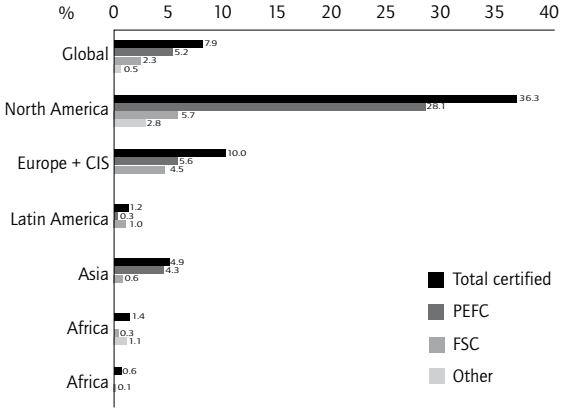
Figure 2.8 Percentage share of certified forest, by system, 2002 and 2007



CSA was endorsed by PEFC March 22, 2005
SFI was endorsed by PEFC December 8, 2005

Source: Based on data from the FSC and national systems elaborated by Indufor

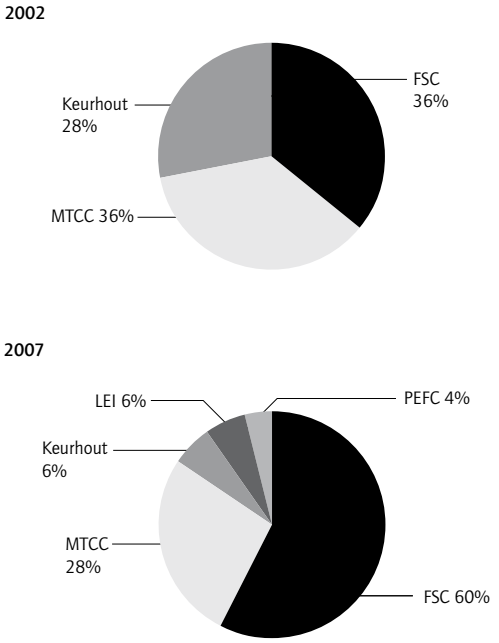
Figure 2.9 Regional share of certified forests, by system, 2007



Source: Indufor

The situation is quite different in the tropical regions, not least because, in the absence of national systems in most ITTO producer countries, the FSC is the only system available. The FSC plays a strong role in Bolivia, for example, where it accounts for 100% of the certified forest, but also in Brazil and, to lesser extent, Indonesia, where national schemes are also available. In 2007, 60% of certified forests in the three developing regions were under the FSC system; this is a significant increase over 2002, when only 38% of certified forests were under the FSC umbrella (Figure 2.10).[5] As a result of CERFLOR endorsement in Brazil, the PEFC has become active in the tropical regions, but its share of the total is marginal.[6]

Figure 2.10 Certified tropical forest, by system, 2002 and 2007



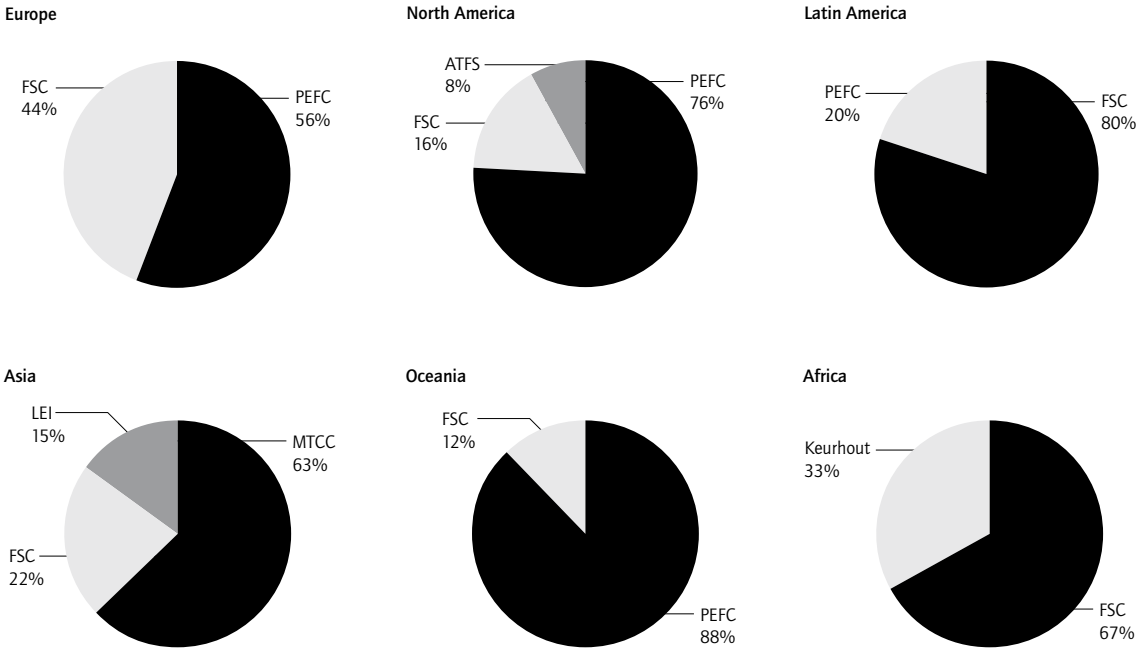
Source: Based on data from the FSC and national systems elaborated by Indufor

A regional analysis (Figure 2.11) reveals that the FSC is the leading system in Latin America (80%) and Africa (67%), while the MTCC and LEI, the two national systems in Asia, account for 78% of that region's certified forests. The FSC's share has increased in Africa and Asia, while in Latin America it is now competing with national systems (which, in addition to Brazil's CERFLOR, includes Chile's CERTFLOR) that account for 20% of the region's total. In North America, Europe and Oceania (ie

[5] Some Keurhout certificates are still valid. See Chapter 6 for an explanation of Keurhout's current status.

[6] The data in Figure 2.10 also includes the non-tropical part of Latin America: ie the area certified under CERTFLOR in Chile, which is also endorsed by the PEFC.

Figure 2.11 Certified forests by system and region, 2007



Source: Based on data from the FSC, the PEFC and national systems elaborated by Indufor

Australia and New Zealand), PEFC-endorsed systems have the leading position. The market share of these systems is changing rapidly, but the promotional drive for quick growth has apparently slowed. Most future growth in the certified forest area is likely to be in Russia, China and other parts of Asia, and Africa (see, for example, UNECE/FAO 2007).

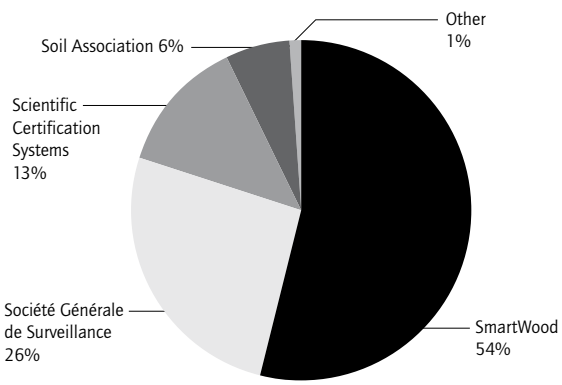
Another trend is the tendency of some FMUs to seek certification under two systems ('double certification'). This is mainly to facilitate access to buyers who need to meet a minimum threshold of certified wood under each system in order to make market claims. In 2007, 3.6 million hectares was certified under more than one system, which was about 1% of the total global certified area. This included about 1.1 million hectares in Brazil and Indonesia, which were certified under both the FSC and the respective national system. In developing countries, double certification represents about 7% of the total certified area. It is unlikely that double certification contributes much, if anything, to the sustainability of forest management, but it does increase costs for FMUs.

Certification bodies

Comprehensive information is unavailable on the role of various certification bodies – companies that carry out the certification process under the auspices of a given certification scheme – in developing countries. According to FSC data, FSC certifications (which account for 60% of the certified forest area in the tropics) have predominantly been carried out by four companies (Figure 2.12; Appendix 2).[7] The US-based SmartWood accounts for more than half the developing country total, followed by Swiss-based Société Générale de Surveillance (SGS). US-based Scientific Certification Systems (SCS) and the UK's Soil Association have had minor roles.

[7] Similar analysis on the PEFC-certified area in Brazil is presented in the country case study (Annex I).

Figure 2.12 FSC-certified forests in developing countries, by certification body, 2007



Source: Based on FSC data on certified forests

SmartWood plays a particularly important role in Latin America and is of considerable importance in Asia-Pacific, but doesn't yet operate at all in Africa. SCS has only certified forests in tropical Latin America, while the Soil Association works mainly in the Republic of South Africa. SGS is the only company providing services in all three tropical regions, but it has been losing market share (Figure 2.13). Tropical countries therefore have a limited choice of certifiers, since only four of the 16 existing FSC-accredited bodies have ventured to provide their services to FMUs in the tropics, and even then with limited coverage. The supply of certification services therefore has certain oligopolistic features (at least in some regions), even though the active certification bodies are competing with each other. This may sometimes be reflected in elevated pricing of certification services. The competitive situation is different in developed countries, where a larger number of suppliers are involved.

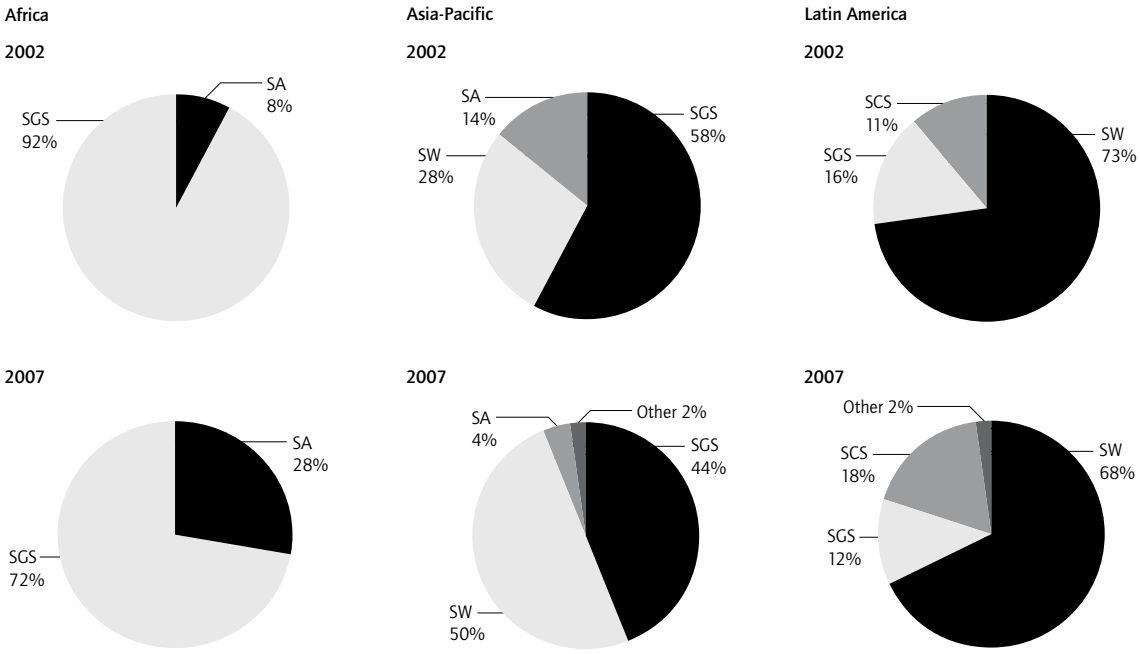
Forests certified under national systems are generally audited by nationally accredited certification bodies. The problem in this case is that internationally recognized national accreditation services are available only in six tropical timber-producing countries.[8] If national systems seek international recognition through PEFC, which is the only recognition option for them[9], they may have to seek accreditation services based outside the country.[10] If accreditation can be organized through bilateral agreements with bodies in other countries, this obstacle is therefore probably less serious than a lack of local certification services.

[8] Brazil, China, India, Malaysia, Mexico and Philippines have national accreditation bodies which are members of the International Accreditation Forum (IAF).

[9] FSC endorses only national standards which meet their requirements, not national certification systems.

[10] In Gabon, for example, the plan is that accreditation for the national system (PAFC Gabon) will be provided by France's COFRAC.

Figure 2.13 FSC-certified forests in developing countries, by region and certification body, 2002 and 2007



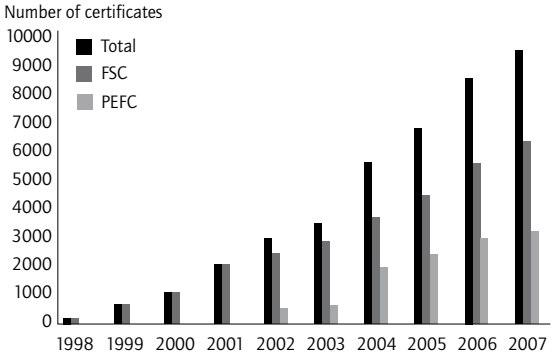
Source: Based on FSC data (SGS-Société Générale de Surveillance, SW-SmartWood, SA-Soil Association)

There is no reliable estimate of the forest certification industry's market size. Using rough estimates of the cost of forest certification (per hectare) and CoC audits[11], the industry might be worth about US$190 million per year worldwide. Due to the generally higher costs of certification in the tropics, about 9% of the total annual revenue of certification bodies (ie about US$17 million) is possibly generated there. This is a small share of the total value of timber production, but the FMU-level costs can be significant for tropical timber producers, particularly in natural forests.

CoC certification

In July 2007 there were more than 9,100 CoC certificates worldwide, a number that has grown steadily since 1998 (Figure 2.14). The FSC is the market leader, with more than 6,000 CoC certificates, while the remaining 3,000 are from PEFC-recognized systems. The FSC's CoC certificates are found in 78 countries, although not all of them have FSC-certified forests. The PEFC's CoC certificates have been issued in 32 countries, most of them with national PEFC-endorsed certification systems. CoC certificates of both international systems have increased at roughly the same rate (20% per year) over the last few years (UNECE/FAO 2007). As logos are not yet applied in the SFI and CSA systems (both of which have recently been endorsed by the PEFC), it is possible that, in the next few years, the number of PEFC CoC certificates will increase faster than those of the FSC.

Figure 2.14 FSC and PEFC CoC certificates worldwide, 1998–2007



Source: FSC and PEFC, elaborated by Indufor

[11] Based on an estimated cost of forest certification for main assessment of US$1/hectare (once every five years) and US$0.5/hectare for surveillance assessment (during the four successive years), and US$500 per CoC assessment.

There are 479 CoC certificates in ITTO producer countries, which is only 5% of the world total (the same as those countries' share of total certified forest area). More than three quarters (78%) have been issued by the FSC. The number of CoC certificates in ITTO producer countries has been increasing, mainly because of the MTCC, which has issued 104 (August 2007). Since 2002, the FSC has issued only 58 new CoC certificates in ITTO producer countries, suggesting that this business-to-business communication tool is probably constrained by the availability of certified timber in the tropical countries, although there may also be a lack of market demand.

More than 300 FSC CoC certificates have been issued recently in China and Vietnam, both of which are large exporters of further processed products but have small certified areas. This relatively large number of CoC certificates is explained by the importance of imported raw materials in the in-transit processing industries in both countries.

Two-thirds of ITTO producer country CoC certificates are in Latin America (80% of them in Brazil and Bolivia) and one-third in Asia-Pacific; amongst ITTO producer countries in Africa, only one certificate has been issued. No new CoC certificates have been issued in ITTO producer countries in Latin America since 2005. This may be partly because most of the region's exports go to North American and Asian markets, where there is less demand than in Europe for certified timber. In Asia-Pacific, in contrast, the number of CoC certificates increased by 38% in 2005–2007.

CoC certification is more widely applied in the mechanical wood industry than in pulp and paper production but, according to the certification systems, this is changing. The current situation is partly because the two sectors have differing wood procurement structures. The leading segment for FSC CoC certifications is the further processing of wood into flooring, components, mouldings, planed wood and various other items. Producers of these products tend to acquire their raw materials in various forms from a large number of small sources, which multiplies the need for CoC certification in the supply chain. PEFC CoC certificates are mostly found among timber traders and sawmillers, while the rest is shared between other wood products, further processing, pulp and paper, and other producers (UNECE/FAO 2007). The FSC label is more widely used than that of the PEFC, which is partly

explained by the difference in the distribution of CoC certificates by segment.

The FSC and the PEFC are present in all tropical-timber importing countries. In some (eg Belgium, the Netherlands and the UK), The FSC has the dominant position, while in some others (eg Finland, France) PEFC has clearly more CoC certificates. Membership of the World Wide Fund for Nature (WWF) Global Forest and Trade Network (GFTN) is an indicator that a company is firmly committed to FSC-certified wood products (Appendix 3); GTFN members, however, represent only a small share of the total trade, with the exception of the Netherlands (Forest Industries Intelligence 2006b).

Even though CoC certification is less costly than forest certification, companies in import markets are concerned about the 'significant obstacles' they face due to the costs and complexity of implementing CoC systems to achieve certification to various CoC standards (FSC, PEFC, LEI and MTCC). Changes in the CoC standards and logo rules have also influenced the interest of industry in applying for certification. The lack of a body to coordinate this process is another concern, since each certification scheme seeks to maximize market demand for its own brand (Oliver 2005).

3. Market Situation

Supply of certified products

The potential supply of roundwood from the world's certified forests is approximately 405 million m^3, of which 6% is produced in developing countries.[12] This is about one-quarter of the world's total industrial roundwood supply. Increases in potential certified roundwood supply are closely related to growth in the total area of certified forests, as well as their composition (particularly the plantation share in the tropics). In developed countries, the growth rate in supply slowed recently, to 4% per year in 2005–07 (UNECE/FAO 2007).

For a number of reasons, most certified wood is sold without a label. Many products do not reach retail markets and, in business-to-business communication, information on the existence of the certificate is often sufficient. Industrial companies might not see an adequate marketing advantage in labelling to warrant the promotion of the certification system's brand. In the domestic markets of countries in which most forests are certified (eg Austria, Finland), there is no incentive to differentiate between certified products. PEFC-certified producers have been particularly slow in adopting labelling and the FSC label continues, therefore, to be more visible in the marketplace. Both schemes are becoming more active in promoting their brands, however, such as by establishing promotional offices (eg PEFC in China and Russia) and special promotional events (eg FSC Paper Forums).

Demand for certified products

Country situations

Despite several calls for separate production and trade data on certified products, consistent information on the markets for certified products is unavailable (UNECE/FAO 2007); some country-level analyses are summarized here. In the Netherlands, an estimated 13.3% of the total volume of timber sold in 2005 carried certification, while an additional 23.1% originated in certified forests but had no label (Oldenburger & Leek 2007). The situation varies, however, by product; 53% of sawn softwood was obtained from certified sources and 12% of tropical sawn hardwood.[13] While the PEFC accounts for 63% of the total certified timber market, the FSC accounts for 70% of products carrying a certificate/label.

In the UK, a study (Timbertrends 2006) revealed a similar situation: 58% of sawn softwood imports were from certified sources, compared with 11% of sawn hardwood imports. Certified products made up 46% of softwood plywood volumes, while only 24% of hardwood plywood (of which at least one-third was made from temperate hardwood) was certified. Most reconstituted panel imports were from certified sources (particleboard 76%, oriented strandboard 98%, medium density fibreboard 88%). Customer insistence on certified supplies is more prevalent among the large industrial users (eg in the housing sector), while it is rarely a requirement for small-scale enterprises. In 2005, just over 10% of all imported wood products were subject to specific customer requests for certification, with the great majority of the goods supplied by larger timber and panel companies (ibid). Oliver (2006) estimated that UK end-use demand for certified products represented 1–5% of total demand, the higher end including companies which are actively seeking for certified timber products.

In the UK, the PEFC has 51% of the market for all-imported certified timber and sheet materials, the FSC has 47%, and the balance is made up by MTCC-certified products. The PEFC is dominant in sawn softwood and softwood plywood, while the FSC's position is strong in the hardwood sector. The Dutch and UK situations demonstrate that, given the diversity of supply sources and consumption patterns in various end-use sectors, a single system is unable to satisfy all the demand for certified products. In the Belgian market, certified products are reportedly readily available but supply is insufficient to meet demand for specific applications like marine construction; supply limitations also apply to other end-uses of tropical timber (WWF 2005a).

[12] Actual supply is not known. Estimates of potential supply differ depending on the assumptions used for annual production per hectare in different types of forest. High-end estimates based on detailed, country-specific yield assumptions for natural and plantation forests suggest a potential supply of up to 750 million m3. The UNECE/FAO (2007) estimates used here were adjusted to include certified area under national systems not endorsed by the PEFC (and therefore not included in the UNECE/FAO figures).

[13] The same level was also reported for sawn temperate hardwood.

As a whole, the demand for certified timber is growing and, at least in some key European import markets, is already significant. Tropical timber is apparently under-represented in this market segment, mainly due to limited supply. The impact of restrictions on access to these markets is, in relative terms, strongest in Africa, which, of the three tropical regions, depends most on Europe. This is why African producers have made important commitments to achieving certification (Bourguignon 2007). Brazil, Malaysia and Indonesia are also affected by market demands in Europe, but to a lesser extent (Simula 2006).

Business-to-business demand

Comprehensive, consistent data on the demand for certified products are unavailable. At the industry level, the number of CoC certificates can be used as a proxy for the development of business-to business demand (see Chapter 4). In the European Union (EU), France has the largest number of CoC certificates, followed closely by the UK and Germany (each with more than 1,000 certificates). With the exceptions of Belgium and Spain, EU countries tend to favour either the FSC or the PEFC, but not both (UNECE/FAO 2007). FSC-certified products are increasingly appearing on the shelves of do-it-yourself retailers and supermarket chains selling furniture made with tropical wood (especially garden furniture) in Central and Western Europe (UNECE/FAO 2007). FSC-certified products are particularly in demand in the UK, Germany, the Netherlands and Belgium (and also the US). PEFC demand is strongest in Austria, Germany and France.

The corporate social responsibility policies of large importers, distributors and builders' merchants have recently started to play an increasing role in creating demand for certified products (see Chapter 6). In the UK, for example, many companies have committed to shifting as far as possible towards 100% certified products, doing so to help protect their markets, counteract environmental criticism, and minimize costs associated with stocking both certified and uncertified product lines (Oliver 2005).

Public procurement

In several countries, government procurement agencies have made commitments to buy legally produced and certified products. In recent years, public timber procurement policies have become a major driving market force (see Chapter 6). Public procurement generally accounts for about 15–20% of the demand for timber products, but the indirect impact of respective policies is significantly higher (Simula 2006). In Denmark, for example, the public sector plays a much stronger role (15–27%), due to the demand for tropical species in marine construction and public works (Rambøll Management 2006). In France, the share of public procurement in tropical timber has been estimated at 25% because of the importance of building construction and public works (CIRAD 2004).

Building industry initiatives

The demand for certified products has increased in the UK due to both the government's procurement policy and to the Building Research Establishment Environmental Assessment Method (BREEAM) program.[14] In the US, the US Green Building Council has developed the LEED (Leadership in Energy and Environmental Design) Green Building Rating System as a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. LEED provides a complete framework for assessing building performance and meeting sustainability goals and presently specifies FSC certificates for timber products. Resource management is assessed as part of the product's lifecycle and forest certification is used as a tool for assessing wood and wood products.

Increasing the use of certified products in the construction sector will be critical for mainstreaming them. A wide variety of timber and timber products are used in both new projects and renovations; in most European countries, for example, more than 50% of sawnwood is used for building and construction (UNECE/FAO 2005). These products are sourced from a large number of different places and enter projects through various subcontractors. It has proved difficult to establish whether a project uses only certified products. Flagship projects like sports stadiums or concert halls can be controlled through special measures but a need has emerged for a systematic approach to ensure that only sustainably or at least legally produced timber is used in public building and construction projects. Decentralized purchasing through subcontractors is one of the

[14] BREEAM is a means of reviewing and improving the environmental performance of buildings. It has been increasingly accepted in the UK construction and property sectors as offering best practice in environmental design and management in office buildings, industrial units, retail developments, schools, hospitals, prisons and homes. The homes version of BREEAM is called EcoHomes.

barriers for implementing procurement policies in the construction industry (Werndle et al. 2005)

In the UK, a group of large building contractors are developing a common purchasing policy and piloting it with building-project certification to ensure that only certified timber and timber products are used at construction sites. Some contractors are committed to the FSC, but it is likely that the policy will be aligned with Central Point of Expertise on Timber (CPET) assessments under the UK government timber purchasing policy. This kind of initiative can have a major impact on the market because it is targeted at professional builders rather than homeowners. It also shows how the public and private sectors can work together to promote green purchasing.

The FSC has issued a special standard (FSC-STD-40-006) for project certification and the PEFC is working on its own approach. Under project certification, the use of legal and sustainable timber at a given site can be independently verified; the aim is to mitigate risks to company reputation related to the use of illegal and unsustainable materials and to track the CoC for complete buildings. BM Trada has been pioneering the implementation of this initiative (McGregor 2007).

Private-sector purchasing policies

Parallel to public procurement policies, some larger companies in the forest products industry have worked to develop their wood-purchasing policies and codes of conduct related to legality and sustainability. Several industry associations have also developed and implemented environmental codes of conduct and purchasing policies; in some, adherence to these is a condition of membership.

The World Business Council for Sustainable Development (WBCSD)'s Membership Principles & Responsibilities (2006) calls for the introduction of credible forest certification in forests owned, leased or managed by member companies, as well as "credible, independently certified wood tracing systems where needed to address significant risks". The ICFPA has agreed that credible forest certification is a significant voluntary, market-based tool for promoting SFM, improving forest management on the ground, and reassuring environmentally concerned customers.

A survey of twelve European timber trade federations showed that eight have codes of conduct that include, as a minimum, a commitment to trade legal timber and to promote SFM certification. Three associations have a systematic approach towards trading only demonstrably sustainable timber, including the monitoring of member compliance and third-party auditing (Hentschel 2006). The European Confederation of Timber Importing Associations (FEBO) has committed to: supporting sustainable forestry; condemning illegal logging and associated trade; and recognizing that certification is the most feasible way to prove sustainability. The UK Timber Trade Federation has finalized its Responsible Procurement Policy, backed by independent audits and including a commitment to favour certified products. The Netherlands Timber Trade Association has agreed to a code of conduct with strict requirements for members to demonstrate a commitment to legal sourcing. The French timber trade association Le Commerce du Bois, has issued a charter that is closely aligned with the government's procurement policy; it requires, at a minimum, that verified legal timber is used for all timber products (Forest Industries Intelligence 2006b).

The industry is aware of the supply constraints that would arise were a certification requirement to be imposed immediately, and procurement policies commonly include both long-term and intermediate objectives. This contrasts somewhat with the commitment made by members of the GFTN to procure only FSC-certified materials, which might be constrained by the availability of supply (see also Appendix 3).[15] One outcome of the market pressure has been an increase in the African exports to Asia where certification is not required.

Price premium for certified products

The verification of legality and SFM certification will increase the cost of timber production in exporting countries, creating pressure for price increases. In general, however, buyers in importing countries have refused to pay a premium for certified products, except for some products and market segments for which demand exceeds supply.

In Denmark, certified tropical timber used in marine construction has achieved prices that are 10–30% higher than those obtained for uncertified timber (Rambøll Management 2006). In the UK, survey data show that companies in different situations have paid widely varying premiums, which have been influenced by a lack of consistent supply.

[15] The GFTN also promotes a phased approach to certification to address this limitation.

Stocking certified tropical timber products is therefore often risky for importers. There are also differences between supplying regions. Hardwood lumber from Asia has recently been in tight supply, causing increases in price. MTCC-certified meranti sawnwood has been sold at a modest premium of about 2% of the UK-delivered price. In some cases, FSC-certified lumber has captured a premium of 5–8%. Brazilian hardwoods have also been in periodic short supply and examples of a 10% premium have been reported. If carrying some form of legal verification, African hardwood lumber has captured a 2–3% premium from some companies. The plywood market has been strongly influenced by the flood of Chinese products, which have been sold at prices that are 25–30% lower than those for competing products. However, some buyers have paid a premium of 11–14% for FSC-certified Brazilian products and an additional 9–10% for Conformité Européene (CE) marking (Oliver 2005). At the end-use industry level, however, there is a limited willingness to pay a premium (eg Werndle et al. 2005).

Studies in the US have shown that most consumers prefer to purchase an ecolabelled timber product as long as it does not cost more than a competing, non-labelled product. For most consumers, a lower price is a more compelling attribute than the presence of an ecolabel, but there are also some who are willing to pay a small premium (Anderson & Hansen 2004). Another experimental study concluded that about 50% of US consumers could be targeted for ecolabelled forest products and that this segment would be easily accessible for promotion and distribution efforts. There may be a core group of consumers that is strongly committed to purchasing such products and from which price premiums might be obtained (Anderson & Hansen undated). A recent survey (Ganguly 2006) found that builders believed that 17–50% of their customers would be willing to pay a premium for a house made of certified lumber. Another US study on Latin American FSC-certified products found that a significant share of US companies dealing with tropical plywood/veneer are 'environmentally certified' and therefore represent an opportunity for suppliers of certified timber (Crespell & Hansen undated).

In Japan, the main certified products are paper for copying and printing, woodchips, and printed materials; other products such as sawnwood represent less than 10% of total sales of certified goods. No price premiums have been reported in the Japanese market (Owari & Sawanabori 2007).

Information is scant on price premiums for tropical logs captured by FMUs, although some cases are known. A study in Sabah, Malaysia, found that the mean value of exported certified logs was 5–77% higher than uncertified logs, depending on the species group. It also found that forest certification can improve log prices and serve as a catalyst for reforming the timber marketing system by sorting species into user-oriented groups (Kollert & Lagan 2005).

Expanding certified supply will increase competition between suppliers; eventually, 'excessive' premiums are likely to disappear. On the other hand, the additional costs of certified natural tropical forest management are unlikely to be excessive and could be absorbed by export-oriented firms with large-scale operations, which are also generally better managed than average. Based on case study field data in Indonesia and Malaysia, Simula et al. (2005) found that additional costs due to certification could translate into a minimum export price premium requirement of 5–8% (CIF) at the level of processed products, depending on the number of intermediaries in the supply chain and their mark-ups. However, small and medium-sized enterprises (SMEs) do not have similar advantages and in their case the additional costs will, in relative terms, be larger than in the case of large operators.

Conclusions

From a supply-demand perspective, the following conclusions can be made:

- certification is already becoming mainstream in many developed countries, but progress in tropical timber-producing countries is still slow;
- most certified timber supply is sold without label or reference to certification due to a lack of market demand;

- demand for certified products is significant in many European markets. There is also potential demand in the US market, but less in Japan. Engaging China in the market development of certified tropical timber would have a major impact on demand;
- the main market drivers are public procurement, corporate social responsibility, building industry initiatives, and NGO pressure;
- unutilized potential demand exists because of a willingness among buyers and consumers to give preference to sustainably produced timber. In order to tap this potential demand, targeted market promotion is needed;
- in some markets and market segments, demand exceeds supply, particularly for FSC-certified hardwood products;
- due to an insufficient supply of certified tropical timber, some African export trade has shifted from Europe to China. Engaging in-transit processing countries in Asia in certified supply chains will be critical for the mainstreaming of certification in the tropical timber trade. There is growing interest in CoC certification in countries such as China and Vietnam;
- some tropical timber exporters and some traders in importing countries report higher prices for certified products. This may be a temporary phenomenon that dissipates when supply expands to meet demand. In the long run, the market is unlikely to pay an additional price and certification will simply be required to maintain access to certain markets;
- despite the recent slow-down in the growth of forest certification, which is partly because many of the easily certifiable forests have already been certified, its use will continue to spread;
- for wood supply and market reasons, many companies have been forced to seek double certification for both their forest management and CoC, which increases costs but has limited or no environmental benefit;
- for reasons of cost efficiency, traders have a clear preference for stocking only one certified brand; and
- the comparability and acceptability of different certification systems remain key issues, particularly for tropical timber producers.

4. Evolution of Forest Certification Schemes towards Increased Convergence

This chapter summarizes the main developments in the structure and rules of the certification schemes present in ITTO producer countries (Figure 4.1). The review shows that most systems have changed significantly in recent years, due to several factors, including: (i) the introduction of external assessments; (ii) the development of public procurement rules; (iii) the schemes' changing market and other strategic objectives; and (iv) stakeholder pressure. These factors have influenced developments in various directions but, as a whole, they have increased convergence between the schemes.

Figure 4.1 Logos of certification schemes operating in ITTO producer countries

FSC

Evolution

The FSC was established in 1993. It is the only globally operating forest certification system that provides all the necessary components of certification through centralized decision-making. These components include: (i) the FSC's own international principles and criteria for responsible forest management (P&C) standard; (ii) its own rules for developing national certification standards and endorsing national initiatives; (iii) a set of FSC standards for the other elements of the system (CoC certification, controlled wood, etc); (iv) a centralized accreditation service (now a subsidiary company); (v) a logo and trademark with associated rules of use; (vi) a unique governance structure; and (vi) a financing mechanism (also organized as a separate unit). The FSC was not set up as an organization for the mutual recognition of other certification schemes and its explicit policy is to only recognize national standards that have been developed through a process complying with FSC requirements and which interpret the FSC P&C in national or local conditions.

Box 4.1 summarizes the main milestones of the development of the system.[16] Many of the initiatives listed therein have been designed to strengthen the provisions of the system, which has evolved over time based on accumulated experience. The Small and Low Intensity Management Forests (SLIMF) initiative, for example, was a response to the slow development of FSC certification in smallholdings and community forests. The separation of the accreditation service from the main organization in 2006 was a response to the requirements of the International Organization for Standardization (ISO). The revision of the CoC standard and the adoption of the controlled wood standards were responses to stakeholder demands to improve the integrity and accessibility of the system and to address the problem of illegal timber in the market. The development of system-wide generic indicators for the P&C was a response to a critique on the variability of individual generic indicators applied by certification bodies in the absence of FSC-endorsed national standards. The review related to the certification of plantations was induced by stakeholder concerns.

The FSC has enjoyed strong support from many NGOs (eg WWF, Greenpeace), trade and industry enterprises[17], and donors. Its main strengths are provisions for the balanced participation of various stakeholder interests in the scheme's governance and standard setting, thorough and detailed procedures, and the high level of performance and credibility of the FSC label. However, some stakeholders have criticized the organization. Issues raised include the limited representation of Indigenous and other social groups, limited access to information on the system, the conditional certification of operations that do not comply with the standard, variability in the individual generic standards of certification bodies, limited progress in the certification of small-scale private and community forests, the possibly inappropriate placement of private and small-scale forest owners in the organization's economic chamber (instead of its social chamber (Counsell 1999; Counsell & Loraas 2002; FERN 2004a; www.fsc-watch.org)[18]. The FSC recognized that some of the concerns were justified and has taken steps to address them. On the other hand, many stakeholders believe that the FSC

[16] A comprehensive review of the FSC's evolution until 2002 is provided by Synnott (2005).

[17] See, for example, www.whyfsc.org

[18] FSC's members are divided into three chambers, each having an equal voting right in the General Assembly.

Box 4.1 FSC milestones

1998	Guidelines and protocols for the FSC endorsement of standards and national initiatives approved. Group certification guidelines approved
1999	Revised policy on percentage-based claims. Revision of Principle #9 High Conservation Value Forests.
2000	A new policy on percentage-based claims. Policy on interpretation of genetically modified organisms; policy on partial certification of large ownerships.
2001	Policy for brokers. Trademark policy for the printing and publishing sectors.
2002	Separation of the Accreditation Program as an independent unit. Revision of FSC statutes and by-laws. Policy on ILO conventions. Policy on group CoC certification for small enterprises and on multi-site CoC certification.
2003	Headquarters relocated to Bonn (from Oaxaca, Mexico). Social Strategy Version 2.1 completed. Adoption of SLIMF Policy. Policy on preliminary accreditation of national/regional forest stewardship standards. Policy on accepting contributions. Regional office in Africa established.
2004	Trademark Integrity Program started. New standards for accreditation incorporating ISO/IEC standards. SLIMF standards come into force. Plantation review started. New CoC standards (including two for non-FSC-certified controlled wood) approved. FSC standard for on-product labelling approved. Policy for pilot tests of draft FSC standards and on policy on excision of areas from the scope of forest certification. First ISEAL peer review of FSC conducted. Regional office in Russia established. First FSC Global Paper Forum convened.
2005	Relocation to Panama of the Latin America Regional Office. Statutes and by-laws revised. Policies on modular approaches to forest certification and pesticides adopted. FSC standard for on-product labelling come into force.
2006	Plantation policy review completed. Accreditation Services International GmbH (ASI) established to provide accreditation and monitoring services. Project certification standard approved. Approval of two new versions of the FSC Controlled Wood Standards. Compliance with the ISEAL Code of Good Practice for developing social and environmental standards.
2007	Draft policy on Criterion 1.6: Legality by forest management enterprises. Technical review phase of FSC plantation review process started. Pesticides policy guidance and procedure for derogations. Development of international generic indicators for FSC P&C. Public consultation and approval of the Global FSC Strategy. New certification standard for multi-site organizations approved. New accreditation standard for evaluation of CoC operations approved. New CoC standard approved. FSC requirements for the promotional use of FSC trademarks approved.

Sources: Synnott 2005; FSC annual reports for 2004, 2005 and 2006; FSC 2005; FSC Secretariat

is the most demanding of all the forest certification system.

The FSC offers three types of certification: (i) forest management certification; (ii) CoC certification; and (iii) the certification of controlled wood, ie of non-FSC certified wood in processed products, so as to avoid "environmentally and socially damaging wood (FSC undated).

Forest management standards

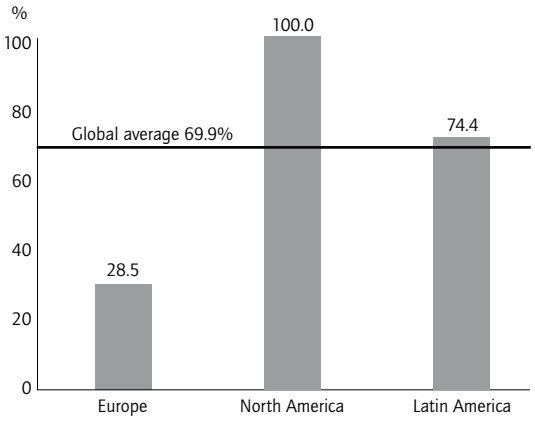
The FSC P&C (FSC-STD-01-001) forms the basis of the standards applied by the system worldwide. This means that all FSC-certified forest management operations have been assessed for compliance with the P&C. The standard on Structure and Content of Forest Stewardship Standards (FSC-STD-20-002) attempts to minimize the potential for variability in FSC certification requirements by stipulating that all standards applied under the system must follow the FSC P&C. Additional criteria may be added if clearly justified. Generic indicators developed by certification assessment bodies are accredited by the FSC and must also be locally adapted in compliance with FSC-STD-20-003.

Each criterion should be accompanied with indicators specifying outcomes or levels (ie thresholds) of performance that are measurable during an evaluation and supported by examples of means of verification. Indicators should be free of subjective elements. The standard needs to be cost-effective and practical for use in SLIMFs, where some indicators might not apply.

The FSC has endorsed national and regional forest management standards in 14 countries, of which four are in Latin America (Appendix 5). Assuming that all the certifications in countries with a national FSC standard have been made against that standard,[19] two-thirds of the FSC-certified area, at most, has been assessed against a national FSC standard (Figure 4.2). FSC certificates have been issued in a total of 76 countries; this therefore appears to be a significant lacuna in the system, which is being addressed through the development of international generic indicators for FSC P&C.

Standard setting is a tedious and time-consuming process because many interests must be reconciled. In some countries, such as Guatemala, the process has taken several years.[20] Guatemala's certified forests were assessed based on a specific standard developed by SmartWood through a long process for the Selva Maya regions in Guatemala and Belize. Contentious issues have been high-conservation-value forests (HCVFs) and the development of a generic standard for the management of different types of natural forest and plantations (Carrera Gambetta et al. 2006). If it wants to accelerate the development of national standards in developing countries, the FSC needs to shorten standard-setting processes.

Figure 4.2 Share of FSC-certified forests under national FSC standards, 2007



Source: Based on FSC data

The FSC requires that FSC members should make up at least half of any FSC national working group for standard setting, representing, in a balanced way, the organization's four chambers. This is particularly problematic in countries – such as many ITTO producer countries – where the number of FSC members is small and stakeholders are not well organized.

Only one country (Colombia) has a specific standard for plantations. In Brazil, the national standard covers only one forest type (non-flooded natural forest or *terra firme*), but 44% of FSC-certified forest there is plantation. The national FSC standard for plantations in Brazil has not been finalized for various reasons (see Annex I). Taking into account the broad spectrum of stakeholder perspectives on plantations, in 2004 the FSC initiated a review of its approach to plantations, as expressed in Principle #10.

[19] Seven national standards are less than five years old, which means that these countries also have areas that have been certified against the generic standards of the FSC's certification bodies.

[20] Eg in the Netherlands, which has a small forest area, four years were needed for standard setting. In Sweden, the national FSC standard, which was first endorsed by the FSC in 1996, should have been updated in 2001 when the five-year validity period expired. Intensive discussions and negotiations have not yet led to a new national standard for submission to the FSC.

Three countries (Bolivia, Colombia and Peru) have developed a national standard for non-timber forest products (brazil nut and bamboo). In 2007, 1.5 million hectares of Indigenous group-managed forest in the central Amazon was certified against the generic indicators of an FSC-accredited certification body.[21]

In Brazil and Bolivia, the existence of a national FSC standard has apparently contributed to the adoption of FSC certification by forest enterprises, since both countries have large FSC-certified areas (Appendix 4). This is not, however, necessarily the case: Colombia, through a major effort, has developed three national standards, but only two plantations covering a total of 38,700 hectares have been certified. On the other hand, the experience in Peru indicates that FSC certification can make progress without a national standard, as long as competent certification services with a good understanding of local conditions are available (Gretzinger, pers. comm.).

The FSC normally endorses only national standards that have been elaborated under FSC rules. In 2003, however, the UK FSC national working group requested formal recognition of equivalence between the FSC national standard and another, differently structured standard that was developed for the use in the national forest certification scheme. The FSC eventually recognized this Woodland Assurance Standard (UKWAS) after an extensive evaluation period at different levels (FSC 2003a). In Indonesia, the FSC has cooperated extensively with LEI over a long period of time, but this cooperation has not led to FSC recognition of the LEI standards.[22]

In 2005, the FSC General Assembly called for the development of FSC international generic indicators for the P&C. The current proposal is aimed at generating a single set of international generic indicators, applicable to all forest types and regions, that would be used in situations where there are no national standards; the aim would be to minimize the scope for variation by certification bodies at the level of indicators. If technically possible, these generic indicators would be fixed at the international level, with no variation permitted by certification bodies at the national level, although the 'means of verification' could differ. If it proves technically unfeasible to have a single set of generic international indicators, the FSC could develop alternative generic indicators, applicable for the evaluation of plantations and for 'natural' or 'semi-natural' forests in each of the boreal, temperate and tropical zones. Variations would only be applied where there is a clear technical argument for such variation. This initiative, when completed, would help eliminate inconsistencies in the application of the generic indicators of certification bodies, one of the perceived weaknesses of the FSC system. The current standard for the local adaptation of generic forest stewardship indicators (FSC-STD-20-003), approved in 2004, is apparently considered insufficient in this respect, leaving certification bodies with too much flexibility on the formulation of indicators.

The international generic indicators might reduce interest in the development of national FSC standards, even though they should work to the contrary. In the long run, the whole system is likely to move towards fully harmonized standards at the global level. From the perspective of ITTO producer countries, a degree of flexibility might still be required to interpret the P&C in local conditions.

Since July 2006, the FSC has been recognized as operating in compliance with the International Social and Environmental Accreditation and Labelling (ISEAL)[23] Code of Good Practice for Setting Social and Environmental Standards (2006), the only forest certification system to have achieved such recognition. The ISEAL code specifies good-practice requirements for the preparation, adoption and revision of standards that address social and environmental practices. It is used to evaluate and strengthen voluntary standards. Were more forest certification schemes to join ISEAL, the code could become an instrument for the international harmonization of standards.

CoC and controlled wood standards

The FSC's CoC standards have developed in stages (Synnott 2005). The current standard for companies supplying and manufacturing FSC-certified products (FSC-STD-40-004) was first approved in 2004[24] and, after a first phase of implementation, is now being revised in order to be applicable, from 2008 onwards, to all organizations in the forest product supply chain. This standard provides, among other things, definitions of new product groups (FSC-pure,

[21] Not, for some reason, the FSC-endorsed national standards for non-timber forest products.

[22] See the country case study on Indonesia (Annex V) for details.

[23] ISEAL was set up by a group of leading social and environmental standard-setting organizations which are not members of the IAF.

[24] All operations that are certified against the older set of CoC principles in conjunction with the FSC Policy on Percentage Based Claims (FSC-POL-40-001) may likewise maintain their corresponding CoC systems until the end of 2007.

FSC-mixed and FSC-recycled), which significantly expands the volume of products eligible for FSC labelling. The origin of all wood needs to be controlled and, if not identifiable, to be kept separate and not included in FSC product groups. The standard also introduced the so-called 'volume credit system'[25] involving the calculation of rolling averages of the share of FSC-certified fibre inputs for the purpose of on-product labelling. Rolling averages are also used to determine the minimum threshold of FSC-certified raw materials under a 'threshold system'.[26]

The specification of controlled wood sources in the CoC standard led to the issuing of two additional standards: one for non-FSC-certified controlled wood (FSC-STD-40-005) and another for forest management enterprises supplying non-FSC-certified controlled wood (FSC-STD-30-010). The primary objective of FSC controlled-wood standards is to avoid mixing wood from 'unacceptable' sources with that from FSC-certified sources. The purpose is to eliminate wood coming from areas in which traditional or civil rights are violated, high conservation values are threatened, illegal logging is practised, natural forest has been converted to plantations, or where wood is from genetically modified trees. The decision to use these specific criteria for controlled wood could be interpreted as an attempt at non-governmental regulation not directly linked with national regulatory requirements. From the FSC's perspective, a number of actions that are unacceptable to the FSC are considered by governments to be legal, which means that the FSC does not want to restrict its approach to controlled wood to legality only (Giacini de Freitas, pers. comm.). This may influence government support for the system, particularly in developing countries where the problems of uncontrolled sources and illegal logging are perceived to be more prevalent than in developed countries (see also Chapter 7).

The FSC has developed two draft standards for multi-site CoC certification (FSC-STD-40-003 for companies and FSCSTD-20-011 for certification bodies) to facilitate certification by companies that have several production facilities, warehouses or sales agencies ('sites'), at which similar procedures are carried out under common, centrally administered and monitored control and reporting systems. Multi-site certification allows certification bodies to evaluate those companies based on samples, reducing certification costs by avoiding the duplication of internal and external inspection efforts.

Logo rules

The FSC's starting position was that 100% of a certified or labelled product would come from certified forests (Synnott 2005). This policy has since been adjusted several times to accommodate increased market demand and to allow the certified supply to grow. The relevant FSC standards[27] allow products to be labelled when the proportion of FSC-certified material used in manufacturing processes is below 100%. The revision of standards and the issuance of the FSC controlled-wood standards in 2004 opened up opportunities for a much wider use of the FSC label, including products manufactured from 100% post-consumer reclaimed material or from various combinations of post-consumer reclaimed material, controlled wood and FSC-certified wood or fibre.

The number of FSC CoC certificates increased by 33% in 2005 and by 15% in 2006, suggesting a strong growth trend. However, 'unacceptable' sources are defined in a way that could pose significant constraints on many applicants, particularly in developing countries (eg by excluding wood coming from natural forests converted to plantation forestry, and from genetically modified trees, which are likely to be introduced faster in the tropics than in the boreal and temperate zones).

The requirements for the promotional use of the FSC trademarks (FSC-STD-TMK-50-201 V 1-0) were approved in 2007 to replace regulations for off-product use included in the FSC Trademark Policy Manual and various related advice notes. The requirements simplify the graphic use of the FSC trademarks in promotional material; it is now clear that claims and statements made under the FSC trademarks must be substantiated and verifiable. In addition, trademark users must ensure that the reproduction or design of the material does not imply any association between the FSC and the logos, names or identifying marks of non-FSC forest management conformity assessment schemes. Trademark users must also ensure that the FSC trademarks are not reproduced in a way that is disadvantageous to it in comparison to the reproduction of non-FSC forest management conformity assessment schemes (eg in terms of logo or font size).

[25] Based on an input-output system, as it is sometimes called by other certification systems.

[26] The threshold is 70% for an accounting period of twelve months if no recycled or reclaimed material is involved.

[27] FSC-STD-40-004 and FSC-STD-40-201.

Certification procedures

To ensure the consistent implementation of FSC certification worldwide, the FSC has developed globally applicable requirements that can be divided into two broad sets: (i) those for the enterprise applying for FSC certification; and (ii) those for the certification body. The FSC provides a set of detailed standards, including for forest pre-evaluation visits (FSC-STD-20-005), stakeholder consultation for forest evaluation (FSC-STD-20-006), forest management evaluation (FSC-STD-20-007), forest certification reports (FSC-STD-20-008), forest certification public summaries (FSC-STD-20-009), CoC certification reports (FSC-STD-20-010), and the evaluation of FSC controlled wood in forest management enterprises (FSC-STD-20-012).

The FSC system was designed to allow certification which is appropriate to scale and intensity. Indicators can be scaled to match the size of the FMU, for example, and monitoring frequency can be adjusted accordingly (although it cannot go below one monitoring audit per year). Another instrument designed to provide flexibility is group certification, which reduces barriers related to the cost of the certification process. The FSC has also set out eligibility criteria for SLIMF approaches (FSC-STD-01-003), for which certification bodies can use simplified procedures for assessment and monitoring (FSC 2002).

Accreditation

The requirements for certification bodies are provided in FSC-STD-20-001 and for their auditors in FSC-STD-20-004. These follow the respective ISO guides, with specific provisions on forest management and CoC. Previously, the FSC did not fully comply with ISO 17011 because a single organization (FSC AC) was responsible for both the setting of standards and the accreditation of certification bodies. This problem was partly addressed by separating the standards and accreditation service functions through the creation of a new subsidiary company, Accreditation Services International GmbH (ASI). Accreditation decisions are still made by the FSC Board of Directors, but on the recommendation of ASI (which carries out the evaluation of applicant certification bodies).

ASI provides accreditation and monitoring services for the FSC Accreditation Program and other voluntary systems. ASI's procedures are consistent with international accreditation norms, including the requirements of ISO/International Electrotechnical Commission (IEC) 17011. ASI plans to further improve its oversight systems by developing tools for monitoring CoC and trademark use, developing and implementing an FSC training framework, and diversifying into other services.

ASI has published an indicative cost estimate for the accreditation of applicant FSC certification bodies.[28] The accreditation process is estimated to cost about US$40,000. This is very high for potential nationally or regionally operating conformity assessment bodies, particularly if they are small-scale operations. It may partly explain why no developing country certification bodies are yet accredited by the FSC, despite the significant market size in countries like Brazil and Bolivia. The issue is circumvented by subcontracting assessment work to foreign FSC-accredited certification bodies.

Strategies, policies and other elements of the system

The FSC recently developed a new global strategy (FSC 2007). Its goals are to: (i) provide leadership in advancing globally responsible forest management; (ii) ensure equitable access to the benefits of the FSC system; (iii) secure the integrity, credibility and transparency of the FSC system; (iv) create additional business value to FSC-certified products compared to non-FSC certified products; and (v) strengthen its global network to deliver on the above goals. The FSC intends to become more market- and customer-oriented without compromising its robustness as a global certification system; it will strive for the equitable sharing of benefits but the general measures to achieve this might have to be defined in detail later on.

The slow development of FSC certification in community forests and smallholdings has been a concern for many years. In an attempt to facilitate access to the system, a social strategy was approved in 2002 with four broad objectives: (i) to enhance processes and procedures for effective compliance and more equitable access to FSC certification; (ii) to build up a communication system; (iii) to increase the capacity of the organization to support marginalized social groups; and (iv) to support systems to promote the equitable distribution of benefits (FSC 2003b). As part of the implementation fo this strategy, many FSC standards address SLIMF issues. SLIMFs still, however, represent a relatively small share of FSC-certified forests (see Chapter 8).

[28] See www.accreditation-services.com

In addition to standards, the FSC has a large set of policies, rules of procedures, advice notes and other guidance documents covering a broad range of subjects.

Governance

The FSC is a membership organization with a general assembly, a board of directors, an executive director, and a secretariat. Technical and policy working groups are drawn on extensively in the development and promotion of the system. At the national level, the FSC has endorsed national initiatives and nominated agents.

The general assembly makes its decisions through a specially designed voting structure, in which each of three chambers (environmental, social and economic) have one-third of the votes. In each chamber, the votes are distributed equally between the South and North. The South includes countries in transition; one effect of this is that some EU member countries are in the South voting bloc, and some are in the North bloc. The purpose of the chamber structure is to ensure balanced voting power between different interests.

The social chamber comprises not-for-profit non-governmental organizations, Indigenous peoples' associations, unions, and research, academic and technical institutions. The environmental chamber includes not-for-profit non-governmental organizations and research, academic and technical institutions. The economic chamber comprises organizations and individuals with a commercial interest in forests, including employees, private forest owners, certification bodies, industry and trade associations, wholesalers, retailers, traders, and consultancy companies. In addition to organizations, each chamber has individual members, which account for about half the total membership.[29] The voting rights of individual members are limited to 10% in each sub-chamber (North/South blocks of the three FSC chambers). This global governance structure is under review.

Many ITTO producer countries have few FSC members, although three members of the FSC Board of Directors are from these countries.

The FSC has national initiatives in 47 countries, of which 14 have produced national FSC-accredited standards (Appendix 4). Nineteen ITTO producer countries have FSC national initiatives and four have national standards (Appendix 5). Nine of the initiatives are in Africa but none of these has produced a standard, while four of the seven initiatives in Latin America have accredited standards.

A key activity of national initiatives is the promotion of standard setting, but they should also promote and speak for the FSC, raise funds, promote training and education, and support local accreditation and certification processes (FSC 1998). Apparently, however, many national initiatives in developing countries are still inadequately equipped to carry out their tasks effectively. For instance, seven countries with a national initiative have no FSC-certified forest (although this might also be explained by local or political factors).

Financing

In 2004, the annual expenses of the FSC were about US$3.5 million, which was double the level in 2000 (FSC 2004). The organization was far from self-financing: the accreditation program contributed only 27% of costs and membership fees 4.5%. Most of the rest (66%) of operating expenses was met by donations from four governments (Denmark, Germany, the Netherlands and Sweden), philanthropic foundations, private companies and NGOs.

The FSC Global Fund[30] is an independent vehicle through which the FSC's international efforts can be supported by companies, investors, foundations, and other organizations that seek to strengthen FSC standard setting. The Fund is able to finance initiatives that: (i) help grow the worldwide market for FSC-certified products; (ii) increase FSC certification worldwide, with a particular emphasis on the tropics and developing countries; and (iii) contribute to the financial sustainability of the FSC's international and national initiatives. In recent times, the fund has assisted only one national initiative in developing countries (financing the FSC national office in China); other projects supported by the FSC Global Fund include market research and promotion, and the certification of private landowners and first-nation groups in Canada.

[29] A significantly higher share in developing countries.

[30] www.fscglobalfund.org

The FSC is far from achieving financial self-sufficiency due to its high dependence on donations, which sometimes are conditional and targeted at specific activities and thereby could influence the priorities of the organization. The FSC recognizes that this situation is unhealthy and is developing a model to decrease dependence on donations by increasing commercial revenue from services rendered and other sources. At present, the FSC receives no royalty for the use of its trademark, despite strong promotional efforts to create a visible brand in the marketplace. In this sense, FSC clients (certified enterprises) have been partially free riders. Probably, the FSC has judged that the trade-off between the level of participation in the certification/labelling program and the collection of royalties is still too large to start collecting fees for the use of the trademark. Nevertheless, royalty collection is practised in other ecolabelling schemes that have no (or less) access to donor funding. The FSC's new strategy is targeted, among others, at creating business value for its clients, which should open up new possibilities for royalty collection. According to the latest information, the FSC will collect royalties in the future (Haase, pers.comm.). To address the special difficulties encountered in tropical timber-producing countries, royalties could be scaled according to producer category.

In conclusion, the FSC has evolved into a highly complex, centrally led forest certification system, the provisions of which are scattered among a large number of standards and other normative documents. The FSC is strongly supported by leading international environmental NGOs like WWF or Greenpeace, which is attractive to large forest industry corporations and large internationally operating trading companies, which are inherently prone to activist attacks. On the other hand, the FSC has been unable to mobilize the large-scale participation of small-scale private forest owners and, with a few exceptions (such as Brazil and Bolivia), its progress in the tropical timber-producing countries is still limited. It is very difficult to reconcile different stakeholder views in a voluntary certification scheme, while simultaneously serving diverse objectives. The FSC has ended up taking the middle ground in its decisions, trying to respond to market needs while balancing its key principles – which, in turn, are linked to its credibility as a certification system. This suggests that there is no 'perfect' system that satisfies the needs of all stakeholders.

PEFC

Evolution

The PEFC, originally established in 1999 as Pan European Forest Certification, is a scheme or arrangement operated by the PEFC Council for mutual recognition between national certification systems. The Council provides recognition of equivalence of various certification systems against its own requirements. This makes it different from the FSC, for example, which is a fully-fledged certification system with detailed provisions for every aspect of the system. The PEFC is probably unique as an internationally operating sectoral arrangement in conformity assessment which provides assurance on single-issue certification systems operating at a national level.

The primary objective of the PEFC Council is to achieve compatibility between credible and independent forest certification systems and to implement and safeguard consistently high standards for SFM worldwide.

Box 4.2 summarizes the main milestones in the development of the PEFC. In 2003, the PEFC's geographic coverage expanded as it became evident that non-European national schemes were also interested in mutual recognition arrangements. As in the case of the FSC, the scheme has been adjusted over time with the aim of strengthening various elements of the PEFC mechanism in the light of experience, stakeholder criticism, and emerging criteria for credible or acceptable certification systems (see Chapter 6). The strongest supporters of the PEFC approach to forest certification have been forest owners, forest industry and governments. In the main, forest owners have not been eager to engage with the FSC, where they feel they are marginalized by their placement in the economic chamber along with industry, certification bodies, and others. The forest industry has seen the PEFC as a useful alternative to the FSC that is capable of making progress in countries where the FSC has been advancing at a slow pace. Some governments view national schemes as more appropriate for their policies than an international voluntary scheme in which they are not members.

Box 4.2 PEFC milestones

1999	PEFC established. PEFC Council Technical Document documented and approved.
2001	Review of CoC requirements initiated.
2002	PEFC Council statutes revised. Technical Document defining the PEFC Council requirements for national schemes adopted. Rules of standard setting amended.
2003	Coverage of the Programme expanded and name changed. PEFC scheme independently evaluated. PEFC Council requirements revised. Office in Japan established.
2004	PEFC Council requirements (clarification of terms and definitions, requirements of regional and group certification, adjustments in the standard-setting process requirements, inclusion of pilot testing of the standard, clarification of accreditation and certification procedures, revised procedures for the assessment of national schemes) revised. Revised CoC requirements approved. Rules of standard setting amended.
2005	Position paper on Indigenous people published. PEFC ENGO platform established. PEFC Council requirements for forest certification systems (including rules of standard setting, public summaries of certification reports, public consultation) revised. Internationally applicable CoC standard approved. Recycled materials included in PEFC claims and CoC system. Requirement of public summaries of certification reports introduced.
2006	PEFC Council requirements revised. PEFC Council position paper on phased approach to certification published. Implementation requirements for the avoidance of the procurement of raw material from controversial sources approved. ITTO Guidelines and C&I adopted as a benchmark for the endorsement of forest certification systems in the tropics. PEFC requirements for consensus in standard-setting process interpreted. Procedures for notification of bodies operating CoC certification in countries without a PEFC national governing body approved. Option for certification of non-timber forest products introduced.
2007	PEFC strategic review process, including governance review, commenced. Procedures for the revision process investigation and resolution of complaints and appeals approved. Office established in China.

Sources: PEFC annual reports 2005, 2006; PEFC technical documents (various years), PEFC secretariat

The PEFC Council has endorsed 23 national certification systems. Five endorsed non-European national systems (SFI and CSA in North America, the Australian Forestry Standard in Australia, CERFLOR in Brazil and CERTFLOR in Chile) account for over two-thirds of the total PEFC-certified forest area. The PEFC is in the process of assessing applications from Pan African Forest Certification (PAFC) Gabon, and from two systems in Russia. The MTCC is a PEFC Council member but has not yet submitted its scheme for endorsement. PAFC Cameroon and Uruguay applied for PEFC Council membership in 2007.

The PEFC has a number of strengths, including applicability to national situations, inclusion of the core or 'fundamental' International Labour Organization (ILO) conventions in the generic requirements for national standards, suitability to the certification of small-scale private non-industrial forest owners, its cost-efficient group certification, and its effectiveness in expanding the area of certified forest. On the other hand, the PEFC has been criticized, mainly by NGOs, on issues related to its credibility as a system. The main concerns have been the apparent variability of PEFC standards associated with a lack of consistency in the outcomes in different countries,

the level of independence of the scheme from its main supporters (forest owners and industry), a lack of adequate participation of environmental stakeholder groups in some PEFC standard-setting processes, a lack of individual forest owner commitments in regional group certification arrangements, and certification of status quo or legal compliance rather than sustainability (low level of standards) (FERN 2001, FERN 2004a, WWF 2005b, Wilderness Society 2005). The PEFC Council has responded to external criticism by strengthening its system through periodic revisions of its rules.

The system is described in the PEFC Council Technical Document (PEFC 2006c), which comprises a main document supported by seven annexes covering: (i) terms and definitions; (ii) rules for standard setting; (iii) the basis for certification schemes and their implementation; (iv) CoC requirements; (v) logo usage rules; (vi) certification and accreditation procedures; and (vii) endorsement of national schemes and their revision. Annexes are supported by specific guidelines. The document is revised periodically. It provides an up-to-date comprehensive description of the scheme and is structured to avoid the need to cover various elements in separate documents.

Forest management standards

The certification criteria of PEFC-endorsed national systems cover all relevant aspects of SFM. The base documents are the criteria of the regional and international C&I processes. The current Pan-European Operational Level Guidelines (PEOLG) forms the reference for national or sub-national certification criteria in Europe. In the case of Africa, the African Timber Organization (ATO)/ITTO Principles, Criteria and Indicators (PCI) form the reference basis. In other tropical countries, the forest certification criteria of natural forest management must be compatible with the ITTO Guidelines for Sustainable Management of Natural Tropical Forests (ITTO 1992) and ITTO Guidelines for the Conservation of Biological Diversity in Tropical Production Forests (ITTO 1993a). In the case of plantations, the reference document is the ITTO Guidelines for the Establishment and Sustainable Management of Planted Tropical Forests (ITTO 1993b). All these reference documents have been developed through a consultative negotiation process at an international level, which has also ensured their applicability in national conditions within each respective region.

A separate assessment has confirmed that, despite their different ecological scopes and different purposes, the ITTO guidelines for the management of natural and planted forests provide, with minor additions, a PEOLG-compatible reference base for the assessment of the national standards of tropical countries (Savcor Indufor 2006).

Another important feature is that the relevant requirements of the eight fundamental ILO conventions[31] must be covered by national certification criteria. The PEFC adopted this approach independent of whether or not the country has ratified the conventions. This has leveraged the application of the ILO conventions and avoided the need to develop new social criteria (Poschen 2000). PEFC rules also link to other forest-related international conventions, even in countries that have not ratified them. The PEFC has therefore built a strong linkage with the internationally agreed forest regime.

The issue of performance criteria in the PEFC-endorsed standards has been subject to debate and criticism (eg FERN 2001). The PEFC Technical Document specifies that the certification criteria must include performance requirements. In addition, the criteria must be compatible and consistent with the PEOLG, ITTO guidelines or ATO/ITTO PCI, which all contain specified performance requirements. It is also stated that the criteria cover forest condition (PEFC Council 2006c), suggesting that the outcomes of forest management rather than the means of achieving them are defined, leaving it to forest owners and managers to determine the best way to achieve them. Another explicit requirement is compliance with national legislation. A review of the assessment of applicant schemes reveals that the performance elements of the standards have been specifically evaluated during the endorsement process.

Standard setting is trusted to a forum in which parties representing different aspects of SFM and relevant stakeholder groups are invited to participate. Consensus-building procedures require a balanced representation of interest categories, such as producers, buyers and consumers. Other provisions concern

[31] ILO's Governing Body has identified eight ILO conventions that it considers fundamental to the rights of people at work, irrespective of the level of development of individual member states. They can be grouped into four categories: freedom of association, the abolition of forced labour, equality, and the elimination of child labour.

documentation and the consideration of the participation and views of different interested parties, for which the forum must have written procedures. In addition, the formal approval of a national system is based on evidence that the forum has reached consensus. There are also provisions for transparency and consultation, and pilot-testing of the standard is required. These current provisions (Annex 2 in PEFC Council 2006c) are the result of several revisions made to address stakeholder concerns about PEFC standard-setting procedures.

Forest certification implementation arrangements

In order to achieve non-discrimination, voluntariness and cost-effectiveness, the PEFC allows definitions of certification units that are appropriate to national conditions. This was particularly important for the supporters of the scheme, which originally represented small-scale private non-industrial forest owners who were concerned about the cost implications that the imposition of inappropriate certification systems might have. In addition to the certification of individual FMUs and conventional group certification arrangements, the PEFC provides a third option, regional certification, to facilitate smallholder access. This is the multi-site certification of forests within a defined geographic area. The applicant is an authorized organization, which must represent forest owners/managers owning or managing more than 50% of the forest area in the region. The participation of forest owners and managers is voluntary. Only participating FMUs are certified and, as in group certification, ground-level verification is done on the basis of sampling.

Regional certification helps smallholders to mobilize for certification by building on the strength of forest-owner organizations. It has also proved useful in engaging other actors operating in the forests (contractors, planning bodies, statistical agencies, enforcement units, wood buyers, research, training and education institutions, etc) to carry out their tasks in compliance with the certification criteria (Savcor Indufor 2005). This has been a leverage factor in also spreading improved practices to non-certified forests, as, in practice, the operators apply a single set of performance standards in their operations.

Regional certification has been particularly successful in European conditions, where small-scale private forest ownership is often dominant. Without this option, the current PEFC certified area would be significantly smaller than it is at present. Regional certification has not yet been tried in ITTO producer countries, but it has potential in places where there are large areas of scattered private timber plantations. It could help build up and strengthen weak forest owner organizations, which would also be desirable for improving their currently limited market power.

CoC and avoidance of raw material from controversial sources

The PEFC CoC includes requirements for a company's process and management system to ensure that claims about the content of PEFC certified raw material in the products sold are truthful and accurate. The PEFC Council's international CoC standard provides two options: (i) physical separation of certified and non-certified products; and (ii) a percentage-based model that allows the company to calculate and communicate the percentage of certified raw material in defined products. Within the latter model, the CoC standard provides two options for calculating the certification percentage: (a) simple; and (b) rolling average calculation. There are also two methods for distributing the certification percentage among the output products: (i) average percentage; and (ii) volume credit methods.

Where a company uses a percentage-based model, it must have in place a mechanism to ensure that non-certified raw material does not originate from controversial sources, defined as 'illegal forest practices'. The mechanism would include a supplier's self-declaration and a risk assessment to classify supplies into high and low risk categories. For the high-risk supplies, the company must implement a second- or third-party verification program.

In addition to claims on certified raw material, the PEFC Council CoC standard allows the calculation and communication of the content of PEFC recycled raw material. The PEFC definition of recycled raw material covers post-consumer raw material for which (a) non-chemical contaminants are known to be absent and (b) the extent of chemical contamination is known and complies with existing regulations. The content of PEFC recycled raw material can be used in addition to the content of PEFC certified virgin raw material to meet the 70% threshold for the on-product usage of the PEFC logo.

Logo rules

The PEFC Council issues licenses on a contractual basis to PEFC national governing bodies, which, in turn, can issue individual licenses for logo use to the holders of PEFC certificates in that country. The governing bodies must keep an up-to-date register of all the licensees of on- and off-product logo use. Certification bodies are responsible for controlling the use of the PEFC logo by a certified logo user.[32]

Three types of claims can be attached to the use of the PEFC logo: (i) "promoting sustainable forest management", which can be used in off-product communication and when the product is certified under a percentage-based system containing both uncertified and certified raw materials; (ii) "from sustainably managed forests", when the product contains only PEFC-certified raw material that has been kept separate along the entire supply chain; and (iii) "promoting sustainable forest management and recycling" in cases where the certified product includes PEFC-certified recycled raw material, the content of which is verified by the CoC. In order to make claims (i) and (iii) the product must contain a minimum of 70% of certified wood and/or certified recycled material. These provisions enable appropriate communication to trade and consumers while avoiding complex calculations for different combinations of raw materials with different certification status.

Certification procedures

The auditing and certification procedures applied within the PEFC framework are based on international standards for management systems or product certification. Certification bodies must be accredited in accordance with the common requirements for such bodies as defined in ISO guides.[33] In addition, certification bodies should have: (i) technical competence in forest management and its economic, social and environmental impacts, and on the forest certification criteria; and (ii) a good understanding of the national PEFC system. Auditors must meet criteria set out in the ISO Guidelines for Quality and Environmental Management Systems Auditing (ISO 19011), and national schemes are able to specify additional requirements.

In forest certification, the audit evidence must include relevant information from external parties (eg government agencies, community groups, conservation organizations) as appropriate. Another requirement, not included in ISO practices, is that a summary of the certification report is made available to the public. This feature was added to PEFC requirements as a result of an assessment of the PEFC for compliance with the UK government's timber procurement policy.

Accreditation

Certification bodies carrying out forest management or CoC certification must be accredited by a national accreditation body to ensure the credibility of the certification work and to facilitate mutual recognition. Accreditation bodies must be a part of the International Accreditation Forum (IAF) umbrella.[34] In exceptional circumstances, the PEFC Council[35] can approve a time-limited exemption from the above requirements based on an explanation of the reasons for requesting the exemption and a description of how the credibility of the certification process will be assured during the period. This provision is necessary to allow the development of accreditation services in countries where they previously did not exist.

In most ITTO producer countries, complying with the accreditation requirements through national arrangements is difficult, as only seven have national bodies that are members of the IAF.[36] The situation is improving gradually, including through the IAF's regional cooperation initiatives[37], but it is likely to take time. In countries with no national accreditation bodies, accreditation can be arranged through arrangements with national bodies in other countries.[38]

Endorsement and mutual recognition of national schemes

The PEFC is a unique scheme that endorses and facilitates the mutual recognition of national certification schemes. This is based on the PEFC Council requirements (PEFC Council 2006c) summarized above[39] and independent, transparent

[32] The national governing body can also use the logo off-product, as can organizations willing to promote or advertise the PEFC scheme for educational purposes only.

[33] ISO Guides 62, 66 or 65 and ISO/IEC 17011.

[34] The PEFC Council is an associate member of the IAF.

[35] Requires a decision by the general assembly.

[36] Brazil, India, Indonesia, Malaysia, Mexico, the Philippines and Thailand.

[37] Inter-American Accreditation Cooperation (iaac-accreditation.org), Pacific Accreditation Cooperation (www.apec-pac.org), and Southern African Development Community Cooperation in Accreditation (www.sanas.co.za).

[38] PAFC Gabon has discussed such cooperation with the French Accreditation Committee (COFRAC).

[39] Requirements cover standard setting, content of standards, scheme implementation procedures, and certification procedures.

and consultative assessment. During the structured endorsement process, the general public and the governing bodies of PEFC national systems are encouraged to express their views (and have done so frequently). Independent assessment by consultants is supported for quality assurance purposes by a mandatory peer review by a panel of experts. The endorsement process takes an average of eight months, during which some of the characteristics of the applicant scheme might need to be adjusted in light of the evaluation.[40]

From the point of view of ITTO producer countries, certification is mainly a tool to ensure international market access. It is important, therefore, that they consider whether investing in a fully-fledged national forest certification scheme is justified by the volume and value of forest product exports (indeed, all existing national schemes in developing countries[41] are in major timber exporting countries). Another criterion to be considered is the local availability of certification and accreditation services. Regional cooperation could provide a solution for addressing such bottlenecks, but so far the efforts in Africa (Pan-African Forest Certification[42]) and ASEAN [Association of South East Asian Nations] countries have not produced tangible results other than the production of regional reference documents for certification standards such as the ATO/ITTO PCI.

The PEFC's endorsement procedures have recently been complemented by detailed provisions for the investigation and resolution of complaints and appeals regarding the PEFC Council or national governing bodies.[43]

Policies

The PEFC Council has issued position papers on two issues. In one, the Council outlines a feasible approach to phased approaches to certification within the PEFC framework and expresses a willingness to deliver technically and politically acceptable solutions once demand, market and political support can be demonstrated (PEFC Council 2006b).

The other position paper deals with how certification schemes can incorporate the interests of tribal and Indigenous people, local people, local communities and forest-dependent communities (PEFC Council 2005b). The paper provides guidance for identifying forest-dependent communities by means of the outcomes of various intergovernmental processes, explains the linkages between SFM and Indigenous people and local communities, and reaffirms that the impacts of forest operations on these people and communities are important elements of PEFC certification. The paper emphasizes the importance of the participation of these groups in standard-setting processes, the consideration of their views, and the need for consensus. The public consultation process that forms part of the certification process provides a further opportunity for these groups to provide their inputs.

Financing

The PEFC's annual budget is about €0.5 million (Gunneberg, pers.comm.). It is financed mainly by membership fees and external funds have also been raised for project work.

Governance

The PEFC's governance structure includes the Council's general assembly, a board of directors, and a secretary general supported by a secretariat. Each participating country has a national governing body, which is in charge of the operation of the national scheme[44] and represents the country in the Council.

National governing bodies are established with the support of forest-owner organizations or national forest-sector organizations that have the support of major forest-owner organizations in a given country. From the beginning of the PEFC it was deemed necessary to fully engage forest owners, who are ultimately responsible for the implementation of SFM. National bodies have their own statutes and all participating interested parties must be provided with a fair, on-going and appropriate opportunity to influence the body's decision-making. National bodies are also issued licenses, under contract, to use the PEFC trademark and the right to issue licenses for the use of the PEFC trademark within their countries (PEFC Council 2006c).

[40] For example, during CERFLOR's endorsement process some of the provisions of the scheme were adjusted for full compliance with PEFC requirements.

[41] Including CERTFOR in Chile.

[42] Indufor (2002).

[43] National governing bodies must have their own appeals procedures and an independent dispute settlement body for handling complaints arising from scheme implementation which cannot be addressed through the dispute settlement procedures of the certification bodies. In addition, the PEFC Council has publicly available procedures for the investigation of complaints and appeals (Guideline 7, 2007).

[44] If there is more than one scheme in the country (eg USA and Russia), only one governing body can be represented in the PEFC Council.

Decision-making in the PEFC Council is done by a simple majority of cast votes. The voting rights of members are scaled (from 1 to 4) according to the size of the country as a wood producer. The board composition aims to include representation by major interested parties and reflect the geographical distribution of members, different voting categories, and an appropriate gender balance.

Thirty-one countries are represented in the PEFC Council, including four developing countries (Brazil, Chile, Gabon and Malaysia). In addition, the Council includes eleven 'extraordinary' members, all from Europe, representing various representative regional organizations.

CERFLOR

CERFLOR's development process was exceptionally long.The first discussions on a national forest certification system started in the early 1990s but the official launching was only in 2002. In the beginning, government officials had doubts about forest certification because it would transfer some of the supervision responsibility traditionally held by government authorities to the industry and to independent auditors, reducing the power of civil servants (May 2006). This view later changed, and now certification is even referred to in national legislation. Issues of sovereignty are always important in the Brazilian government's engagement in international negotiations; such issues are less important, however, in a national system like CERFLOR compared to international schemes.

CERFLOR was conceived originally as a response to the plantation sector's market need to produce certified products and, therefore, the private sector has been an active partner in its development. The process slowed in the late 1990s because its structure was reviewed in order for it to be incorporated in the Brazilian Conformity Assessment System. The engagement of government representatives in the process was considered important due to the large expanse of public forests in Brazil.[45] After convincing the government of the need for a national scheme, the process was restarted and led to practical standard-setting work. CERFLOR's development culminated in its endorsement by the PEFC in 2005. Box 4.3 outlines the milestones in the CERFLOR development process.

[45] In the recently promulgated regulations for forest concessions, forest certification is considered to be a parameter indicating good management practices (see Chapter 7).

Box 4.3 CERFLOR milestones

1990–1993	Preliminary discussions held on the development of a national certification scheme.
1996	Cooperation agreement made with the national standards association (ABNT) for the development of certification criteria.
1998–1999	Elaboration and pilot testing of principles, criteria and indicators for planted forests begun.
2001	The need to develop a national certification system as a priority identified by the Forum for the Competitiveness of the Timber and Furniture Productive Chain. The Sub-Commission for Forest Certification established, assuming responsibility for the development of the scheme. Project included in Brazil's National Conformity Assessment System
2002	The Brazilian Program for Forest Certification (CERFLOR) officially launched as part of the National Certification System Standards for forest plantations, CoC and auditing procedures prepared.
2003	An ITTO project, implemented by the Brazilian Association of Mechanically Processed Timber Products (ABIMCI), started to develop principles, criteria and indicators for sustainable management of natural forests.
2004	PEFC endorsement applied for and some elements of the scheme revised.
2005	Principles, criteria and indicators for the sustainable management of natural forests approved as certification standard (NBR 15789). CERFLOR endorsed by PEFC.

Source: see Annex I

CERFLOR is an integral part of the National Conformity Assessment System and strictly follows its rules. Within existing agreements for mutual recognition under the IAF umbrella, this underpins the acceptability of the system at the international level. The preparation of standards strictly followed the international procedures implemented by the national standards association (Associação Brasileira de Normas Técnicas – ABNT), including the involvement of stakeholders in a wide and open discussion before voting and official adoption.

CERFLOR has separate national standards (principles, criteria and indicators) for forest plantations and natural forests.[46] Brazil does not yet have an FSC plantation standard, even though FSC certification of planted forests in Brazil has been growing quickly; most of the FSC-certified tropical/subtropical plantations are found in this country.

CERFLOR is voluntary and open to the participation of all interested parties. Representatives of various environmental, social and economic organizations participated in the standard-setting process. Once the standards had been elaborated, the results were submitted to pilot testing and public consultation. The suggestions arising from these processes were analyzed and, where pertinent, included in the standard. The final documents were published by the ABNT as official Brazilian standards.

Stakeholders have criticized the private sector's strong participation in CERFLOR's development. The main arguments of the large NGOs were that another certification system (the FSC) was already available, that other systems would not be credible, and that the discussions were not sufficiently participatory. Despite being invited several times, some large NGOs, particularly international ones, did not participate in the process; they are strong supporters of FSC, which has developed national standards for one type of natural forests in Brazil. This is a common problem in those countries wishing to develop a national system in which FSC certification is already broadly practised.

The process of developing the CERFLOR standard strictly followed the ISO rules; for forest management, the process also included pilot testing. CERFLOR has specific procedural standards covering the general principles of forest auditing, those to be applied in forest management auditing, and qualification criteria for forest auditors.[47] In addition, the system relies on the generic elements of the National Conformity Assessment System. Forest certification bodies must follow ISO/IEC Guide 66; if necessary, the standard will also be adjusted to meet the new requirements of ISO 17021.[48]

In addition to its own CoC standard, CERFLOR has issued the Regulation of Conformity Assessment for Chain of Custody for Products with Forest Origin[49], which establishes, among other things, 70% as the minimum percentage of forest raw material in certified products, by either volume or weight. Minimum percentages for recycled pre-consumption and post-consumption materials have also been established. In addition, CERFLOR has its own logo and respective regulations covering its use. CoC certification bodies must comply with ISO/IEC Guide 65.

At present, four accredited certification bodies carry out audits of the CERFLOR standards; two are also accredited by the FSC. In Brazil, the availability of certification and accreditation services is not a constraint on the implementation of the national system.

CERFLOR is operated under the auspices of INMETRO, the national accreditation body linked to the Ministry of Development, Industry and Foreign Trade. It is responsible for the accreditation of certification bodies involved in forest management and forest product CoC. INMETRO operates as an independent and impartial system, with international and national credibility, and is recognized by the IAF for conformity assessment of quality and environmental management systems and products.

During the development phase, CERFLOR received funding from the Competitiveness Forum for the Wood and Furniture Productive Chain. In addition, ITTO supported the development of the national standard for natural forest management.

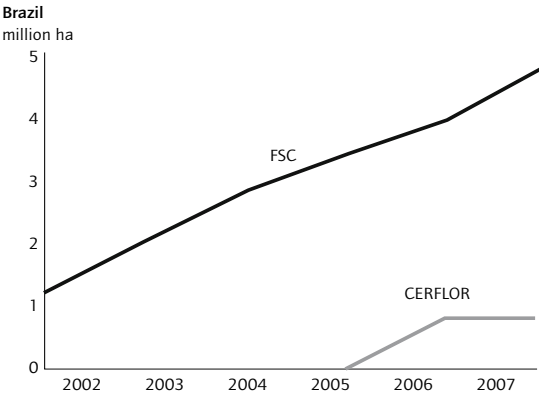
CERFLOR illustrates how a forest certification program can be developed within a national system of standardization and conformity assessment. The first certificate was issued in 2003, when CERFLOR became operational in planted forests; it became operational in native forests in 2005. By mid 2007, 835,000 hectares of planted and native forests had been certified under CERFLOR. The rate of

[46] NBR 14789 and NBR 15789, respectively.

[47] NBR 14791, NBR 14792 and NBR 14793, respectively.
[48] The deadline established by IAF is September 2008.
[49] INMETRO Administrative Directive 301/2007.

certification had apparently slowed (Figure 4.3),but demand for CERFLOR increased during the second half of 2007 and the total area certified under the scheme reached 996,000 hectares by the end of the year (Garlipp, pers. comm.).

Figure 4.3 Area of certified forest in Brazil, by system, 2002–2007



LEI

The development of the Indonesian certification system (for natural forest), its institutional arrangements, and other required supporting systems took place during 1994–98. The process was lead by Pokja Lembaga Ekolabel Indonesia (LEI Working Group) involving a range of interest groups including the Association of Forest Concession Holders of Indonesia (APHI), an expert team, the National Standardization Board (BSN), NGOs, and university representatives. In 1998, the working group was formally established as the LEI Foundation (Lembaga Ekolabel Indonesia), which, in 2004, was transformed into a constituent-based organization (Box 4.4). LEI has also developed certification systems for native forests, plantation forests, community-based forest management, and CoC. In response to the difficulties in implementing full certification and to market demand to demonstrate the verification of legality in certification, in March 2007 LEI launched a phased approach based on a specific standard, in which the first step is compliance with legal requirements. Another set of standards and procedures is under development for the management of non-timber forest products.

To operate the certification system, LEI has developed supporting elements such as: (i) a manual of accreditation, and the accreditation of certification bodies (CBs); (ii) training for assessors and certification decision-makers; (iii) a personnel registration body; (iv) a dispute settlement mechanism; and (v) regional multi-stakeholder communication forums (RCFs) at the provincial level to facilitate public consultation during the certification process and to serve as the local representative in the

Box 4.4 LEI milestones

1998	LEI certification system agreed by three main stakeholders: government, forestry business (APHI) and LEI (NGO and academicians) and adopted by the BSN as a national standard.
1999	Joint Certification Programme initiated with FSC.
2000	CoC certification system adopted. Interim accreditation standard formulated and implemented; four CBs accredited. LEI becomes an accreditation body. Forest certification process conducted by LEI-accredited certification bodies.
2001	LEI policy developed on the exclusion of timber from conversion forest in LEI certification.
2002	Certification system for community-based forest management adopted.
2003	Forest certification system for plantation forest adopted.
2004	Transformation of LEI from LEI Foundation into LEI Constituent-based Organization. Independent Personnel Registration Body initiated.
2005	LEI's Accreditation Manual adopted.
2006	Full accreditation of certification bodies implemented and one certification body accredited. Development of a certification system for non-timber forest products started.
2007	LEI's phased-approach to certification scheme launched.

Source: See Annex V

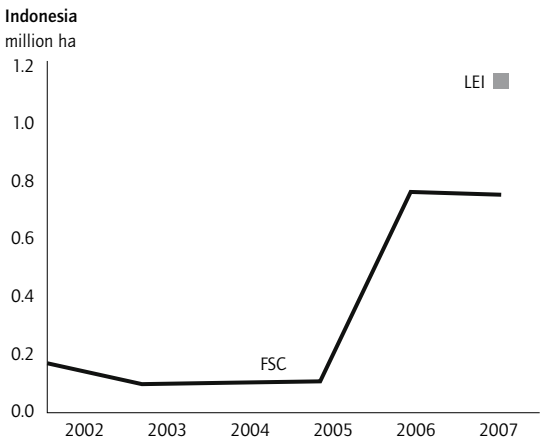
analytical hierarchy process (see below).[50] The Certification Review Council has also been established as a dispute resettlement body; its members are elected by the LEI chambers.

Currently, eleven forest management units[51] covering 1.107 million hectares are certified under the LEI certification system; one timber product manufacturer has a CoC certificate (Figure 4.4).

From 1999 to December 2005, LEI and the FSC had a joint certification program involving both LEI- and FSC-accredited certification bodies. In 2001, the NGO network, led by Friends of the Earth Indonesia (WALHI) called for a moratorium on certification. In principle, WALHI does not oppose certification, but it believes no certification of logging concessions can be credible as long as the concession system and legislation (Forestry Act No.41/99) fail to grant local communities rights to their land and resources. According to WALHI, the entire concession system should be revised and the borders of Indigenous peoples' lands clearly defined (Muhtaman & Prasetyo 2006).

The WALHI critique suggested that inadequate preconditions to implement SFM existed for certification to succeed on a widespread basis. Land management responsibilities are shifting towards a decentralized approach; the relationship between central and regional administrations, however, has not yet been properly established and there are conflicting roles and responsibilities between agencies.

Figure 4.4 Area of certified forest in Indonesia, by system, 2002–07



[50] Currently there are 14 RCFs.

[51] Five natural forest FMUs, five community-based FMUs, and one plantation FMU.

The LEI system consists of three elements: standard, procedures, and requirements. The standard contains a hierarchical order of principles, criteria, indicators and verifiers. It is oriented towards performance rather than management system and divided into three broad areas: (i) the sustainability of production functions, including criteria for forest resource, forest production, and business sustainability; (ii) the sustainability of ecological functions, including criteria for ecosystem stability and species survival; and (iii) the sustainability of social functions, including criteria for secure community-based tenure, community resilience and development, social and cultural integration, community health, and employee rights (Meidinger et al. 2003). The uniqueness of the LEI system is in its use of a multi-criteria decision-making method known as the analytical hierarchy process. In this process, the decision-maker panel (6 persons), representing the above three broad areas and including local representatives, reaches a consensus on the roles of each measured element (indicators, process, criteria, principles) towards the goal of SFM and the threshold of each indicator, taking into account the FMU typology (ie biophysical and social conditions). The standard and decision-making procedure for community-based forest management is simpler than those for natural and plantation forests.

LEI's CoC certification system requires the physical separation of timber, a log-tracking system, timber tagging, and demonstrated performance of the log-tracking system. The assessment process covers the previous three years and is documentation-based. The LEI logo can be used if the end-product contains 100% certified wood. The LEI Manual 22-02 on Logo Use allows both off-product and on-product use of the logo. Accredited certification bodies are delegated to control logo use by certified FMUs and timber product manufacturers.

To ensure consistent procedures, LEI has developed a set of detailed procedures for each type of certification, including the assessment process, decision-making process, dispute resolution mechanism, and requirements for assessors and certification decision-makers. The purpose is to ensure that certification is operated by eligible and competent assessors and that decisions are made based on accountable procedures demonstrating transparency, a participatory approach, and fairness.

In the beginning (1998–99), LEI functioned both as system developer and certification body. In 2000, it developed a standard for interim accreditation and, in 2004, it published an accreditation manual for conducting full accreditation. Currently, there are three accredited certification bodies and two applicants. Even though LEI is not a member of international accreditation alliances, its system makes sufficient reference to international schemes and standards, such as ISO, ILO, ITTO, FSC, and BSN. BSN is an ISO member and has endorsed LEI's standard for natural production forests. LEI's accreditation program, particularly the recently published Manual 11, refers to BSN Guide 3, which is based on ISO/IEC Guide 61. It also refers to ISO/IEC Guide 62 (Hinrichs & Prasetyo 2006).

As a constituent-based organization, LEI governance includes a national general meeting. It has 142 members organized into four chambers representing all the relevant non-governmental stakeholder groups in Indonesia: NGOs, private sector, experts and Indigenous communities. The government and political parties cannot become full members of LEI but can achieve associate membership status without voting rights. Through RCFs, LEI has also created a certification network comprising the same constituents and other relevant parties. The RCFs are designed to partner LEI's certification bodies in provincial and district-level activities, helping to address issues beyond the capacity of the FMU under assessment. RCFs also propose candidates for decision-maker panels to represent local perspectives (Hinrichs & Prasetyo 2006).

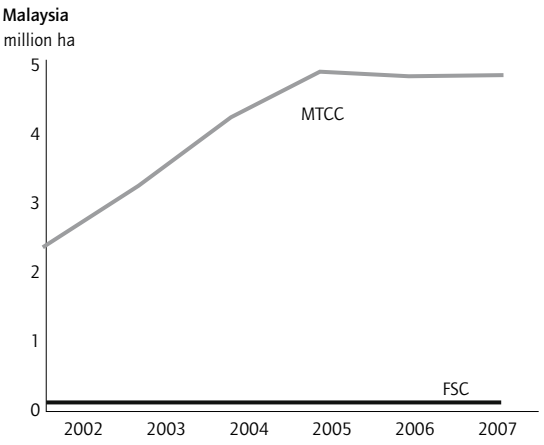
As a non-profit organization, LEI is not self-financing. Income to operate the organization is currently obtained from membership fees, accreditation fees and donors. Membership and accreditation fees only contribute a small share, while funding has mainly come from donors (including ITTO) supporting projects related to certification, SFM in general, and capacity building. In the future, LEI needs to find a way to increase support from its constituents, including financing, and to develop other non-conflicting sources of income. This will also require an expansion of LEI-certified forests in the country.

MTCC

The Malaysian Timber Certification Council (MTCC) is an independent organization established in 1998 to develop and operate a voluntary national timber certification scheme. It is governed by a board of trustees, presently comprising a chairman and ten other members representing academic and research institutions, the timber industry, NGOs and government agencies. In 2007, the number of board members increased from nine to eleven to ensure a better representation of stakeholder groups, particularly social and environmental NGOs.

The MTCC was established in 1998 (Box 4.5; Figure 4.5) and began operating its certification scheme in 2001 using a phased approach (MTCC 2006). The forest management standard used in the initial phase – the Malaysian Criteria, Indicators, Activities and Standards of Performance for Forest Management Certification (2001) – was based on the ITTO Criteria and Indicators for Sustainable Management of Natural Tropical Forests. Since the end of 2005, the MTCC has used a new standard, the Malaysian Criteria and Indicators for Forest Management Certification (MC&I) (2002) – based on the principles and criteria of the FSC.

Figure 4.5 Area of certified forest in Malaysia, by system, 2002–07



Box 4.5 MTCC milestones

1998	MTCC established.
1999	MTCC starts operation. The Malaysian Criteria, Indicators, Activities and Standards of Performance for Forest Management Certification formulated.
2000	FSC-MTCC Workshop on Forest Certification convened. Requirements and Assessment Procedures for Chain-of-Custody Certification formulated.
2001	Multi-stakeholder NSC established. Operation of MTCC timber certification scheme commenced. Certificate for Forest Management awarded to first three FMUs (Pahang, Selangor and Terengganu) in Peninsular Malaysia. Certificate for Chain-of-Custody awarded to first 16 timber companies. Work initiated to develop the Malaysian Criteria and Indicators for Forest Management Certification [MC&I (2002)] based on the FSC criteria and indicators.
2002	First shipment of MTCC-certified sawn timber delivered to the Netherlands. MC&I (2002) finalized at national-level consultation. MTCC becomes a member of the PEFC.
2003	Danish Ministry of the Environment becomes first to include the MTCC scheme in its Environmental guidelines for Purchasing Tropical Timber.
2004	Field tests of MC&I (2002) in the three regions. MC&I (2002) adopted by NSC as standard for forest management certification. Revised standard for chain-of-custody certification [Requirements for Chain-of-Custody (RCOC)] adopted. Certificate for Forest Management awarded to first FMU in Sarawak (Sela'an Linau).
2005	New standard, MC&I (2002), used in assessment of certified FMUs.
2006	Development of the MC&I (Forest Plantations) started.
2007	Draft MC&I (Forest Plantations) finalized and subjected to public comment. First FMU (Negeri Sembilan) awarded Certificate for Forest Management against the MC&I (2002) standard.

Source: Annex VI

The MTCC's standard-setting process was originally coordinated by the MTCC but was later taken over by the National Steering Committee (NSC). The standard-setting process has apparently followed the ISO Guide 59 requirements on participation, coordination and information. Formal reference to ISO Guide 59 has been made in the standard-setting process for the MCI applicable to forest plantations. The process involved a wide range of stakeholders, who were invited to participate in consultation events. Both standards – MCI (2002) and MCI (Forest Plantations) – were reportedly adopted by consensus.

The MTCC forest management certification procedures seem thorough but are not yet entirely in conformity with ISO guides. Certification decisions are based on the reports of independent assessors and peer review. The MTCC acts as the certification body by processing applications, appointing MTCC-registered independent assessors to undertake the assessments, and making certification decisions based on the reports of the assessors.[52] There is a clear separation of the decision-making and assessment functions in the MTCC.

The MTCC Assessment Procedures cover all stages of the assessment process for forest management certification, as undertaken by the registered assessor. Previously, there was a gap in the procedures between the FMU and the primary processing stage, but this problem has been addressed by a requirement that the assessors of the FMU and CoC carry out additional checks. There are also provisions for the exclusion of non-certified material from 'controversial sources' as defined by the standard, including illegality. The MTCC does not have provisions for recycled materials.

[52] The same approach has been applied by LEI.

Although some of the MTCC independent assessors are certification bodies that are internationally accredited for management system certification, a number are local companies that do not have any other accreditation. The Council has developed its own rules for the registration of the independent assessor companies and recognizes them based on applications. This raises a question about how their competence has been established.

The procedures in the MTCC Timber Certification Scheme (2004) include provisions for appeals against certification decisions and for investigating complaints from interested parties during surveillance audits. The mechanism to address appeals during the standard-setting process is not yet defined.

The MTCC is in the process of implementing a new institutional arrangement under which it will continue to play the role of the national certification scheme's governing body. Assessments and the issuance of certificates will be the duty of certification bodies. which will have to be accredited by the Department of Standards Malaysia (DSM), the national accreditation body. DSM is in conformity with the ISO Guide 61 and a full member of the IAF (meeting the PEFC requirement). The new institutional arrangement is planned to be in place some time in 2008. The MTCC made the transition towards this new arrangement on 1 April 2007 by using only assessors accredited by DSM under ISO Guides 62, 65 or 66 to conduct assessments for both forest management and CoC certification.

Funding for the administration and operation of the MTCC scheme is derived from the interest accrued from an endowment fund specifically granted to the MTCC by the Malaysian government as part of efforts towards achieving SFM. The funding provided by the Malaysian government reflects a political will to ensure the security of the country's forests through the achievement of SFM and the implementation of forest certification.

The area of MTCC-certified forest increased rapidly up to 2005 but, since then, there has been no increase. The critical factors for the future of the scheme will be: its expansion in Sarawak and Sabah; and its ability to meet the sustainability criteria of public procurement rules and private purchasing policies in countries importing Malaysian timber products.

Other national schemes in ITTO member countries

China[53]

Since the mid 1990s, several research projects on certification have been carried out in China. The implementation of certification started in 2004; by the end of 2006, a total area of 441,600 hectares in four FMUs had been certified under the FSC scheme. About 220 wood-processing enterprises had achieved FSC CoC certification and three had achieved PEFC CoC certificates. In 2003, the Chinese government issued a Resolution on Accelerating Forest Development, explicitly calling for, as a priority, the opening of the forest sector to foreign investment and the acceleration of forest certification to meet international standards. The State Forest Agency established the Division of Forest Certification and the Leading Group on Forest Certification. A plan has been drafted for a national forest certification scheme, which would include a steering committee, a standardization committee, a research and training centre, the forest certification system itself, forest certification standards, and pilot and demonstration projects; a forest certification label has also been designed. The purpose is to develop a scheme that is appropriate for Chinese conditions and can achieve mutual recognition with international forest certification schemes.

The draft forest management standard has nine principles, 45 criteria and 118 indicators. The draft CoC standard covers five criteria, concerning system management, material management, production control and records, labelling requirements, and invoice and sales records.

Preparations are being made to set up a 'forest certification centre' as the Chinese forest certification body. Pilot and demonstration efforts on certification are being made at sites representing tropical forests, plantations, collective forests and state-owned forests. The projects will involve forest certification training and standards testing.

Parallel to the development of the national certification system, cooperation with FSC has intensified, culminating recently in the formal endorsement of the FSC China national initiative. A national working group is already working to promote the

[53] Largely based on Wenming & Wen 2007.

FSC, encourage the involvement of stakeholders in forest certification, and develop and test FSC region-specific standards. The draft national standard is not fully compatible with the FSC requirements.

The national forest certification scheme, which is to be implemented in phases, will operate in competition with the FSC scheme. The PEFC has opened a promotional office in China, which might, in due course, lead to the endorsement of the Chinese national scheme.

Limited demand and the likelihood that costs will exceed benefits are the main constraints to rapid progress in certification in China. To address the first constraint, the Ministry of Finance and the State Environmental Protection Administration announced that the nation's central and provincial governments will prioritize environmentally friendly products and services in their purchasing policies. The China Timber Distribution Association submitted a proposal to the Chinese Certification and Accreditation Administration to initiate a credibility assessment program of timber industry enterprises, in which forest certification would be an element. The aim would be to encourage enterprises to pursue CoC certification and thereby contribute to the progress of forest certification in the country.

Gabon[54]

Gabon was the first country of the Congo Basin to be involved in forest certification. Leroy Gabon was awarded an FSC certificate in 1996, but this was later withdrawn due to controversies over the quality of the forest management plan and criticisms by national and international NGOs about the stakeholder consultation process used during assessment. This was an important setback to forest certification in the Congo Basin. The private sector, which initially was the main driver pushing for forest certification in Gabon, became lukewarm towards it. Most enterprises (especially those with European capital) have always been positive towards forest certification but were sometimes opposed to the FSC system. This is the reason why three leading logging companies applied for Keurhout certification and advocated the development of a national forest certification system (PAFC Gabon). After the Leroy Gabon certification and withdrawal, it took ten years for another forest company, Rougier Gabon, to embark on the FSC certification process.

As a follow-up to a feasibility study on pan-African forest certification (Indufor 2002), work started in Gabon to develop a national system. This is now at an advanced stage and was expected to be completed by the end of 2007. PAFC Gabon uses the ATO/ITTO PCI as the basis of the national forest management standard, which was developed through a participatory process (PAFC Gabon 2006). The system has already been submitted for endorsement by the PEFC. Given the support that the national initiative has received from the logging industry, it is likely that a number of companies will apply for audits once the system becomes functional.

The ATO/ITTO PCI used by PAFC Gabon were developed through the integration of national, regional and international approaches. The international process was conducted by ITTO, the regional process by ATO, and the national process by the Gabonese national working group. The national working group has ensured that the standards are well adapted to the country context. Government representatives were involved in the development of the ATO/ITTO PCI for Gabon, which has ensured public support for their use. The system will provide both forest and CoC certification, which can be applied at an individual or group level.

Due to the absence of national accreditation bodies, PAFC Gabon certificates would be issued by certification bodies already accredited by internationally recognized organizations. The draft procedures (PAFC Gabon 2006) specify that certification bodies should meet three sets of requirements: (i) compliance with ISO Guides 62, 66 or 65 and EC rule 761/2001; (ii) technical competence in SFM systems, including economic, social and environmental aspects; and (iii) in-depth knowledge of the PAFC Gabon forest certification scheme.

The difficulty for PAFC Gabon could be related more to the credibility of the certification procedure rather than to the quality of technical standards. The standard-setting process encountered problems related to the low level of involvement of local stakeholders and the weak capacity and understanding of issues by national actors. The design of the scheme is not yet complete and PEFC endorsement might not happen before 2008.

[54] Based on Annex III.

Box 4.6 Key milestones in forest certification development in Ghana

1995	Ghanaian certification process launched.
1996	First stakeholder workshop convened. National Committee on Certification established. Technical Committee on Certification formed.
1997	Workshop on Potential for Sustainable Timber Production outside Forest Reserves convened. Draft standards document published.
1998	Second Stakeholder Workshop on Certification convened.
1999	Pilot testing of the computer-based log tracking system undertaken.
2000	International certification workshop convened. Forest Management Certification Standards and Checklist (Version 4) published.
2002	Capacity Building in Forest Certification Workshop convened.
2004	ITTO/ATO Project PD 124/01 Rev.2 (M) commenced.
2005	Compatibility study report commissioned by the national governing council of the Ghana Forest Certification Scheme. Forest Management Certification Standards and Checklist (Version 5) published.
2007	Ghana Forest Certification Standard published in FSC format.

Source: Annex IV

Ghana[55]

Ghana has been engaged in the development of forest certification for more than a decade but, to date, no forests have been certified.

No structures are in place to support a national scheme. Neither the Ghana Standards Board nor the Forestry Commission have developed the capacity to support forest certification. In 2005, a national working group on certification commissioned a review of the country's Forest Management Certification Standards and Checklist (FMCSC) Version 4 with the aim of harmonizing the FMCSC with the FSC P&C as well as the ATO/ITTO PCI. At the same time, the Ministry of Lands, Forestry and Mines undertook, with the support of the ATO and ITTO[56], a review of the FMCSC, taking into consideration recent forest-sector policy, legislative and institutional reforms to ensure the relevance of the standard to the local situation in Ghana. This was part of an attempt at developing a national standard and scheme.

The interest in developing a national scheme is partly because FSC-accredited certification bodies, using their generic standards, have been unable to certify any forests in Ghana because existing timber utilization permits and contracts might be in conflict with recent laws. Another reason is that management plans written by the Forestry Commission are at various stages of consultation (ie drafts) and are unapproved.

A national certification scheme in Ghana would have strong national ownership and reduced costs (since the industry would need to apply only one system), and would suit local conditions. On the other hand, promoting the scheme in the market would be costly and it would have to compete with the FSC. In addition, a national scheme could be exposed to attack by NGOs. Another hurdle is that, apart from international companies accredited by the FSC, no accreditation and certification services are available in Ghana.

While the decision on a national system can be postponed until there is more clarity on the implications, the development of a national standard must be a priority. In addition, the following action would be needed for certification to make progress in Ghana: (i) adjustment of regulation to assign management planning as a private-sector responsibility as the Forestry Commission has not been able to carry out this task; (ii) adjustment

[55] Based on Annex IV.
[56] PD 124/01 Rev. 2 (M) *Promotion of Sustainable Forest Management of African Forests.*

of the institutional responsibilities of the Forestry Commission accordingly; (iii) identification of a responsible body for the development work for certification; (iv) clarification of the roles and approaches to managing forest in off-reserves to achieve SFM; (v) awareness raising amongst local communities and the private sector on the requirements of forest certification; and (vi) ensuring full government support to certification development, including financing. These are major issues and resolving them is likely to take time. In the meantime, Ghana could give priority to making progress under the EU's FLEGT Voluntary Partnership Agreements program to demonstrate that its timber exports to the EU (its main export market) come from legal sources.

Other national schemes

Uruguay (not an ITTO member country) is at an advanced stage in the development of a national forest certification scheme. India is considering a similar initiative. Cameroon recently applied for membership of the PEFC Council, which might be expected to lead, in due course, to the design of a national scheme. In the Republic of Korea, a national scheme for smallholder forestry is reportedly planned (B. Gunneberg, pers. comm.). For some years, Myanmar has pursued the design of a national certification system. Several other countries that have had difficulties embarking on certification through current approaches have or are considering the implementation of a national scheme (eg in Thailand for the certification of rubberwood products).

Experience has shown that the design of a national scheme is a time-consuming exercise. Operating it is also a challenge due to resource requirements and bottlenecks in the policy and institutional framework in which forest management is taking place. A critical mass of certified forest and processing operations is needed to justify investment in the development of a national system. Many countries are insignificant exporters of timber and timber products and forest certification is not a priority for them. In addition, several other constraints tend to limit the development of national systems (see, for example, Box 4.7).

Box 4.7 Forest certification in the Republic of Congo

Forest concession holders in the Republic of Congo have been subject to NGO campaigns since the mid-1990s. This led to major efforts to prepare and implement proper forest management plans involving various partnerships with NGOs; in 2005, the first concession was certified and another one is presently undergoing the auditing process (both are managed by the private company Congo Industrielle de Bois).

Parallel to this, a national working group was established in 2004 to develop (with ITTO support) a national set of C&I that could underpin an ATO/ITTO-compatible national certification standard. As this would not be in compliance with the the FSC's rules, there is a need to develop a national FSC standard through another national working group following FSC's rules. An FSC national initiative has been set up but has not been endorsed by the FSC because its members include government employees. The establishment of a national scheme based on past work would have some advantages but hurdles that would need to be addressed include cost implications and the lack of local accreditation and certification services. In addition, the special problems of SMEs in the certification process need to be addressed.

Source: Annex II

5. Comparative Analysis of Certification Schemes Operating in ITTO Producer Countries

Past comparisons

Since the emergence of national certification schemes and the PEFC in the late 1990s, several parties have carried out comparative analyses of forest certification standards and schemes. The objective has been to identify the main differences between schemes. The parties have either defined the criteria of comparison themselves or used criteria defined by others. Guides have also been produced to assist forest certification users to identify which features make certification systems reliable and effective (eg Garforth et al. 2002). Forest owners and managers have to choose between schemes as part of their marketing strategy. Governments have to assess schemes for their timber procurement policies and they also have to understand how certification can help achieve various policy goals. Buyers and users of paper and wood products are interested in knowing how schemes can provide credible guarantees of good forestry practice and the environmental credentials of forest products. International debate continues on those features of forest certification schemes that are essential for the provision of reliable assurances of good forestry practice.

Comparative analyses are different to the assessments that various parties have made on individual systems in order to establish whether the schemes meet a predetermined set of acceptability criteria. Such assessments have been made by public procurement agencies, financing institutions, NGOs and private companies buying forest products. The criteria applied by these bodies are discussed in Chapter 6; it is noted, however, that sometimes it is difficult to distinguish between comparative analyses and individual assessments, since some comparative analyses have been made against a set of "acceptability" criteria.

This chapter maps the main similarities and differences between the five forest certification systems currently operating in ITTO producer countries: ie FSC, PEFC, CERFLOR, LEI and MTCC. The purpose is to identify where the differences lie rather than to analyze detailed provisions and their implications. The comparison matrices are presented in appendices 6–13.

Objectives

All five schemes have the same general goal of promoting sustainable (or responsible) forest management by offering: (i) a certification mechanism involving third-party assessment of forest management and CoC against respective agreed standards; and (ii) a means of communicating the outcome. All schemes also recognize that sustainability has three pillars – economic, environmental and social – and, in order to establish a balance between them in a certification standard, a participatory process is needed.

The FSC emerged in the early 1990s as an alternative to bans and boycotts of tropical timber, while the other schemes emerged as a tool to ensure access to forest product markets which require certified products and have been developed as alternatives to the FSC's centralized global approach.

Forestry standards

While the FSC offers its own P&C as the basis of the national or generic standards applied by its certification bodies, the other schemes rely on internationally or regionally negotiated processes to define criteria, indicators and guidelines for SFM. LEI has also drawn on FSC's P&C and the MTCC has elaborated its standard within the FSC P&C template. All the standards cover virtually the same elements, most explicitly and some implicitly (Appendix 6). There are, however, some substantive differences (eg prohibition of genetically modified organisms in the FSC P&C and the MTCC). Both the FSC and CERFLOR require explicit measures for public consultation during forest management operations and the certification process.

A detailed comparison of differences would require either an analysis of national standards in a country which has both a national certification scheme standard and an FSC-endorsed national standard, or a comparison of the entire set of FSC standards with a national system's standards.[57] Such comparisons,

[57] Most past comparisons have covered only FSC P&C, PEOLG and national certification system standards.

which are outside the scope of this study, could reveal substantive differences between standards but have rarely been carried out. Another approach would be to carry out on-the-ground assessments of the impacts of forest management certified under different systems.

There has been a lot of debate about whether the different certification standards and systems lead to different impacts on the ground. Most comparative studies have been based on an analysis of the requirements laid out in the standards; this approach has inherent limitations, because the real test is how the standards are applied. Another approach has been to look into the corrective action requests of certification audits based on the information contained in the public summaries of certification audit reports. This approach is limited by the fact that it reveals what should be done *after* the main certification audit to comply with the standard's requirements. Many of the improvements have been made during the certification process – before the final report of the audit is issued. Better information on impacts could be obtained by combining the certification audit reports with the reports of the scoping analysis, which would show where the gaps were *before* the certification process (ie provide a baseline). Forest enterprises then take the measures needed to fill these gaps, which should all be accounted for in any impact assessment.

To address these limitations, a mixed approach was applied in a study comparing the FSC and PEFC standards in Nordic countries by combining documentary analysis of the schemes with a comparison of full certification audit reports, and interviews with stakeholders (Savcor Indufor 2005). The study is not without limitations but, because it is unique, some key results are summarized in Box 5.1. The methodology also included aspects of effectiveness and efficiency, which have been missing in many other comparisons.

Another issue in most comparisons is that FSC certification without national FSC-accredited standards is prone to inconsistent assessment and less support for social benefits, due to differences in interpretation of generic standards by certifiers and the arguably lower accountability of certifiers hired by FMUs seeking certification (Richards 2004). This problem has been observed in tropical countries, not only between certification bodies but also between auditors of the same certification body (Delwingt, pers. comm.).[58] In countries without a national or regional certification standard[59], a comparison between schemes becomes an extremely cumbersome exercise.

Despite addressing the trade-offs between the three pillars of SFM through a consultative process, it appears that current standards have a tendency to treat ecological and social aspects of SFM independently, even though the two are intricately interlinked. To improve the design of standards, these trade-offs need to be better understood. Certification standards should not be considered as cast-iron measures of sustainability but as evolving tools in an adaptive management system with the ultimate aim of sustainability (Marjokorpi & Salo 2007). Regardless of the differences between individual standards, it can be safely assumed that, overall, implementation of forest management standards for certification have had a positive impact on FMU-level management systems and performance.

Standard-setting process

Because all certification schemes relate their standard-setting process to ISO Guide 59, there are many similarities between them. Typical features include adaptation to national conditions, a balanced, participatory process, targeted consensus, standard development through a national working group or forum, communication and transparency, as well as appeal procedures (Appendix 6). The PEFC, its endorsed national schemes, and the MTCC, closely apply the ISO Guide 59 provisions; LEI has developed its own rules, which are compatible with ISO. The FSC also has its own specific rules, which have been assessed as compatible with the ISEAL Code of Good Practice for Setting Social and Environmental Standards (2006). The ISEAL Code also draws on ISO Guide 59 and the World Trade Organization (WTO) Code of Good Practice for the Preparation, Adoption and Application of Standards.[60] The ISEAL Code procedures and provisions for participation are not significantly different from the practices employed in existing forest certification systems, but they include a number of provisions that are not explicit in the latter. Another issue is the Code's provisions on international standards and international harmonization, should another forest

[58] It has even been proposed that certification assessments under the FSC should not be undertaken in countries lacking a properly constituted national working group or national/regional standards (Counsell & Loraas 2002).

[59] Most ITTO producer countries fall into this group.

[60] Annex 3 of the WTO Agreement on Technical Barriers to Trade.

Box 5.1 Comparison of FSC and PEFC standards and systems in the Nordic countries

- In all standards, social aspects mostly rely on the normative requirements and the common law on free access and use rights of some non-timber forest products.
- With regard to biodiversity conservation, the main difference in the standard is in the requirement for FMU-level set-aside areas (FSC applies a blanket 5%, while PEFC standards focus on valuable habitats). In the case of smallholdings, a blanket 5% requirement creates patches of set-aside areas which may or may not have an impact on biodiversity, depending on local conditions. The valuable habitat approach attempts to also consider landscape-level aspects. While blanket thresholds may be effective instruments in large-scale forestry, their application in smallholdings can be challenged in comparison to other approaches.
- The key difference in the social standards is in addressing the relation between (well-established) ownership rights and traditional rights to the use of forests. While PEFC standards rely on the use of democratic decision-making procedures, the FSC specifies in detail the rights and duties of different forest users. In the case of Nordic countries where there are strong democratic traditions, not all have accepted explicit international requirements, which has been one of the key reasons why, in two of the countries, parallel initiatives have emerged.
- When measured in terms of certified area, effectiveness can also be interpreted as the appropriateness of a standard or system to local conditions. Most FSC-certified areas are in large-scale industrial forestry, while most PEFC-certified areas are in private small-scale non-industrial forestry, which is dominant in the Nordic countries. As the factual differences between the standards were minor, suitability to local conditions becomes an important criterion.
- Standard-setting processes are different. The FSC uses a structured, three-chamber system in which small-scale non-industrial forest owners are part of the economic chamber, while, in the PEFC-endorsed national standards, working groups have worked by consensus and, when required, each participant has an equal vote.
- The FSC standards focus on the forest/owner/manager, while the PEFC standards set specific requirements for other operators working in the forests (eg forest contractors).
- Efficiency reveals the relationship between costs and benefits. As market benefits in the three countries have been limited, cost-effectiveness has become the main criterion. In this case, a PEFC system operating in small-scale non-industrial forestry is more cost-efficient than the solutions available from the FSC, but the FSC's potential market benefits could outweigh the cost difference.
- Due to small differences in standard requirements, double certification has proved a feasible approach for reaching minimum thresholds for percentage-based claims under both systems.

Source: Savcor Indufor 2005

certification system seek ISEAL accreditation for its standards.[61]

National standards are not a pre-condition for FSC certification, which, in their absence, can be carried out using generic standards developed for FMUs by certification bodies through a local process. As explained in Chapter 5, such standards can be problematic due to differences in interpretation (indicators and verifiers). The FSC is in the process of developing generic indicators for its P&C with the aim of eliminating inconsistencies.

The development of PEFC-endorsable standards needs to be initiated by national forest-owner organizations or national forest-sector organizations that have the support of major forest-owner organizations

[61] This may be interpreted to mean that other standards to be recognized by ISEAL will have to be compatible with the FSC P&C.

in a given country. In the FSC system, national standards are developed under an FSC-endorsed national initiative, the participants of which would be 'initiators' of the standard-setting process, but there is no requirement regarding their identity or affiliation. In Malaysia, the initiative is vested in the MTCC multi-stakeholder Steering Committee.

Based on the debate and criticism of the existing schemes, crucial points in standard setting appear to be related to: (i) the meaningfulness or effectiveness of participation by interested parties; (ii) the interpretation of situations in which a stakeholder group does not participate, even though it is invited to do so; and (iii) possible dominance by some parties. These three aspects are all considered important elements of credibility. Despite differences, it can be assumed that standard-setting processes under various certification systems have had a positive impact on stakeholder participation in all countries in which national standards have been developed.

From the perspective of ITTO producer countries, the requirement for participation has proved problematic in countries in which relevant stakeholders (including civil society, forest communities and private small-scale forest owners) are weakly organized. Government support is often required to develop a national certification standard[62] independently of the certification system.[63] In tropical timber-producing countries, organizing effective standard-setting processes that meet international criteria tends to be a time-consuming process that easily gets stranded; therefore, external support, such as ITTO's work in Brazil, is often justified. The international certification schemes should consider ways to shorten national standard-setting processes (to last not more than a year), in order to provide a firm, locally appropriate basis by which FMUs can move towards certification.

CoC standards

CoC certification is necessary to translate the potential supply from certified forests into sales of certified timber in the market. All systems need credible traceability if their users are to make claims about certification. The two international systems have largely similar CoC standards but there are some differences, particularly in labelling requirements. Appendix 7 presents a comparison of the CoC requirements of the five systems.

The methods laid out in the PEFC and FSC CoC standards for determining certified content are largely similar. Physical separation and the calculation of the minimum average percentage are common to all schemes. In the calculation of average percentage, a batch system can be applied, although the time span of the batch varies.[64] Both schemes presently include the volume credit system (input/output calculation) for certified content (it was added to the FSC recently). The volume credit system makes it easier to obtain the labelling right than the earlier minimum threshold system, which required that at least 70% of the virgin fibre was certified in FSC, PEFC and CERFLOR. In the case of LEI, the requirement is 100% (products have to be made entirely out of LEI certified materials) while MTCC requires a minimum 70% for assembled products and 30% for fibre/chip products.

Under PEFC rules, neutral raw materials (ie non-wood-based raw materials, wood harvested from housing areas, and recycled wood and recycled fibre) are not included in the calculation of the certified percentage. The PEFC allows labelling of the share of production that corresponds to the share of certified fibre input; the claim can be made for the whole production volume but the percentage of certified input must be mentioned in the claim.

This is not possible under FSC rules, which allow the labelling of a percentage of final product corresponding to the volume of FSC-certified and/or recycled raw material intake, as long as the certified raw material content is at least 10%.

Both schemes have provisions to exclude controversial sources from labelled products. The FSC definition of such sources is significantly broader than the PEFC's:

FSC: Forest area where traditional or civil rights are being violated; forests with high conservation value that are under threat; genetically modified trees; illegal sources; natural forests that are being converted to plantations or non-forest areas (FSC-STD-40-005 V1-0).

PEFC: Illegal or unauthorized harvesting (PEFC Technical Document Annex 4).

The FSC has five standards dealing with controlled wood, while the PEFC, LEI and the MTCC cover the exclusion of controversial sources under their

[62] Case studies on Brazil, Gabon, Ghana, Malaysia and Congo showed this but it has also been observed in Guatemala (Cashore et al. 2006).

[63] According to FSC rules, government agencies cannot participate as members of the standard-setting working group.

[64] The PEFC is likely to change its 90 days to 365 days in the future to allow the application of the CoC standard to project certification.

respective CoC standards. While the FSC's various standards can be used to verify legality (as part of FSC controlled wood), the PEFC's approach is to exclude illegal timber from the supply chain based on the CoC standard itself.

Each scheme only recognizes material certified according to its own requirements. Hence, FSC-certified material would be classified among non-certified wood in the PEFC classification, as would PEFC-certified material in the FSC classification. PEFC's Annex 6 allows the dissemination of voluntary additional information about wood raw materials. Such information could include, for example, the proportion of FSC-certified wood or wood fibre. This information, however, would not be endorsed by the FSC and, naturally, could not be associated with an FSC label. In assessing the risk of controversial sources (which is also included in the FSC controlled wood management system), the PEFC mentions that the existence of another certified forest (eg FSC) in the area, with a CoC certificate, is an indication of low risk (PEFC Technical Document Annex 4 Appendix 7). The MTCC makes a similar reference to the FSC and the PEFC. The FSC has not referred to other systems because the PEFC only covers legality and does not, as a system, address the issues of conversion, Indigenous people's rights, genetically modified organisms, and high conservation values, which form part of FSC's controlled wood standards (Giacini de Freitas pers.comm.).

The FSC, the PEFC and CERFLOR all have provisions for project certification and multi-site certification, in the latter two through the application of their CoC standard.

The labels and claims are different between certification schemes and should remain so. All schemes emphasize that labelling is voluntary and should be non-deceptive.[65] The FSC provides three options: *FSC Pure* (100% certified), *FSC Mixed* (a combination of FSC-certified, controlled and recycled wood/fibre), and *FSC Recycled* (100% recycled fibre). The PEFC has a 100% option (*From sustainably managed forest*), a percentage-based option in which the CoC has been verified through the volume credit system (*Promoting sustainable forest management*), and an option for 100% PEFC-certified recycled wood/fibre (*Promoting sustainable forest management and recycling*). When the product contains recycled fibre, the PEFC logo is accompanied by the universal symbol of recycling (the mobius loop) and information on the percentage of recycled content in the product.

CERFLOR complies with PEFC requirements and, as has been observed with many other national schemes, the PEFC endorsement process was a useful driver for completing the development work.

LEI and the MTCC have developed their own CoC and logo rules, which are mostly comparable with other schemes but differ in some respects. The MTCC system applies minimum average percentage and volume credit accounting for raw materials over production batch periods. The minimum content of certified wood varies by product type (70% in solid wood products and 30% in products made from chips and particles). At a minimum, controversial sources are excluded from the supply chain through self-declaration. In LEI rules, mixed labels are not applied and, as in the case of the MTCC, a recycled label is not provided because recycled content is not involved in certified products.

The FSC is the only scheme that does not allow the on-product use of other forest certification labels; the other schemes do not have this limitation. This may be a concern to those companies with double certification and there could also be legal implications.

Even though there are some differences in requirements, the schemes have essentially the same CoC verification procedures. They all involve:

(i) auditing the company's records on incoming and outgoing wood flows (purchasing, receipt of materials and goods, processing, storage of raw materials, intermediate products and products, sales, etc);

(ii) auditing that part of the management system related to CoC (inspection of raw materials received and products delivered, data capture, information system, document control, labelling, training, etc); and

(iii) making spot checks in woodyards, warehouses and the processing plant.

Two PEFC-endorsed certification systems (the Australian Forest Certification Scheme and Chile's CERTFOR) include social criteria in their CoC standards, as does the MTCC. In light of interest from the labour movement[66], the PEFC will consider including compliance with the requirements of the

[65] FSC and PEFC require compliance with ISO 14020.

[66] Building and Wood Workers' International.

eight fundamental or core ILO conventions in their CoC standard (Gunneberg, pers. comm.; Ramsay, pers. comm., Street pers. comm.).

The existence of two parallel international systems for CoC certification represents an unnecessary hurdle for the increase of certified products in the supply chain and creates unnecessary costs in the distribution chain and further processing (double audits, stocking of different brands, etc). It also causes increased emissions of greenhouse gases because it involves the (unnecessary) transportation of raw materials with different certifications over long distances to meet the labelling criteria of a particular scheme at plant level. As a solution, the industry and trade have proposed the development of a generic CoC standard focusing only on the verification of the CoC, while the certification systems could continue with their own labelling requirements and rules on conditionalities related to uncertified wood and controversial sources.

Certification and accreditation procedures

The certification procedures of different certification schemes rely on the same international guidelines[67] and therefore there are only smaller differences between them (Appendix 8).[68] All systems provide public summary reports; earlier, this was one of the subjects of debate because it is additional to the standard ISO procedures (eg in the case of ISO 9000 and 14000 certifications). Group certification is provided by the two international systems and CERFLOR. The PEFC also provides regional certification to facilitate the participation of small-scale forest owners. The FSC's SLIMF initiative and respective provisions in its standards are directed towards the same objective, together with facilitating the certification of community forestry. In PEFC systems, the certification decision is considered the responsibility of the certification body, which may decide if peer review is applied or not. In other systems, audit reports must be peer-reviewed before the certification decision.

In accreditation, there is a major difference between the two international systems. The FSC's subsidiary body, Accreditation Services International, acts as the central accreditation body, while PEFC schemes rely on national accreditation bodies. However, both schemes use ISO 17011 procedures. The PEFC requires that national accreditation bodies are members of the IAF, while the FSC is a member of ISEAL, which is the collaboration body of standard-setting and conformity assessment organizations focused on social and environmental issues. The PEFC's requirement is problematic for the many ITTO producer countries that do not have national accreditation bodies.[69] Having their own rules for accreditation, the MTCC and LEI have also acted as accreditation bodies, which has created conflicts of interest; in both cases, the rules are under revision.[70]

Conclusions

- The many similarities between certification schemes offer a basis for cooperation between schemes, despite inevitable competition between the FSC and other schemes.
- The PEFC and its national schemes have harmonized procedures, while the FSC, LEI and the MTCC have their own peculiarities. The MTCC is expected to fully harmonize with the PEFC. As an international scheme, the FSC has apparently not felt the need to harmonize with other schemes.
- The most important differences between schemes concern certain elements of the standard, the standard-setting process and accreditation, while certification procedures are largely harmonized.
- The CoC standards are largely similar; differences concern the identification and treatment of different material/product categories. The implications of the standards for trade and industry are, however, related to labelling rules, which differ between schemes.
- As long as the FSC is unable to accredit national schemes, the schemes' only option for international-level endorsement is through the PEFC.
- All forest certification schemes have contributed to improvements in the quality of forest management and of management systems in certified FMUs, processing plants and trading companies.

[67] ISO Guides 62, 65 and 66.

[68] In the case of the FSC, the standard FSC-STD-20-001 defines the FSC procedures and their relationship with ISO Guide 65.

[69] Only Brazil, China, Egypt, India, Indonesia, Malaysia, Mexico, the Philippines and Thailand have IAF members.

[70] The MTCC is in consultations aimed at obtaining the services of Standards Malaysia as an accreditation organization.

6. Comparative Criteria and Acceptance of Certification Standards and Schemes

Assessment frameworks

Because of its unique nature as a policy instrument, the 'desirable', 'credible' or 'acceptable' elements of forest certification have been debated since its inception. In 1996, the Intergovernmental Panel on Forests identified seven criteria to be supported in the implementation of certification (IPF 1997).[71] While useful, these criteria were, in practice, too general to guide the design and evaluation of certification systems. Various efforts have been made by governments, NGOs, the industry and trade to define what a credible or acceptable certification system should entail. This was deemed necessary when the number of forest certification schemes started to increase in the late 1990s. Initiatives related to the assessment criteria and frameworks are summarized below.

Government initiatives

In 1997, the Dutch government produced a set of minimum requirements for timber from "sustainably managed" forests to be eligible for a label in the Dutch market. These criteria were later adopted by the Dutch Keurhout labelling scheme. In 2003 the Dutch government began a revision of the criteria and a new version – the National Assessment Guideline for the Certification of Sustainable Forest Management and the Chain of Custody for Timber from Sustainability Managed Forests – was published in 2005 (National Assessment 2005).

In 2000, the Australian government published a report containing critical elements and potential performance measures for the assessment of forest management certification schemes as well as a preliminary assessment of existing comparability and equivalence initiatives and certification schemes against these proposed critical elements (Department of Agriculture, Forestry and Fisheries 2000). This initiative was taken to assist the government in its strategic planning.

More recently, several governments have developed public timber procurement policies which specify that, in the future, legal and sustainable timber is to be used in all public purchasing (Simula 2006). The emergence of these policies has prompted governments to define methodologies for assessing certification standards and systems, as well as verification systems of legality based on specified minimum requirements. Further, some governments have developed national guidelines or criteria for assessing certification systems. Typically, these cover both procedural criteria and substantive requirements for forest management and CoC. Some of these policies explicitly identify acceptable schemes and some specify the general characteristics that certification systems should have. The public procurement policies of Denmark, the UK and the Netherlands set out the detailed criteria that certification schemes should meet in order to be recognized as providing proof of legality and/or the sustainability of timber supplies; only the first two are included in the comparative analysis here, since the Dutch set is currently being revised.[72]

Industry initiatives

In 2000, the Confederation of European Paper Industries (CEPI) developed a comparative matrix (CEPI 2000) to allow comparisons between the standards, and the procedures used to certify against those standards, of different certification schemes. The matrix was supported by information collected on the certification schemes and standard-setting bodies. It was revised in 2004 and was recently transferred to the ICFPA, which established a website to facilitate its use (www.forestrycertification.info). Its primary aim is to assist customers and companies involved in the paper and wood products trade in determining the status of individual forest certification schemes and the labels issued under these schemes. A secondary aim is to inform international debate on harmonization and mutual recognition.

The ICFPA Matrix has identified three key requirements that are now widely recognized as the minimum necessary for credible forest certification schemes: (i) conformity with ISO; (ii) legal compliance as a certification requirement; and (iii) conformity

[71] These were: open access and non-discrimination with respect to all types of forests, forest owners, managers and operators; credibility; non-deceptiveness; cost-effectiveness; participation that seeks to involve all interested parties, including local communities; sustainable forest management; and transparency.

[72] Proforest (2006) carried out a comparison of it against the Danish and UK policies.

with international forestry principles. In addition, the matrix contains detailed specifications for the main elements of all existing forest certification systems**.** However, since the main purpose is to assist comparisons, the matrix does not canvass all performance requirements.

Parallel to the work of CEPI/ICFPA, the International Forest Industries Round Table (IFIR) suggested criteria and indicators for credible SFM standards and certification systems in the context of its proposal for an international mutual recognition framework (IFIR 2001). As mutual recognition between the two leading certification systems proved impossible, in 2003 the WBCSD proposed a conceptual framework for the independent assessment of certification systems based on broad stakeholder agreement on 'legitimacy thresholds' (Griffiths 2003). This model was designed to promote the credible use of multiple certification systems and was debated in various fora, including The Forests Dialogue in 2004; however, it received insufficient stakeholder support to gain significant traction.

Many trade federations (eg the UK Timber Trade Federation) have developed their own general criteria for certification schemes. The only detailed set of requirements has been developed by the Keurhout Foundation, which was later taken over by the Netherlands Timber Trade Federation (Box 6.1). Keurhout requirements are included in the comparative analysis later in this chapter.

Financing institution initiatives

In 2000, the World Bank/WWF Alliance for Forest Conservation and Sustainable Use defined eleven criteria for determining credible forest certification systems (World Bank/WWF Alliance for Forest Conservation and Sustainable Use 2000). These were adopted in the Bank's Forests Strategy (World Bank 2004) and its Operational Policy on Forests (OP 4.36), which guide the Bank's forest-related investments in client countries. The Bank has deliberately avoided endorsing any specific scheme and none is referred to in OP 4.36. Based on its eleven criteria, the World Bank/WWF Alliance prepared a tool for assessing certification schemes called the Questionnaire for Assessing the Comprehensiveness of Certification Schemes/Systems (QACC), which was to be used in the identification of schemes which contributed to the Alliance's target of 200 million hectares of certified forests (World Bank/WWF Alliance for Forest Conservation and Sustainable Use 2003). The perceived bias of this document towards the FSC raised substantial opposition from some governments, certification schemes and industry organizations. The QACC was subsequently revised and tested and finally published as the Forest Certification Assessment Guide (FCAG) (World Bank/WWF Alliance for Forest Conservation and Sustainable Use 2006). It is designed primarily for use by Alliance partners in assessing the acceptability of certification schemes, but it can also serve as a guide for the development of national standards, the evaluation of forest harvesting operations receiving Bank assistance, and so on.

The assessment of certification systems is a complex, time-consuming task which requires special skills. FCAG provides guidance for interpreting the World Bank/WWF criteria but it is not supposed to be used as a decision-making tool; it is limited in its advice on judging each criterion, on what levels of performance or practices are acceptable, and on how to determine these. Nor is it clear on how to deal with partial compliance and how to establish the acceptability of schemes. Despite FCAG's guidance, the evaluation of how various schemes meet individual criteria might still be subject to significant personal judgment by evaluators, thereby raising the risk of inconsistent outcomes. FCAG may therefore be more suited to identifying differences between schemes and standards than to establishing compliance with the Bank's specific requirements for forest certification.

As part of the World Bank Group, the IFC finances private enterprises that are managing forests and/or procuring their raw material from forests managed by other parties. It draws on the Bank's requirements for certification in defining its own performance standards related to the management of renewable natural resources. The requirements of the two institutions for forest certification can be considered compatible and consistent. They include a set of minimum performance requirements for such things as the conversion or degradation of critical forest areas or related critical natural habitats, and legally protected areas. While the Bank has specified a comprehensive list of requirements for certification standards and schemes, the IFC's approach is to implement its performance standards through the client's social and environmental management system. The Bank is attempting to upgrade and strengthen policy frameworks in client countries by using certification as a strategic promotional instrument to improve the forest practices of operators.

Box 6.1 Keurhout system of sustainable and legal timber

Keurhout was not intended to function as a self-standing certification system but rather as a gatekeeper for checking the certificates of various systems against the criteria of Keurhout protocols. Nevertheless, some forest areas were assessed by an independent certification body against the Keurhout criteria for SFM because no other applicable standard was readily available in those cases. In the late 1990s and early 2000s, this resulted in Keurhout-certified areas in Africa and Malaysia.

In January 2004, the Keurhout Foundation was terminated and 'Keurhout' was established as a part of the Netherlands Timber Trade Association (NTTA) (but maintaining an independent board of experts and an independent board of appeal). It was also decided that no new cases of FMU/CoC certificates assessed against the Keurhout criteria would be accepted for validation. Instead, a certificate issued against the standard of a certification system would have to be produced, which could then be validated and admitted (or not) by the board of experts. There was a transition arrangement for Keurhout-certified suppliers.

Keurhout has three protocols:

(i) Protocol for the Validation of Legal Origin (Keurhout-LET): this protocol, which has been in use since 2005, is used to validate certificates against criteria of legal origin. It includes requirements for forest management, certification bodies, and CoC. Certificates judged to meet the criteria can be admitted to the Keurhout legality system and certified timber can be sold as Keurhout-Legal timber. Keurhout considers legal origin to be a first step towards SFM. By October 2007, over 4 million hectares of MTCC-certified forest and 25 CoC companies had been admitted to the Keurhout-Legal system. Other cases, including some in Africa, have been validated but not admitted for various reasons (eg mixing with timber from non-controlled sources);

(ii) the original Keurhout Protocol for the Validation of Sustainable Forest Management (Keurhout-SFM), through which certificates can be admitted to the KH-Sustainable system. Certified timber admitted under this protocol can be sold as Keurhout-Sustainable timber. The criteria for Keurhout -SFM are based on the minimum criteria for SFM set by the Dutch Government (1996); they are in line with the ITTO criteria for SFM. The criteria for Keurhout-LET have been entirely integrated in the Keurhout-SFM protocol; and

(iii) the Protocol for the Validation of Certification Systems (KH-SYS), in use since 2006, allows the validation of entire certification systems and therefore includes additional criteria on system management. Systems can be admitted to either the Keurhout-Legal or the Keurhout-Sustainable system. PEFC Finland was admitted to the Keurhout-Sustainable system in 2006 and PEFC Sweden, PEFC Austria and PEFC Germany were admitted in 2007.

In October 2007, approximately 50 million hectares of certified forest area had been admitted to the Keurhout-Sustainable system, and more than 1,300 CoC certificates.

In addition to the three protocols described above, certification bodies in the EU use a specific KH-CoC protocol to verify the continuing compliance of receiving parties (denominated Keurhout participants).

Through a combination of Keurhout-validated forest and CoC certificates in producer countries and certification body-verified CoC in consumer countries, a completely controlled CoC is established from the forest to the consumer. The connection between an exporter in a producer country and an importer in the EU (both critical control points in the CoC) is established through detailed shipping information (bills of lading, invoices and (possible) use of on-product Keurhout logo). The latter must be in accordance with the Keurhout logo use guide.

Source: Zambon, pers. comm.

Box 6.1 Keurhout system of sustainable and legal timber continued...

To be eligible to trade Keurhout timber, a company must be a Keurhout participant. Therefore it must: be positively assessed against the Keurhout CoC requirements by a designated certification body; sign the Keurhout Participants Agreement with the NTTA; and pay an annual fee. Implementing certification bodies must be properly accredited. A positive audit result does not result in the issuance of a certificate but in the possibility of admittance to Keurhout.

Keurhout started as a system serving the Dutch market. Since early 2006, trading and processing companies in other EU countries have also had the opportunity to become a Keurhout participant and to sell Keurhout timber. These participants and their Keurhout activities are audited annually by independent accredited certification bodies on the basis of the Keurhout protocol for CoC. In October 2007, Keurhout had more then 160 member companies and the trend is one of increasing membership.

Source: Zambon, pers. comm.

An important expansion of the application of the World Bank/IFC requirements for forest certification occurred when the Equator Principles Financial Institutions (EPFI) adopted the IFC Performance Standards for project-financing investments above US$10 million. This was the first step in mainstreaming the World Bank Group's requirements among leading private financing institutions. EPFI has recently taken an initiative to assess existing forest certification standards against the IFC's Performance Requirements No. 6 and system characteristics against FCAG (Nussbaum, pers. comm.).[73] The FCAG and IFC requirements are included in the comparative analysis later in this chapter.

NGO initiatives

A number of environmental NGOs have assessed the merits and weaknesses of various certification systems but few of these assessments have been based on a clear set of criteria (see Chapter 5). One exception was an assessment by the Forests and the European Union Resource Network (FERN), which used a broad set of environmental NGO objectives and criteria in its comparative analysis of four certification schemes (FERN 2001). FERN's second comparison (FERN 2004a) analyzed eight schemes using eleven key questions which can be interpreted as specific criteria. It is unclear how the list of questions used in FERN (2004a) was developed but the report builds on the earlier assessment.

Past comparisons of assessment frameworks

Various efforts (eg Rametsteiner & Simula 2003 and Eba'a Atyi & Simula 2002) have been made to analyze the general criteria used by different initiatives in the assessment of certification schemes. Nussbaum and Simula (2004) carried out a detailed comparison of four assessment frameworks – including those applied in the CEPI matrix, the IFIR framework, QACC and FERN (2004a) – analysing in detail the differences between the four approaches. Since 2004, the CEPI Matrix has been improved significantly (and is now overseen by the ICFPA), IFIR is no longer relevant, QACC has been recast into FCAG, and FERN has not pursued the matter. Guidance on how assessment criteria could be developed is given, for example, in Nussbaum and Simula (2005).

Comparative analysis of assessment criteria

This section presents a comparative analysis of the criteria used in five selected assessment initiatives:

- the ICFPA Matrix, which uses a large number of indicators supported by a scoring system based on three possible levels (full conformity with the indicator, partial conformity, and non-conformity);
- WWF/World Bank FCAG (eleven criteria with a total of 55 requirements)[74];
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[73] The work will be carried out by Forest Trends and Proforest.

[74] The QACC had a total of 103 requirements (World Bank/WWF Alliance 2003).

- the public procurement policies of Denmark (Draft Criteria for Legal and Sustainable timber and Assessment of Certification Schemes developed by the Danish Ministry of the Environment, currently undergoing a consultation process) and the UK (CPET 2005; 2006a); and
- the Keurhout protocols for the validation of certification systems, legality and sustainability.

The UK and Danish public procurement policies apply a broad set of criteria covering all the key elements of certification schemes and include separate scoring systems comparable to that used in the ICFPA Matrix for legality and sustainability.

The comparison was carried out for the following elements:

(i) forestry standard contents: legality and sustainability;

(ii) forestry standard-setting process;

(iii) CoC certification and labelling; and

(iv) certification and accreditation process.

All sets except FCAG are structured according to the above breakdown. FCAG contains three parts (compliance with international systems, standards and standard setting, and certification and accreditation) but it lacks CoC and labelling elements, which were apparently deemed irrelevant.

The comparisons are presented in the form of matrices, where the presence of an indicator or requirement is indicated (appendices 6–13). It needs to be recognized that wordings may not be the same in all the cases. There are also hierarchical problems: some sets use broader terms, some very detailed specific provisions. As far as possible, these are indicated in the matrices.

General observations

Combined, the various frameworks cover, in a most comprehensive way, all the relevant aspects of forest certification schemes. Individually, however, the frameworks cover the requirements of the five sets of assessment criteria unevenly. Some emphasize details, while others focus on key factors. This is partly understandable because, in the assessment of certification schemes, 'the devil is (sometimes) in the detail' – details which reflect stakeholder perceptions of what sustainability is or how it should be defined. For this reason, most differences are related to forestry standards and their development processes and there is less variation between criteria related to other aspects.

There is a considerable degree of commonality between assessment criteria. Some, such as the Danish and UK procurement policies, are quite similar, having been developed for the same purpose and having benefited from an extensive exchange of ideas. This finding coincides with that of an earlier assessment by Proforest (2006). The Danish (and Dutch) policies have been developed through a bottom-up approach involving extensive consultations and therefore it is understandable that their specifications differ from each other (de Jong, pers. comm.; Lundmark Jensen, pers. comm.). A common guiding framework could have evened out some unnecessary differences.

The ICFPA Matrix and Keurhout provide a more comprehensive coverage of assessment indicators than the other sets and a combination of both could serve as a basis for a general checklist for this purpose.

Requirements for the contents of forestry standards

The requirements for the contents of forestry standards cover two main areas: legality and sustainability. All sets of criteria are compatible with each other in specifying compliance with national laws. The two public procurement policies apply the approach set out in EU FLEGT Briefing Note 9 (2005), which covers laws on forests, the environment, labour, occupational health and safety, and land tenure. In addition, the payment of royalties and taxes are singled out (Appendix 9). The definitions of legality are harmonized between the two policies, with the CPET wording appearing in both. This is, however, slightly different from the wording used in Briefing Note 9, and a question can be raised about the value of minor deviations in expression.

With regard to international law, all the ratified legally-binding conventions become part of national law. However, the Danish and UK procurement policies specifically refer to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), implying that it should be respected even in countries that have not ratified this convention.

FCAG, Keurhout and the ICFPA Matrix make specific reference to the customary rights of Indigenous people (in the other cases these are implicitly dealt with under 'national legislation' or 'sustainability of forestry standards'), since these rights are not always recognized in national law. FCAG refers to all

relevant laws and singles out labour and land tenure, while the IFC's Performance Standard (applicable at the enterprise level) identifies compliance with legislation on health and safety and land tenure.

The ICFPA Matrix and Keurhout provide the most detailed breakdown of sustainability criteria and most of these are found in one or more other sets (Appendix 10). The Danish public procurement policy is almost identical to the two previous ones, since the differences can be interpreted to be covered implicitly. Denmark also consistently follows the internationally agreed sets of C&I in its requirements. The UK's policy has many similarities to the Danish policy, but the language is generally less specific, allowing more scope for interpretation in assessment. In a way, both countries have developed their own definition of SFM, which is now applied to certification systems operating in countries from which timber is imported. This has been necessary in order to derive criteria that are measurable and clear and therefore allow an objective evaluation of certification schemes; the international/regional C&I sets are inadequate for this purpose (Lundmark Jensen, pers. comm.).

The UK's public procurement policy differs from the others in two important ways by excluding: (i) the extent of forest resources (including issues related to regeneration and forest conversion to other uses); and (ii) socioeconomic benefits and needs. Socioeconomic benefits and needs are excluded because of a concern that the social criteria of central government procurement rules could be challenged in the WTO.

FCAG uses some specific terms (eg critical areas, critical habitats) derived from World Bank/IFC policies and standards that do not appear in other initiatives. FCAG's set of requirements, however, is substantially less extensive than those of the other initiatives and two 'global SFM criteria' (extent of forest resources[75] and forest health and vitality) are not mentioned explicitly at all. On the other hand, FCAG requires specific provisions for plantations.[76]

In general, all the criteria sets are weak on economic aspects. This is surprising, since the sustainability standards of forest certification systems are designed mainly for application in production forests.

[75] It can be argued that the extent of forest resources is not relevant at the FMU level, but it is one approach for dealing with the prevention of forest conversion.

[76] CERFLOR and LEI have separate national standards for plantations. The FSC has a specific principle for plantations but its recent review recommended its integration with the other FSC principles.

The Danish and UK public procurement policies, the ICFPA Matrix and Keurhout all cover the protective functions of forests in detail. There is also a considerable degree of commonality in provisions for biological diversity. More differences are found in the area of socioeconomic benefits.

Regarding coverage, FCAG has selected eleven detailed aspects of the contents of the forest management standard derived from the priorities of the World Bank/WWF Alliance partners, omitting some aspects that would be needed for comprehensive coverage of SFM. The other sets of criteria adopt a more holistic approach derived from the seven global thematic elements of SFM. This latter approach would be desirable from the perspective of ITTO producer countries, which are in the process of implementing SFM within the framework of the ITTO C&I. New structures represent a hurdle for implementation and could cause confusion over the required elements of SFM.

Requirements for setting forestry standards

The requirements for setting forestry standards can be divided into: (i) compatibility with international standards; (ii) process characteristics; and (iii) decision-making. There are differences in all these areas, but also commonalities (Appendix 11). FCAG and the Danish and UK public procurement policies contain substantially more specific requirements for standard setting than the ICFPA Matrix and Keurhout.

With regard to compatibility with international standards, there are two options: (i) ISO Guide 59 Code of Good Practice of Standardization (1994), which is used in all standardization work globally; and (ii) the SEAL Alliance's Code of Good Practice for Setting Social and Environmental Standards. While the Danish and UK public procurement policies refer to both, the ICFPA Matrix refers only to ISO Guide 59 and FCAG only to ISEAL. The ISO and ISEAL provisions share common elements but have significant differences. The FSC is the only forest certification system which is part of the ISEAL Alliance. FCAG requires that the standard-setting body is affiliated with ISEAL and, if not, that schemes are assessed against the respective requirements through a self-standing assessment. For the present, this is likely to represent an obstacle to acceptance under FCAG requirements for any national forest certification system in tropical timber-producing countries and thereby for PEFC in general.[77]

[77] It should be noted, however, that while FCAG lists its requirements in normative language, they are not binding for World Bank operations; the binding requirementst are defined in the Bank's OP 4.36.

Different assessment frameworks propose different criteria for the standard-setting process but all call for the same principles of consultation, participation, and inputs from stakeholders. In addition, the Danish policy mentions the general principles of national adaptation and transparency. The ICFPA Matrix and the Danish policy also highlight the public availability of the standard, although this is also implicit in ISO rules. FCAG requires stakeholder invitation to the process, a procedure to involve stakeholders, documentation of the efforts made to include stakeholders, and an explanation of how the issues raised were considered; these requirements partly overlap with each other.

Balanced representation is mentioned in the UK policy, while FCAG and the Danish policy require that the process be open to all affected parties; the Danish policy also points out the desirability of involvement of all major groups. Input from stakeholders should involve "active seeking" (ICFPA and UK); participation must be "meaningful" (FCAG).

The requirements for decision-making of the FCAG and the UK policy are practically identical. The Danish policy shares with them a 'process based on consensus' and majority voting, as well as a dispute resolution process, which is also mentioned in the ICFPA Matrix. Keurhout requires that the outcome is acceptable to a large number of affected parties.

The detailed requirements or indicators in the various sets are mostly additional to ISO Guide 59 and some of them are mentioned in the ISEAL Code. This has been considered necessary because ISO Guide 59 considers neither the specificities of environmental and social standard setting nor the particular characteristics of forestry standards applied to the management of a renewable natural resource. Were the implicit elements in the requirements eliminated, the criteria sets could be simplified. Different wordings in some additional requirements would be relatively easy to harmonize without losing their intent.

CoC and labelling requirements

All the requirement sets refer to a procedure for CoC or a CoC standard (Appendix 12). On top of this, the Danish and UK public procurement policies specifically mention CoC from the forest to the final product (implying that a partial CoC is insufficient). The accreditation of CoC certifiers is also a common requirement.[78] The exclusion of illegal sources is required by all except the ICFPA Matrix, which covers it under rules for non-certified material. Conformity with ISO Guides 62, 65 or 66 is included in the ICFPA Matrix and the UK public procurement policy. Keurhout also calls for conformity with the ISO 9001 quality management system standard, which presents a particular challenge for many tropical timber producers. As a whole, Keurhout and the Danish policy contain more provisions for CoC than the others, while the ICFPA has only four specific requirements. All the necessary technical elements of CoC certification could be covered by combining the five requirement sets.

FCAG is the only initiative that mentions the exclusion of wood from conversion forests. This is an expression of a policy that is mainly relevant to tropical timber-producing countries.

Requirements for labelling and claims differ. Keurhout has the most comprehensive set. It (as well as the UK public procurement policy and the ICFPA Matrix) specifies the basic aspects of on-product labelling and off-product claims must be supported by CoC certification. The Danish public procurement policy and FCAG refer to the conformity of claims with ISO 14020/14021 standards. All but the ICFPA Matrix require that logos are not used for uncertified timber.[79] Keurhout and the Danish and UK policies require a mechanism (implicit in the others) for controlling claims. This is strengthened further in Keurhout and the UK policy by a requirement for the reliable distinction of certified products.

Although there are differences in the explicit requirements for CoC and labelling, they do not represent different approaches. The provisions are compatible with each other and can therefore be considered complementary. Some of the specified requirements are implied (for example, they are set out in the ISO Guides and standards for labelling) and are thereby covered. Based on the various assessment frameworks, it would be relatively easy to develop a common set of comprehensive requirements for CoC certification and labelling, while the labelling rules of specific certification schemes could be maintained.

[78] In FCAG it is implicit.
[79] This is also implied in the ICFPA Matrix.

Requirements for certification and accreditation

All the initiatives require a third-party certification/accreditation body, conformity with ISO Guides 62, 65 or 66, surveillance audits, and public summary audit reports (Appendix 13). Other common features are consultation with external stakeholders and mechanisms for dealing with complaints and disputes (not explicitly included in the ICFPA but covered by ISO guides). The Danish and United Kingdom public procurement policies are identical, requiring (in addition to the above) audits to cover both performance and management systems. This is in fact a requirement for the standard used for certification.

The detailed requirements for the certification process in the ICFPA Matrix and FCAG include the following common elements: collection of field evidence[80], sampling, SME requirements, and group certification. The public availability of the assessment methodology and surveillance intensity is an explicit requirement in all initiatives except the ICFPA. FCAG specifically requires the public availability of all scheme requirements and summaries of certification/accreditation reports. The handling of non-conformity is covered by all initiatives except FCAG. A requirement for forestry competence in audit teams is mentioned in three sets (ICFPA, UK and Keurhout), since it is not covered by the ISO Guides.

The ICFPA Matrix is the only initiative that mentions the local interpretation of standards and peer review of certification reports; FCAG is the only one which allows conditional certificates (an aspect inherent in the FSC system but not in all national forest certification systems). Apart from these characteristics, the various requirements are compatible with each other and can be considered complementary. Existence of a common element does not, however, mean that the requirement is identical.

All criteria sets require an accreditation body which, in the case of the Danish and UK public procurement policies, can be either national or international; the ICFPA mentions only national (therefore excluding the FSC), and FCAG and Keurhout do not specify. All the criteria sets except FCAG require conformity with ISO Guide 61/ISO 17011, which is the international standard for conformity assessment covering the requirements for accreditation bodies. The Danish and UK policies and FCAG define the accreditation scope to cover forestry. The ICFPA, FCAG and Keurhout include the national accreditation body's affiliation with IAF while, in this context, FCAG mentions ISEAL. The ICFPA is the only initiative requiring criteria for auditors and consultants in the assessment teams. Despite seeking conformity with existing international norms and standards, the compliance of FCAG with ISO 17011 can be demonstrated through affiliation with ISEAL, IAF or a separate self-standing assessment. FCAG further specifies the publication of reports on accreditation and complaints and appeals mechanisms.

As is the case for standard-setting procedures, the accreditation requirements of some assessment frameworks appear to give preference to one international system over another, the ICFPA to national systems due to the close linking of indicators with the ISO framework, and FCAG to the FSC due to the setting of its requirements within the ISEAL context. In accreditation, the FSC is a special case because it is not a member of the IAF, to which national accreditation bodies belong. The two public procurement policies are silent about the need for accreditation bodies to have an international affiliation, in effect avoiding a situation in which this issue would become a selection criterion between certification systems. In other respects, the various accreditation requirements are compatible with each other and could be considered complementary, but their harmonization would require changes in the provisions related to international rules and the affiliation of accreditation bodies.

Other requirements: avoidance of discrimination of trade

FCAG has an additional criterion not covered by the other four frameworks: the avoidance of unnecessary obstacles to trade. The World Bank/WWF Alliance regards the provisions in the ISEAL Code as an appropriate basis for avoiding such obstacles, including the requirement that national standards are based on international principles and criteria. FCAG does not, however, define a requirement for this criterion. In this context, the absence of any reference to the WTO Agreement on Technical Barriers to Trade (TBT Agreement) and its Annex 3 on the Code of Good Practice for the Preparation, Adoption and Application of Standards should be noted. This document, together with the ISO Guide 59 Code of Good Practice for Standardization, provides an internationally agreed

[80] Also in the Danish public procurement policy and Keurhout.

authoritative basis for non-discrimination of trade through standards. Three measures are relevant: (i) using international standards, where they exist, as a basis for the national standard; (ii) a national adaptation process; and (iii) providing procedures by which standard-setting bodies can harmonize standards with other standard-setting processes that deal with the same subject matter and that participate in international processes. However, ISEAL (2006) states that provisions in ISO Guide 51 and the TBT Agreement Annex 3 are not appropriate for social and environmental standards, although these are not identified.

The ISEAL Code Version 4 (2006) is a living document and will be reviewed in 2008. ISO Guide 59, approved in 1994, is also under revision. The future compatibility and consistency of these two documents will have implications for the requirements of forest certification systems. Apparent present inconsistencies between the WTO/ISO guidance and the ISEAL Code, as well as a lack of certainty about the contents of the revision of the ISEAL Code and ISO Guide 59, make it difficult to provide clear guidance for countries in the development of their forest certification standards. This issue should be looked into.

Acceptance of certification systems

Public sector

Since forest certification is a voluntary, market-based instrument, governments and intergovernmental organizations have been hesitant to formally recognize particular systems. Public timber procurement policies have, however, changed this, since buyers need practical guidance on how to implement such policies. As explained above, Denmark, the UK and the Netherlands have detailed requirements for the acceptability of certification systems. In the UK, the work was carried out by the CPET, which is run by a consulting company, Proforest. The UK criteria have been used to evaluate five systems – FSC, PEFC, CSA, SFI and MTCC (CPET 2006b). The current policy obliges central government departments to seek to buy timber from sustainable and legal sources[81] but, from 2009, the intention is to demand only timber from trees grown and legally harvested in sustainably managed forests, or timber licensed under FLEGT Voluntary Partnership Agreements. The target is to limit timber to sustainably managed forests from 2015 onwards.

In Denmark, the original (2000) timber procurement guidelines concerned only tropical timber. The policy included an assessment of three certification schemes (FSC, LEI and MTCC) and their capacity to provide proof of sustainability (Proforest 2006). In 2006, the policy was expanded to cover all types of timber. In 2007, the Draft Criteria for Legal and Sustainable Timber and Assessment of Certification Schemes was released for public consultation and its results are being analyzed. The draft was used in the comparison presented in this report. In the temporary guidelines of June 2006 the Danish Ministry of the Environment recommends - as a temporary piece of advice - that the CSA, FSC, MTCC, PEFC and SFI certificates could be taken as sufficient evidence of legality for all kinds of timber.

The Netherlands is still in the process of developing its public procurement policy on wood-based products. In 2010, all timber procured by the central government should come from sustainable sources; before then, all timber should at least be from a legal source. For legal timber, the Dutch government has decided to use the UK criteria (CPET 2005). For sustainable timber, the government has been working with stakeholders on the National Assessment Guidelines (BRL). The Ministry of Housing, Spatial Planning and Environment has established an Equivalence Assessment Board (Houtwereld), which will be responsible for the assessment of standards and certification schemes. The board recently completed a test in which it used the BRL requirements to assess six certification schemes; the test suggested that none of the schemes would meet all the BRL criteria, which therefore appear to be infeasible for use in assessment.[82] This is partly because the BRL was originally developed for a Dutch national forest certification system and not for the assessment of other systems. A revised set of criteria is already under development (de Jong, pers. comm.).

Belgium defined a set of general criteria for certification systems and carried out an assessment which concluded that the FSC, PEFC Belgium and the PEFC are acceptable schemes (CFDD 2005). In addition, the Belgian policy makes provision for 'equivalent certification' that has been carried out by an independent organization applying internationally recognized criteria to ensure that timber comes

[81] Legal timber is a contract condition; sustainable timber can be offered as a variant in tenders.

[82] This is why BRL was not included in the comparative analysis.

from sustainably managed forests. The equivalence of certification systems is established when all the criteria of the federal government circular are met. The assessment is carried out by an expert committee representing various stakeholder groups, which makes its decisions by consensus. The Belgian policy on the equivalence of individual schemes is temporary; an in-depth, two-yearly review is foreseen to re-assess the criteria and the different certification schemes (van Orshoven, pers. comm.).

In Germany, an administrative regulation was issued in 1996 which stated that tropical timber should come from sustainable forestry as demonstrated by credible certification. In 2005, the federal government agreed to use only timber from certified forests. Procedural requirements and requirements for establishing sustainability were developed and, in 2005 and 2006, pilot evaluations of existing certification schemes were carried out. In 2007, the government issued its current policy, specifying that wood products procured by the federal government must demonstrably come from legal and sustainable forest management (Anonymous 2007). All certificates issued by the FSC and the PEFC will be accepted. Wood products with other certificates or without any certificate might be accepted if the bidder is able to satisfactorily prove in the bid that the wood products were produced in compliance with the FSC and PEFC standards applicable to the respective country of origin.[83] In spite of an earlier intention, the policy does not specify generic requirements for certification systems.

Switzerland's public timber procurement policy (CAC 2004) requires that, for projects financed or subsidized by the federal government, only bids specifying the use of timber coming from sustainable production can be considered. The policy refers to three forest certification labels (FSC, PEFC and Swiss Q-label) but recognizes that other national systems exist that can demonstrate conformity with sustainable development and the policy emphasizes the importance of mutual recognition of these systems. If other labels are used by a bidder, the policy recommends consultation with the authority of the policy.[84] It also specifies that if a supplier cannot present a label, other documentation must prove that the wood offered conforms to the criteria of one of the recognized labels.

The Japanese green procurement policy on forest goods and services took effect in April 2006. The corresponding law concerning the promotion of eco-friendly goods and services by the state and other entities requires that all purchased timber should be legal according to the forest laws in producing countries and sourced from forests under sustainable management. The policy provides guidelines[85] to assist importers to verify that products are legal and sustainably produced, including proof by forest certification and CoC, together with other options like verification by industry or association. The Japanese policy provides an indicative, non-exhaustive list of certification systems (including FSC, PEFC, SFI, CSA, MTCC and LEI) that could provide the necessary proof. Japan will further consider the requirement of sustainability in its procurement policy. Sustainability is not a necessary condition for government purchasing but a preferable attribute when choosing between products and suppliers.

The New Zealand government expects its agencies to take all reasonable steps to ensure that purchased timber and timber products, including tropical timber and timber products, are from legally logged and sustainably managed sources.[86] The respective implementation guideline identifies six certification systems for considering supplier claims of certification of timber and timber products. The government does not endorse any one scheme above the others, and other verifiable evidence of origin from sustainable sources should also be considered.

Table 6.1 summarizes how national policies make reference to specific certification schemes. It shows that countries have drawn differing conclusions in their procurement criteria about the acceptability and applicability of individual certification systems. However, the assessment of certification schemes is an evolving process and therefore the situation is likely to change in the future. Tropical timber-producing countries have a number of concerns:

- different requirements and assessments can lead to different conclusions on the acceptance of national systems operating in tropical timber-producing countries. MTTC certification, for example, is recognized as proof of legality but not of sustainability in the Danish, UK and New Zealand public procurement policies, and

[83] Inspection will be carried out by the Federal Research Centre for Forestry and Forest Products (Hamburg) and the Federal Agency for Nature Conservation (Bonn) at the expense of the bidder.
[84] Procurement Commission of the Confederation.
[85] Guideline for Verification on Legality and Sustainability of Wood and Wood Products, February 15, 2006.
[86] Government Procurement in New Zealand: Policy Guide for Purchasers. Ministry of Economic Development. July 2002.

Table 6.1 Certification systems referred to in national timber procurement policies

Country	FSC	PEFC	SFI	CSA	ATFS	MTCC	LEI	Other
Belgium	X	X	X[1)]	X[1)]				
Denmark[2)]	X	X	X	X		X[3)]	X[4)]	Swan and EU Flower Ecolabel
Germany	X	X						Other Schemes, comparable to FSC & PEFC
Japan	X[2)]	X[1)]	X	X		X	X	SGEC (national scheme)
New Zealand	X	X	X	X	X	X[6)]		Eco-timber
Switzerland	x	x	X[1)]	X[1)]	X[5)]	X[5)]	X[5)]	Q-Swiss Quality Equivalent systems
UK	X	X	X	X		X[6)]		

1) Through PEFC endorsement.

2) Based on the 2003 Danish assessment and the 2006 temporary guidelines of the Ministry of Environment.

3) The MTCC is considered adequate guarantee for legal forest management progressing towards sustainability.

4) LEI alone cannot be regarded as adequate proof of legal or sustainably produced timber.

5) There is the possibility of accepting other labels through consultation with the Purchasing Commission of the Swiss Confederation.

6) Legality only.

is referred to without such limitations in the Japanese policy. The Danish public procurement policy did not consider certificates of the LEI scheme to be sufficient for either sustainability or legality but the Japanese policy recognizes it for both;

- in some of the policies, the process by which the conclusion on schemes was arrived at was not transparent. The CPET procedure in the UK can be considered exemplary in its clarity and transparency and in the extent to which certification schemes could participate in it and provide additional information.[87] Many past assessments have been made based on available documentation only which, in the case of national systems in tropical countries, is not necessarily at the same level as in developed countries;
- many policies are interim or under review and this has created a situation in which goalposts move before they can be achieved by tropical timber producers;
- even though probably designed to allow flexibility, vague provisions concerning 'comparable' or 'alternative' evidence, 'individual specifications' or 'consultations with the importing country authorities' create uncertainty about how, in the absence of a recognized certificate, tropical timber producers are handled;
- in the case of non-recognized certificates, comparability or equivalence with the FSC or PEFC is required (eg by the Belgian and German policies), but the practical assessment of this is difficult. The PEFC's own procedures would be appropriate for an assessment of comparability with it, but experience has shown that their proper application is a major exercise.[88] Given the FSC's integrated nature as a comprehensive certification system, there is no clarity on which of its requirements should be complied with by non-FSC certificates; and
- there are generally no provisions for appeals. This is ironic because the policies tend to require that certification systems have an appeals procedure.

The European Parliament suggested the mutual recognition of the FSC and the PEFC in its resolution on the implementation of the EU forestry strategy (2006), declaring that it:

> Welcomes the efforts of European forestry undertakings to give consumers assurances concerning sustainable forest management which takes account of the multifunctional

[87] Some NGOs have, however, criticized the decision-making procedures of CPET.

[88] See PEFC procedures in Chapter 4.

> role of forests, notably by means of certified wood products; considers the FSC and PEFC certification systems to be equally suitable for this purpose; calls for mutual recognition of the two certification initiatives to be promoted.[89]

In Mexico, the law on public procurement (*Diario Oficial* 2007) makes specific reference to the purchase of wood, furniture and office supplies based on wood raw material. It requires that suppliers provide third-party certificates which ensure the sustainable management of forests from which such products originate; third parties should be registered with the Ministry of Environment and Natural Resources. The law does not specify how sustainability should be defined and there is no national standard for this purpose. The Mexican forest law makes provision for preventive audits (*auditorías técnicas preventivas*), which the national forest authority, CONAFOR, should carry out (either by itself or through third parties) to verify legal compliance. These audits are not, however, linked with the implementation of the procurement law. In view of the lack of a relevant SFM standard, uncertainty about the availability of acceptable timber supply, lack of criteria for the registration of third-party auditors, and lack of a linkage with the existing provisions for forestry audits, it appears that the law would benefit from a revision of its provisions on forest products.[90]

Norway recently adopted a quite different approach. Its new public procurement policy (Box 6.2) refers to the Nordic Swan and EU Flower ecolabels, which are lifecycle-based regional labels used in all kinds of products**.** The worrying aspect of this policy is that it identifies tropical timber as a priority product which, from the beginning of 2008, should not be used in any public property management or building. The policy applies to parastatal companies in charge of central government procurement and is understood as a political and moral appeal and not as a regulation (Abrahamsen, pers. comm.); nevertheless, it is likely to be challenged in the WTO by tropical timber-producing countries. The policy can be interpreted as discriminatory based on the origin of the product and thereby against the WTO principle of non-discrimination.[91] The spread of this kind of policy to other countries could have a devastating impact on the international trade of tropical timber and timber products, be they produced in natural forests or plantations (McClendon, pers. comm.).

It is clear that, due to their differences, the proliferation of requirements for certification systems is a cause of concern for tropical timber producers. The extent to which these differences are truly justified or technically solid for the purpose of ensuring credible certification merits careful consideration by decision-makers and stakeholders because there is a risk that they are, or will become, an unnecessary obstacle to trade. Convergence in the conclusions on acceptability of various certification schemes is also called for, because it would eliminate the need for producers to choose different certification strategies in different markets. In this context, the particular problems of the tropical timber-producing countries in implementing forest certification should be given due attention.

Private sector

Boxes 6.3, 6.4, 6.5 and 6.6 describe the certification-related requirements of four large international companies in direct interface with consumers. Due to their visibility and market power, all these companies are easy targets for NGO pressure. Each company buys (or its suppliers buy) significant volumes of tropical timber and timber products and can therefore exercise significant influence on timber and timber product suppliers. The policies described in the boxes show differing degrees of commitment and detail in terms of its requirements for certification systems.

[89] European Parliament resolution on the implementation of a European Union forestry strategy (2005/2054(INI)).

[90] Another issue is that the law requires all office paper to be produced using a minimum 50% of recycled fibre, which should be bleached through a chlorine-free process. Such paper is not necessarily available in the Mexican market, as users of recycled fibre (often imported waste paper) have no means of verifying whether the original virgin fibre was chlorine-free.

[91] See also Trade Statement at the 40th session of the International Tropical Timber Council on risk of discrimination due to public procurement policies.

Box 6.2 Norwegian public procurement policy

The Norwegian public procurement policy will enter into force on January 2008 and all government institutions shall incorporate it into their internal management systems.

General principles:

1. Products and services must be chosen on the basis of lifecycle costs, quality and environmental properties.
2. Priority must be given to products and services which are energy-efficient and have a low content of hazardous chemicals, low pollutant emissions and low resource consumption.
3. In the case of products for which eco-labelling criteria have been developed (Nordic Swan and the EU Flower labels), these criteria must be applied as much as possible.
4. In the case of services, priority must be given to suppliers with routines and expertise that ensure a low environmental impact, such as suppliers who can document this by using ISO 14001 or the national Eco-Lighthouse Scheme.

Priority product groups

Property management and building, including energy use and tropical timber.

Specific requirements

Property management and building:

- Tropical timber. Do not use tropical timber in any form, either in the building itself or in the materials used during the building period.

Source: Norwegian Ministry of Environment, Norwegian Ministry of Government Administration and Reform, Norwegian Ministry of Children and Equality (2007)

The Kingfisher and IKEA policies are specific and demanding; they differ in both terminology and the performance requirements they set for suppliers. Kingfisher has published a list of requirements for acceptable forest certification systems but IKEA has not made its requirements public. Both companies, however, recognize the FSC as the highest-level scheme. Kingfisher has not published its assessment of schemes against the company's criteria. Both companies apply a phased approach to achieve their (implicit) long-term goal, which is to have 100% of supplies coming from FSC (or equivalent) certified sources. Supply constraints are reflected in the wording of the policies, which, for the time-being, allow entry to the supply chain of other (ie non-FSC) certified products. Neither policy specifies how equivalence with FSC is to be established.

IKEA's policy and requirements contain a number of detailed specifications which tend to exclude tropical timber. Teak, meranti, rosewood and mahogany, for example, cannot be purchased if not certified by the FSC (or equivalent). Some concepts, such as not allowing wood derived from HCVFs, and the plantation cut-off year (ie that wood must not originate from plantations established after 1994 by replacing intact natural forests), are lifted directly from the FSC P&C.

The US-based Home Depot's policy is more generic and less demanding than those of Kingfisher and IKEA. Legal compliance is expected (in the other two companies it is a requirement). The requirements for certification are broad. The policy lists 40 species for which an export permit is required; most are tropical but not listed in CITES, which may represent an implementation problem in supplier countries, where the issuing of export permits for non-listed species is not provided for in the regulations. Home Depot's policy states an explicit preference for FSC certification.

The identification in the IKEA and Home Depot policies of certain geographic areas from which timber is not to be purchased is a cause for concern, particularly if such practice spreads.

The Wal-Mart policy is less explicit, although the intention is clear. All four aforementioned companies share the goal of creating added value to consumers through sustainability while reducing costs, as expressed by Walmart President H. Lee Scott, Jr. (Box 6.6), but without recognizing the damage this could cause to many legitimate tropical timber producers. Another shared goal – to obtain all supplies from FSC-certified sources – will be difficult to achieve in the short-to-medium term.

Box 6.3 Kingfisher's timber-buying standards

In 2005, Kingfisher introduced buying standards for timber to help buyers and suppliers implement its timber policy. These provide detailed guidance on issues associated with timber sourcing, including how to ensure the legality of the timber, avoid controversial sources and purchase timber that is certified.

The buying standards set out three tiers of certification; over time, operating companies are expected to progress upwards to Tier 1. They are:

- Tier 1: Responsible forest certification systems: FSC, or systems independently recognized as equivalent to FSC;
- Tier 2: Schemes in progress towards meeting Tier 1 requirements: schemes with a formal process towards FSC certification, including members of the Tropical Forest Trust; and
- Tier 3: Other third-party certification schemes – forest certification schemes that meet some but not all the Kingfisher criteria.

Kingfisher's long-term goal is to ensure that all timber falls within the three tiers of certification and that operating companies progressively increase the proportion of timber in Tier 1. The target is that, by 2010/11, 75% of timber sold is from sources certified as to be well managed (tiers 1–3) or recycled. At present, 9% of timber sold is certified as well managed (tiers 1–3) or recycled.

Criteria for certification schemes acceptable to Kingfisher are: (i) require SFM standards; (ii) have the participation of representative environmental and social pressure groups; (iii) have transparency in grievance procedures; (iv) require independent and full CoC; (v) set minimum standards required for auditing; (vi) require regular and relevant auditing at forest level; and (vii) are capable of being applied globally or endorsed by a global umbrella scheme. According to Kingfisher, the FSC is the only scheme in Tier 1.

To help prevent the purchase of timber from controversial sources, Kingfisher requires all operating companies to develop an action plan by the end of January 2008 for tracing the country of origin and tree species of timber purchased. Kingfisher has developed red and amber lists of timber and sources to be avoided.

Source: www.kingfisher.com; Kingfisher Timber Buying Policy 2006

Box 6.4 IKEA policy and requirements

The 2006 policy

The long-term goal is to source all wood from verified responsibly managed forests, ie forests that have been certified according to a forest management standard recognized by IKEA. To reach this long-term goal, a staircase model is applied with four levels of minimum requirements for wood material. The policy covers products that contain solid wood, veneer, plywood or layer-glued wood. The four levels are: (i) start-up conditions; (ii) minimum requirements; (iii) compliance with the IKEA 4Wood standard; and (iv) verified responsibly managed forests. At present, only FSC-certified wood is considered to comply with the fourth level.

IKEA's short-term goal is that, by the end of 2009, 3.6 million m^3 (30%) of the wood material used in IKEA products will be certified according to Level 4 and 100% of suppliers are (at least) on Level 2.

The minimum requirements (Level 2) are: the origin of the wood must be known; wood must be produced in compliance with national and regional forest legislation; wood must not originate from protected areas unless felled according to the management plan for the area; wood must not originate from intact natural forests or HCVFs unless certified according to a Level 4 standard; and wood must not originate from plantations established after 1994 by replacing intact natural forests.

Box 6.4 IKEA policy and requirements continued...

All suppliers must have certain routines in place to ensure that the wood used meets the above requirements. Suppliers must know the origin of all wood used, ensure that IKEA requirements are met throughout their supply chains, and accept audits at various links in the supply chain. Suppliers are required to report, on an annual basis, the origin, volume and species of wood used in IKEA products via the IKEA Forest Tracing System.

Levels 3 and 4 require CoC routines and third-party verification of responsible forest management. Level 4 of the staircase model represents a forest management and CoC standard produced through balanced cooperation between social, environmental and economic stakeholders.

2007 supplier requirements

I. Legal requirements

Suppliers must comply with national laws and regulations and with international conventions concerning social and working conditions, child labour and the protection of the environment.

II. Social & working conditions

IKEA expects its suppliers to respect fundamental human rights and to treat their workforces fairly and with respect.

Suppliers must agree to: (i) provide a healthy and safe working environment; (ii) pay at least the minimum legal wage and compensate for overtime; and (iii) in those instances where housing facilities are provided, ensure reasonable privacy, quietness and personal hygiene. Suppliers must not: (i) make use of child labour or forced or bonded labour; (ii) discriminate; (iii) use illegal overtime; (iv) prevent workers from associating freely with any workers' association or group of their choosing or collective bargaining; and (v) accept any form of mental or physical disciplinary action, including harassment.

III. Environment and forestry

Suppliers must agree to: (i) work to reduce waste and emissions to air, ground and water; (ii) handle chemicals in a safe way; (iii) handle, store and dispose of hazardous waste in an environmentally safe manner; (iv) contribute to the recycling and reuse of materials and products; and (v) use wood from known areas and, if possible, from sources that are well managed and preferably independently certified as such. Suppliers must not use wood originating from national parks, nature reserves, intact natural forests or any areas with officially declared high conservation values, unless certified.

Routines for the procurement of wood, bamboo and rattan include, among others, an obligation to maintain records of the origin of all sources of supply, to report on the origin within 48 hours of a request to do so, to implement a forest tracing system, and to separate non-complying wood, bamboo and rattan.

For IKEA products, the supplier shall only use materials that have been produced in compliance with existing laws and legislation and accepted forest practices within the country and/or region from which the wood originates.

The supplier shall not utilize wood from intact natural forests or nationally/regionally recognized and geographically identified HCVFs unless the forest area is certified according to a standard recognized by IKEA.

The supplier shall not utilize wood, bamboo and rattan from protected areas (eg national parks, nature reserves) unless it can be proven that harvesting has been in accordance with management prescriptions for the protected area and/or has been certified according to a standard recognized by IKEA.

The supplier shall not utilize wood from plantations in tropical and sub-tropical regions that have been established after November 1994 by replacing intact natural forests.

The supplier shall only use high-value tropical tree species (teak, meranti, rosewood, mahogany) that are certified according to FSC or other IKEA-recognized Level 4 standards.

The supplier shall ensure that no bamboo or rattan is coming from Myanmar (Burma). Large-diameter rattan canes (above 18 millimetres in diameter) from Indonesia must originate from Sulawesi. Prior to usage, all other sources and species of large-diameter rattans originating from other parts of Indonesia must be approved by IKEA in writing.

Source: www.ikea.com

Box 6.5 Home Depot's wood-purchasing policy

Home Depot will:

i) wherever feasible, give preference to the purchase of wood and wood products originating from certified well-managed forests;

ii) eliminate the purchase of wood and wood products from endangered regions around the world;

iii) practice and promote the efficient and responsible use of wood and wood products;

iv) promote and support the development and use of alternative environmental products; and

v) expects its vendors and their suppliers of wood and wood products to maintain compliance with laws and regulations pertaining to their operations and the products they manufacture.

Wood is considered certified if it has been managed and harvested under strict guidelines and monitored by a third party to ensure sustainable practices are followed. In short, some certified timber can be tracked through its entire journey from stump to shelf.

The company is committed to not purchasing uncertified wood products sourced from the ten most vulnerable forest ecoregions as identified by WWF (eg some areas in the Philippines and Mexico).

The company is also committed to not accepting wood products made from the 40 suspect tree species listed by the World Conservation Monitoring Centre as potentially endangered species, unless the supplier provides an export permit. (Most of these 40 species are tropical.)

In a number of items there is a preference or precondition with a reference to FSC certification.

Source: http://corporate.homedepot.com/wps/portal/Wood_Purchasing

Box 6.6 Wal-Mart's policy on sustainable forests and paper

Wal-Mart plans to introduce a program that will give preference to suppliers who make their products with sustainably harvested wood. Tree farms or forests are required to pass a series of inspections that analyze their harvesting methods before they can be declared a sustainable forest. In doing this, Walmart hopes to eliminate the use of non-sustainably harvested wood from its supply chain.

Statement by Wal-Mart President H. Lee Scott, Jr. (1 February 2007):

"Our goal is to encourage other forest and plantation owners to become certified by the FSC. Eventually, we want to use only sustainable timber and pulp-based products to manufacture our brands. But here is the best part of the story: shifting to sustainable timber has not added one single penny to the price of our tissue. It was a great value before and, by being a socially responsible product, it is an even better value to our customers in the UK. They are able to make an affordable purchase and a sustainable purchase at the same time. I believe we all have an opportunity to approach sustainability this way: to increase the acceptance and prevalence – and drive down the cost – of sustainable practices."

Source: www.walmart.com

In conclusion, a number of concerns related to private-sector policies on the acceptance of forest certification can be raised:

- the many differences in requirements for suppliers and certification systems pose a considerable difficulty for tropical timber producers. This proliferation of requirements may be more serious than the proliferation of certification systems;
- requirements for certification systems are not always transparent and it is unclear how the assessments of compliance have been carried out. The extent to which existing systems in tropical timber-producing countries have been

considered in the setting of these requirements is unclear, since such schemes are not specifically referred to in purchasing policies;

- it is unclear how equivalence with the reference systems (eg FSC and PEFC) should be established;
- the added value of introducing 'own' terms in requirements should be considered carefully, as such terms might represent unnecessary additional costs or other hurdles for suppliers. On the other hand, companies might use these terms on purpose to tie suppliers to the buyer company, thereby strengthening the bargaining position of the latter. This is not to the benefit of tropical timber suppliers;
- there is no alignment between the criteria of public and private timber procurement policies. Since many of the public policies have been legitimized through transparency and the participation of stakeholders, they offer a useful reference point for private-sector policies and a way for companies to avoid costly assessments of certification systems. This would also improve the transparency of private-sector policies; and
- when defining their procurement policies, buyers should better understand the difficulties faced by tropical timber producers in meeting different requirements and, in particular, recognize the need to provide adequate time for producers to adjust production practices and management systems.

Issues related to comparability and acceptance

Proliferation of certification schemes

The timber trade perceives the proliferation of forest certification standards and schemes as a key problem. Kanowski et al. (2000) pointed out that, in the case of this kind of market-based voluntary instrument, (a certain degree of) proliferation is probably inevitable. It can bring benefits by encouraging the development of more efficient and effective approaches, it might lower certification costs for forest operators, and it might also ensure the continuous improvement of schemes. Another potential benefit is that the existence of clear alternatives can better meet the demands of different users and stakeholders and also cater for market niches (eg non-timber forest products), which might not be served by mainstream schemes. Moreover, alternative schemes can spread certification to countries and forests which could not be certified were only one scheme available.

On the other hand, proliferation has been singled as a cause of confusion among consumers. Experience with consumer-product labelling campaigns suggest that for a label to be successful it must have a dominant position in the mind of the consumer. (This argument might be less important in the case of timber and timber products, however, since most of them are not sold to individual consumers.)

Proliferation also poses a dilemma for forest owners and managers, who have to make a difficult choice between alternative schemes (Kanowski et al. 2000). The biggest disadvantage for the distribution channels is the need to stock different labelling brands, which is costly and sometimes physically impossible due to a lack of space. In the wood-supply chain, proliferation also leads to increased emissions when raw materials have to be transported longer distances in order to meet the minimum threshold requirements of certified wood. It is apparent that some proliferation is necessary, but too much of it becomes a hurdle.

Harmonization between certification systems

The forest industry and trade, and others, have frequently called for the harmonization of forest certification systems and standards. For instance, the Trade Advisory Group made a statement at the Market Discussion of the 40th Session of the International Tropical Timber Council, in which it appealed for the international harmonization of standards to facilitate trade in tropical timber. The statement expressed concern about differing standards for temperate and tropical timbers and recommended that certification systems move towards mutual recognition. In the light of WTO rules, other calls have been made for international organizations and governments to work together to the greatest extent possible to support a harmonized approach to certification (Christy et al. 2007).

There are several avenues for the harmonization of certification in the forestry sector: (i) international standards; (ii) the recognition of equivalence, eg through mutual recognition between existing systems; (iii) regional or international cooperation; (iv) the bottom-up harmonization of standards; and (v) unilateral recognition. The FSC represents the first approach and the PEFC the second. As a

bottom-up approach, some countries have developed their certification standards in a way that could meet the requirements of the two international systems.[92] Unilateral recognition would be applied when a system recognizes another system (or parts of it) without mutual arrangements. These five approaches are discussed below.

The **harmonization of standards** is a long process and, in the case of natural resource management (such as forestry), it is unclear how it could be implemented (Rametsteiner & Simula 2003; Eba'a Atyi & Simula 2002). Experience shows that the following aspects can be harmonized at the international level: general principles and descriptive and qualitative criteria for sustainable forest management; procedures for developing national performance standards; management system standards; procedures for conformity assessment; verification of the CoC and accreditation; and guidelines for the use of labels and certificates in market communication. The existing systems have already drawn on the available ISO standards and guides but this has not led to full (or an adequate level of) harmonization (see Chapter 5).

The critical issue is the harmonization of the contents of forest management standards. Equivalence forms the basis of the harmonization of standards, and it can be achieved through either equality of measures or equality of results. The former is not applicable because the national certification standards should suit local ecological and socioeconomic conditions and, without national-level or local-level interpretation, their diversity makes 'global' standards impossible. In the case of the FSC, this approach is applied in the absence of a national FSC-endorsed standard because the local interpretation of the FSC P&C is left to the certification body[93].

There is more hope of achieving equivalence on the basis of equality of results because the focus is on the level of and progress towards the achievement of a common goal – SFM. Because of the ecological and social diversity of country situations, these requirements can best be expressed in comparable, agreed sets of criteria and indicators, which is the approach adopted by the PEFC. In any harmonization process there is always a need to consider trade-offs between the degree of specificity and the level of performance requirements on one hand, and the feasibility of practical application on the other.

In view of the constraints on the international harmonization of forestry standards, the **recognition of equivalence** could be the main avenue for facilitating trade in certified forest products. As they differ – sometimes significantly – because of their location-specific nature, the determination of equivalence has, nevertheless, proved to be a difficult issue. Two sets of conditions need to be fulfilled to achieve such recognition: (i) standards should be equivalent in their objectives; and (ii) the parties must have confidence in the conformity assessment processes and related infrastructure of the other party. This approach is applied in the PEFC scheme and in some public timber procurement policies. If there are no broadly supported relevant international standards, or their completion is not imminent, the recognition of standards and the certification process is the only option. The current situation, which sees several competing systems in the marketplace, indicates that there is no common view on such standards, even though the differences might not be fundamental.

Regional schemes could be another avenue for common action. The experience of the PAFC shows, however, that the weakness of regional institutions (in this case the ATO) can easily become a bottleneck. Effective regional cooperation in forest certification requires special arrangements, which can rarely be provided by existing institutions in the tropical timber-producing countries. There is also a need for a common view on how regional cooperation should be arranged. The lack of a common approach to implementation has slowed regional cooperation in the ASEAN region. Despite these difficulties, regional cooperation would be very useful for countries that want to implement their own national systems but do not have a critical mass of export-oriented production to justify the cost. The *modus operandi* of such cooperation should probably be designed on a case-by-case basis. In Africa, the ATO/ITTO PCI already provides a common framework for national standards; other forms of regional cooperation, such as to develop accreditation and certification services, could also be explored.

[92] Another bottom-up approach is the double certification of an FMU, but this does not lead to the harmonization of the standard or procedures, since the rules of both systems must be applied, either in the same audit (if carried out by a certification body accredited by both certification systems) or in different audits.

[93] The FSC is in the process of developing a generic standard for this kind of situation. The generic standard would be used as a bridging mechanism for certification assessments in cases where a national standard had not been finalized.

Bottom-up harmonization has been successfully implemented in the UK, where the national UKWAS standard has been endorsed by both the FSC and the PEFC, in the latter case as part of the national PEFC-recognized certification system. The FSC's decision involved a special process that has not been repeated in other countries. In order for the FSC to make such an endorsement, its rules must be respected in the standards development process, the contents of the standard must be in conformity with the FSC P&C, and the standard must follow the structure of the FSC P&C.[94] The PEFC requires that the standard development process meets its requirements and that the contents are in conformity with the PEOLG or ITTO reference documents, but there are no rules on structure. It is possible to develop a bottom-up, harmonized national standard by strictly following the FSC rules and ensuring that the provisions of PEFC are also considered. The same standard could be submitted to both systems for approval.

The benefit of this kind of bottom-up harmonized standard would be that, through a single certification process[95], timber and timber products could be sold to clients who demand goods certified under different systems. This is particularly important for timber used as raw material or intermediate product in a variety of end-products, as it would help processing industries to achieve the threshold limits of certified material input under a particular system in order to make market claims.

Inspired by the UKWAS example, standard-setting working groups in a number of countries (eg Croatia, Ghana, Malaysia) have tried to follow this approach. Formal arrangements have not, however, been possible because the FSC does not recognize other certification schemes or standards if they do not meet all the relevant FSC rules. This problem does not arise in the case of the PEFC, which has clearly defined rules for the endorsement of national schemes.

The unilateral recognition of one certification scheme (or elements of it) by another has risks, because it might convey to the market and stakeholders the message that the 'recognizing' scheme is the weaker of the two. Unilateral recognition was applied in a modest way by the PEFC and the MTCC, which identified FSC certification as an indication of low risk that timber was from a controversial source. Were such an approach applied to FSC-certified wood in general, it would represent unilateral recognition of the whole scheme.

As explained in chapters 4 and 5, certification schemes have tended to converge in recent years, driven by criticism from stakeholders in the industry and trade and, more recently, by public timber procurement policies, which have created the need for formal mechanisms by which equivalence between schemes can be recognized. The process is far from complete. From the viewpoint of tropical timber-producing countries, mutual recognition within the PEFC framework requires the establishment of fully-fledged national certification systems. Seeking recognition in public timber procurement policies on an individual basis has proved problematic, and an additional hurdle is the investment needed to establish the brand of the national system in the international marketplace. The bottom-up harmonization of standards is also feasible; it offers exporters the flexibility to supply timber under different international labels depending on demand. It also allows the commencement of the national standards development process without taking a decision on which international system to apply during implementation.

Compatibility of forest certification with trade rules

The key principles of the General Agreement on Tariffs and Trade (GATT) are non-discrimination and equal treatment of suppliers (national treatment). The TBT Agreement defines the general rules for applying technical regulations and standards for internationally traded products and services. Public procurement is not covered by the TBT Agreement because it is subject to the WTO Plurilateral Agreement on Government Procurement (GPA), which is binding for its signatory countries only.[96] The general WTO principles of non-discrimination and national treatment are central to the GPA, which also builds on the principle of transparency (WTO 2006).

The key contentious issue related to the trade in forest products in general, and thereby also to forest certification, is how the requirements of legality and SFM can be applied within the international legal

[94] The other requirements of the FSC (see Chapter 4) must also be respected.
[95] Assuming that the certification body is accedited by both the FSC and a national accreditation body.
[96] Including the EU, Canada, Hong Kong China, Iceland, Israel, Japan, Korea, Liechtenstein, Norway, Singapore, Switzerland and the US.

framework of non-product-related PPMs.[97] The PPM issue has been debated for years in the context of voluntary eco-labelling and single-issue environmental certification, including of forest products. There appears to be a common view among WTO members that product-related PPM requirements are covered by the TBT Agreement, but there are differing views on the application of non-product-related PPM (environmental and social criteria) when it comes to, for example, requirements for certification systems in public procurement rules. Voluntary certification schemes are likely to be compatible with GATT, however, if they are not discriminatory and if foreign producers are able to participate in these schemes.

The GPA allows parties to implement measures to protect human, animal or plant life or health. Such measures, however, should not be used as a means of arbitrary or unjustifiable discrimination, or a disguised trade restriction on international trade (Article III). A GPA party may apply technical specifications to promote the conservation of natural resources or protect the environment (Article X). In this context, the GPA text does not mention social aspects. In prescribing the technical specifications for the goods and services procured, a procurement entity shall, where appropriate, base the technical specification on international standards, where such exist (Article X). However, the entity is not allowed to require or refer to a particular trademark or specific origin unless there is no other sufficiently precise or intelligible way of describing the procurement requirements and provided that, in such cases, the entity includes words such as 'or equivalent' in the tender documentation. How such equivalence between forest certification schemes is or should be established is unclear but will have to be addressed (in the case of the Belgian and German timber procurement policies, for example).

The GPA draws on the WTO's general principles on non-discrimination and national treatment but it also clarifies, to a certain extent, how forest certification as a requirement and selection criterion could be applied during the public procurement process. The GPA embodies the views of WTO members that labelling schemes can be economically efficient and useful for informing consumers, and tend to restrict trade less than other methods if such schemes are voluntary, allow all sides to participate in their design, are based on the market and are transparent. On the other hand, environmental requirements can impede trade and even be used as an excuse for protectionism. The answer is not to weaken environmental standards but to set appropriate standards and enable exporters to meet them.

The GPA recognizes that it is essential to involve developing countries in the design and development of environmental measures so that the measures do not unnecessarily impede trade. In addition, the GPA has provisions to facilitate developing countries in accessing public procurement in signatory countries over a period of three or five years and also to allow a price preference program or an offset.

Of relevance to the issue of forest certification is the recent discussion in the WTO's Committee on Trade and Environment[98] on organic agriculture. Members raised concerns about the problems faced by producers due to the proliferation of government regulations and private voluntary standards in the market, the lack of international standards, and the high cost of multiple inspection, certification and accreditation requirements. The importance of providing for smallholder group certification, as well as multilateral solutions on harmonization, equivalency and mutual recognition were emphasized.

In conclusion, the SFM and CoC certificates of voluntary programs may be used for demonstrating compliance with requirements of legality and sustainability. On the other hand, bidders should also be allowed to use other means, such as self-documentation and declaration. It is unclear the extent to which, or in what situations, the contracting authorities may require bidders to submit additional proof in the form of a test/certification report by a 'recognized body'. Further work is required in timber procurement policies to use forest certification schemes as a reference and to define acceptable alternative proofs.

Inclusion of social criteria

Forest management standards

From a legal point of view, there is a lack of clarity about the inclusion of social criteria in the requirements of public timber procurement policies. On the other hand, social aspects are inherent to the concept of SFM and therefore are included in one

[97] Other issues subject to debate include the international and national standards that can be referred to, standard-setting processes, and their organization through a 'recognized' body (eg CIEL 2006).

[98] May 2007.

way or another in all forest certification standards. After careful analysis, the UK opted not to include social and ethical criteria (although this is under reconsideration).[99] In contrast, the Danish government has included two social criteria in its definition of legal timber.[100] In addition, the criteria for SFM include socioeconomic, cultural and spiritual components.[101] The Dutch BRL requirements also include social criteria. When references are made in other countries' policies to specific certification schemes (all schemes cover social aspects in their standards), there is a likelihood that, by default, social aspects are also covered.

In the EU, guidance on the integration of social considerations in public procurement policies was given in a 2001 European Commission Interpretative Communication.[102] It identified three principles for the inclusion of environmental or social criteria in public procurement: (i) non-discrimination (the tender cannot be formulated in a way that excludes, directly or indirectly, tenders from potential suppliers); (ii) transparency (specifications must be measurable and objective); and (iii) appropriate technical specifications (the tender can integrate environmental and social elements when the definition of the subject matter of the contract and technical specifications are established).

Social considerations cover compliance with: fundamental rights; the principle of equality of treatment and non-discrimination (for example, between men and women); national legislation on social affairs; and with European Commission directives applicable in the social field. The concept also covers preferential clauses (for example, the reintegration of disadvantaged or unemployed persons, and positive actions or positive discrimination in particular with a view to combating unemployment and social exclusion).

Some parties see the inclusion of social criteria as permissible as long as it is done in a transparent and timely manner and as long as the criteria are objective, satisfy the principles of transparency, non-discrimination and equal treatment, and guarantee that tenders are assessed in conditions of effective competition when they deal with fundamental rights as identified in relevant international conventions. It has also been suggested that social criteria could be presented as environmental criteria (van den Biesen 2006). There is clearly a need to clarify the treatment of social aspects in timber procurement policies; the position that forest certification deals with them under environmental criteria is unlikely to be defensible.

More generally, this review of existing sets of standards for SFM reveals that they can be incomplete, imprecise and even inconsistent. Standards cover biological aspects such as biodiversity and soil and water in great detail but often neglect or deal superficially with the functions of forests in society and the social conditions necessary for the continued existence and sustainable management of forests. Issues relating to the workforce and social aspects need to be addressed more fully in order to redress the current bias towards ecological and sometimes economic functions. Several avenues should be pursued, including codes of forest practice, forest policy fora such as the regional processes, and voluntary initiatives such as certification. For the latter two, consistency, harmonization and minimum standards are desirable. Much of the ground can be covered by using ILO's fundamental conventions to define criteria and indicators and to serve as references for threshold values and verifiers (Poschen 2000).

CoC standards

Social improvements induced by certification in the forestry sector have been limited to forest operations, but many social problems also exist in the processing industry, particularly related to workers' rights, occupational safety and health, and child or forced labour. The Building and Wood Workers International recently launched an initiative to include the assessment of social standards in CoC certification audits. If adopted widely, this would be a well-justified and significant change, with important implications for certification as a tool for promoting social sustainability in the timber sector. In practice, it could mean the inclusion of the provisions of the fundamental ILO conventions in CoC assessments. This approach has already been adopted by the PEFC in its minimum requirements for forest management standards and by the FSC in its policy guidelines (FSC-POL-

[99] However, it was considered legitimate to require that forests be managed in sustainable ways that may also have consequences for social well-being. CPET's criteria for acceptable certification schemes also include some social aspects (Criterion 1.1.1).

[100] Lack of compliance with two of the social provisions – the neglect of the rights of forest workers concerning wages and working conditions, and not respecting the traditional rights of the local population – results in the timber being considered illegal.

[101] In the background material to the Danish Environmental Guidelines for Tropical Timber.

[102] CEC 2001.

30-401). The MTCC has already made provision for assessing compliance with two of the ILO conventions as part of CoC certification.

The PEFC is already considering the inclusion of social standards in CoC (Gunneberg, pers.comm.) and the FSC General Assembly in 2005 decided to commission a feasibility assessment on the subject. To avoid the creation of different rules and procedures, certification systems would ideally cooperate with each other in this work. This is particularly important because of the substantive and practical issues that must be considered in implementation, including: (i) the scope of the social criteria and their interpretation in country conditions; (ii) the need for adjustment of certification procedures; and (iii) the need for inclusion of necessary competence in the audit team. Moreover, cost impacts need to be clarified as well, and the need for cooperation at the international level during the development and implementation (if the idea is found to be feasible) should also be explored.

Including social parameters in CoC would raise trade rule-related issues similar to those raised with respect to forest management standards, probably even more strongly because this would be a new application for certification systems working in the forestry sector. ITTO, together with FAO and the ILO, could facilitate the process by offering a neutral platform on which to explore implementation options.

7. Forest Certification as a Governance Tool

Regulation and forest certification

Despite being a voluntary, market-based instrument, forest certification has clear linkages with the regulatory framework. Many governments in tropical countries are sensitive to negative publicity related to the management and harvesting of their forests. Certification is seen as an initiative to shift power from government to other stakeholders (Cashore et al. 2006) and is one reason why governments have taken steps to establish technical and regulatory tools to support SFM. In Gabon, for example, such tools were introduced after the failure of the first certification assessment (Leroy Gabon), which cast doubts not only on the credibility of the regulatory system to ensure SFM (Eba'a Atyi 2006) but also on the suitability of certification as an instrument in African forests (Lescuyer 2006).[103]

A number of countries have made specific legislative provisions for forest certification, since less oversight by forest authorities is needed for certified timber companies (which must have internal and external auditing procedures in place). Peru provides for the registration of certification bodies and offers participating concessionaires a 25% reduction in forest fees and exemption from official inspections. Costa Rica and South Africa have adopted, or provided for, SFM criteria and indicators as the basis of a certification system; in South Africa, breaching these might also be an offence. The Bolivian forest law states that third-party certification can serve as a substitute for governmental audits of forest concessions (Christy et al. 2007). In Guatemala, annual audits are required by law in the concessions located in the Maya Biosphere Reserve. Mandatory forest certification that requires annual audits was considered crucial to reducing the incidence of political interference and corruption there. Stakeholders agreed to this approach during the legislative drafting process but they had little knowledge of the practical implications of forest certification (Carrera Gambetta et al. 2006).

In Brazil, law enforcement regulations introduced over the last few years on the use of native and plantation forests have favoured forest certification, particularly Law 11.284 of 2 March 2006 on forest concessions. This law considers certification as a criterion for the selection of concessionaires, together with: environmental impact; direct social benefits; efficiency of operations; and value adding to products and operations. The Brazilian Forest Service considers certification to be an additional guarantee that the above aspects are fully taken into consideration and that this would reduce the need for monitoring and thereby government supervision costs.[104] In Indonesia, the government supports voluntary certification by allowing certified FMUs to determine their own annual harvesting plans, while the non-certified FMUs are closely supervised and their annual plans need to be approved by government. Certified FMUs are also allowed to harvest ramin (*Gonystylus bancanus*), a species listed in CITES Appendix II, with intensive monitoring by the Indonesia Science Institute. In addition to these examples, other countries (eg Mexico and Russia) also refer to forest certification in their national forest legislation.

Governments providing voluntary certification in their legislation have established a clear link between their national regulations and international criteria for forest management (such as FSC P&C, ITTO C&I, etc). This is highly desirable in order to avoid the imposition of parallel criteria on FMUs and to reduce the risk of confusion among forest owners and managers.

In addition to government supervision of logging activities, the regulation of timber transport, processing and trade has traditionally been used as a tool to address illegal logging. Transport permits and the official marking of timber are common means of tracing the origin of logs. These systems have proved to contain loopholes and, in various countries, new measures such as the licensing of timber transportation vehicles, timber traders and processors, requirements for internal record keeping, and multiple inspections, have been introduced. More recently, geographic information and global positioning systems and the computerized cross-checking of license databases have proved useful. Despite being more sophisticated than paper-based systems, however, these measures are still prone to fraud, albeit to a lesser extent. To obtain reliable results from a paper-based system requires tight

[103] See also country case studies on Congo, Gabon and Ghana (annexes II, III and IV).

[104] See country case study on Brazil (Annex I).

cross-checking of logger, trader and processor records and the tabulation of forest inspection and permits, road checks, final inspections, and surrendered documents. Only very few of the traditional forestry bureaucracies can do this (Christy et al. 2007). Therefore, CoC audits under forest certification are potentially very useful in complementing government control systems.

Many certified FMUs and COC certificate holders have also certified their environmental or quality management systems under ISO 14000 or 9000 standards. These require that producers keep internal records demonstrating compliance with certification standards or, where problems occur, documenting efforts to restore compliance. These records are also fundamental to forest and CoC certification audits. It has been observed that forest administrations can use such records in enforcement proceedings to show violations of national laws, which could discourage enterprises from engaging in certification. To address this issue, special legislative provisions may be needed (Christy et al. 2007).

In conclusion, the potential of forest certification to help address illegal logging and trade will depend on the robustness of certification systems with regard to fraud and corrupt influences. Illegal logging is prevalent in many countries in which certification is being implemented. On the other hand, experience has shown that certification is unlikely to be effective as a carrot without "sticks" (and without governance preconditions to generate a supply of sustainably produced products) (Richards 2004). In fact, certified, legally operating FMUs are at a disadvantage due to the additional costs they have to bear to comply with both national legislation and the requirements of a certification standard. "Governing through markets" using certification and associated labelling as the key instrument (Cashore et al. 2004) can therefore be seen as a complementary element of the policy toolbox for SFM in the tropics, but it cannot replace regulatory control. Moreover, the regulatory framework should be designed in such a way that it provides tangible incentives for certified FMUs.

Verification of legality and certification of sustainability

All the forest certification standards require or imply compliance with a country's legal requirements. In practice, if the legal requirements are not explicitly included in the standard, or if the government has not specified such requirements (which tend to be scattered in legislation and other regulatory instruments), the verification of legal compliance remains at the discretion of the certification body. In many cases, verifying a lack of evidence of violations of the law is deemed sufficient (Pinto de Abreu & Simula 2004). This approach might be considered satisfactory in countries with strong enforcement agencies and/or well-established traditions towards the rule of law, but major concerns arise when it is applied in countries where illegal logging is prevalent.

The FSC's Principle #1 deals with compliance with the law, but what it means by 'legislation' remains to be defined in the national context, either in the national FSC standard, if it exists, or in the generic standard applied by the certification body. In practice, auditing is a fairly short process and therefore extensive efforts to verify legality are rarely possible. This might be one reason why the FSC P&C document states that perfection is not required in the auditing process.[105]

The PEFC's generic reference document for endorsable standards (PEOLG) defines the scope of legal compliance in that system.[106] With regard to tropical forests, the PEFC recognizes the ITTO C&I, the respective ITTO Guidelines, and, in the African context, the ATO/ITTO PCI (ATO/ITTO 2003) as applicable reference documents for tropical forests. In the ITTO C&I, relevant provisions are included in *Indicator 1.1: Policy, legal and governance framework*. In the ATO/ITTO PCI, Criterion 2.1 requires that forest management complies with the national policies and legislation in force in the country; this includes all local and national laws as well as all administrative requirements such as the payment of taxes, royalties and other fiscal payments established by law. The auditing guidelines explicitly require that relevant national and administrative requirements from forest codes, environmental legislation, labour codes, land tenure legislation and fiscal laws, etc, are listed and their auditing is carried out (ITTO/ATO 2005).

[105] The introductory section in the FSC P&C.
[106] Criterion 6.

International concerns about the extent and impacts of illegal logging have led to a series of initiatives to address the problem; strengthened enforcement and the verification of legality have become key tools. Both are synergistic with forest certification, which has a general requirement for legal compliance and independent third-party auditing as a measure of verification. In addition, it is generally perceived that legal compliance can be the first step towards the full certification of SFM (Pinto de Abreu & Simula 2004). Both independent verification and SFM certification require clarification on which legislation is relevant, and both involve some form of auditing, which in both cases can be made by third parties even though legal compliance is usually verified through government systems.[107] Both approaches require the tracing of timber and timber products throughout the CoC and often also involve the same problems of keeping uncertified/unverified timber separate from certified/verified goods. Both rely on the same information systems and can apply the same technological solutions for timber tracking (eg Lounasvuori & Sheikh Ali 2006).

But there are also important differences between certification and legality verification: (i) there is an overlap in requirements but the scope of the latter is narrower; (ii) the verification of legality tends to involve greater depth in the assessment of compliance than does certification (see above); and (iii) legal compliance is mandatory, while meeting the certification requirements is voluntary. As a consequence, all operators must comply with the law, not only those who want to make market claims on the origin of their products and the quality of their forest management.

When an independent third party is employed to verify legality at the FMU or industrial plant level in cases where the government system is insufficiently reliable, there would be a strong case to integrate the two types of assessments.[108] This would be cost-efficient (avoiding multiple audits), it would facilitate the communication of claims, and it would also be compatible with market requirements related to legal and sustainable timber. These aspects have also encouraged governments in some tropical timber-producing countries to use voluntary certification as a complementary tool in implementing their forest policies.

[107] In some cases (eg Ecuador, Bolivia, Cameroon and Cambodia), the verification of legality (or part of it) has been outsourced to the private sector.

[108] SFM certification through a phased approach, if needed.

On the other hand, there are also arguments for keeping the two instruments separate. The legitimacy of national governments as custodians of their natural resources and regulators of their utilization could be undermined by the use of independent accreditation and certification bodies that have different accountability from government agencies. The sovereignty issue has been raised in the context of independent international accreditation bodies like the FSC. There are also other, less fundamental concerns, such as the quality of verification audits and potential conflicts of interest for the service providers involved in verifying legality and certification (Box 7.1). Combining the two could also have negative impacts on small-scale producers and the forest-dependent poor (Brown & Bird 2007). In one way or another, such issues have been associated with forest certification from the beginning. With the exception of potential new conflicts of interest induced by legality verification, they can probably be addressed satisfactorily through appropriate system design.

The final analysis of how to make use of the synergies between the verification of legality and the certification of SFM will be done by the tropical timber-producing country governments. As certification can only attract those enterprises that want to make market claims, which is often only a minority of all forest operators, in most cases the two approaches will have to be implemented in parallel. The synergies merit careful consideration, because complex supply chains are difficult to control through mandatory measures. In addition, for governments, certification is a potential way to reduce bureaucracy and minimize budgetary implementation costs. Institutional separation is likely to be needed in all situations, even though there would be parallel complementary implementation (Brown & Bird 2007). Much will depend on how certification schemes and certifiers develop their provisions and procedures for the verification of legal compliance and how the above-mentioned issues are addressed.

On the other hand, there is also a risk that the current attention given to addressing illegal logging through verification (eg within the context of EU FLEGT Voluntary Partnership Agreements) will divert the attention of tropical timber producers from sustainability to a lower level (ie legal compliance). Therefore, it is advisable to keep sight of the goal of SFM and, when the market demands it, its verification through certification. This calls for an integrated

Box 7.1 Problems of conflict of interest in forest certification

Seven sources of potential conflict of interest have been identified and are of major concern to stakeholders. These include: (i) the dependence of certification bodies on the client for income, which can influence certification decisions; (ii) the provision, by the same body, of consultancy services and conformity assessment might influence the assessment process to maximize revenue of the certification body; (iii) accreditation as part of the standard-setting/scheme governance, ie the situation of the certification body being assessed by the accreditation body; and (iv) the participation of the certification body in standard setting/scheme governance. This problem might arise when the certification body is developing its own generic standard, which could lead to lower standards in order to gain additional clients; (v) the advocacy role of some accreditation and certification bodies may influence their decisions and rules; (vi) sensitivity to external and internal pressures, which can be a problem when some scheme supporters (eg NGOs, funding sources or key participants) exercise undue influence on accreditation or certification decisions; and (vii) the competence of key personnel and individual conflicts of interest might influence the decisions, particularly in countries where only a small pool of competent assessors exists (Proforest 2005). All these sources of possible conflicts of interest are found in the realm of forest certification and (i) (ii) and (vi) could arise in the context of independent legality verification.

The sources of conflict of interest (i), (ii), (vi) and (vii) appear to be generic and could be raised in the context of any forest certification scheme. For certification schemes operating as part of national conformity assessment systems (eg CERLFOR), these issues are managed through the relevant ISO Guide (ISO 17011), on which PEFC-endorsed systems also rely by requiring the accreditation of certification bodies by national accreditation bodies. Conflicts of interest of types (iii), (iv) and (v) have been raised in the context of the FSC, which has taken a number of measures to address them (eg the separation in 2006 of accreditation services from the other roles of the FSC).

Source: Proforest (2005)

approach in which the synergies between the two instruments are fully capitalized.

The issue is partially addressed through the exclusion of controversial sources from the wood intake of products certified under the two international schemes. This is not, however, sufficient to meet market demands and therefore there should also be a way of making positive claims on the legality of timber supplies in tropical timber-producing countries. Some private certification bodies (eg SGS) already provide services for this purpose but there is a need to develop common approaches which could be mainstreamed under existing and emerging certification schemes. One option is to include the issuance of attestations of legal origin and legal compliance of forest management within the structure of the certification schemes. The current CoC standards are adequate for making claims on the origin of timber and timber products and they would only need a minor adjustment to include a new category of products in the certification procedure.

For compliance with relevant national laws, an international framework standard or similar instrument could be developed to serve as the basis for assessing the legality of forest management. It is also possible that competency requirements will have to be designed for the auditors. Competing certification schemes have common interests in this field, which would justify a cooperative approach. In addition, a harmonized approach to meeting market demands for 'legal' timber, would be highly desirable in order to avoid controversies that have negatively affected progress in certification.

8. Appropriateness of Certification Standards and Systems

This chapter reviews the appropriateness of forest certification standards and systems based on the results of country case studies, differences in the on-the-ground impacts of certification standards, and the particular obstacles faced by community forests and smallholder private forest owners.

Country-level assessment

For the purpose of this study, six country case studies were carried out with the objective of assessing the appropriateness of active certification systems in the conditions specific to each country.[109] Table 8.1 presents a summary of the assessment. The following country-level observations have been singled out concerning limitations and issues:

Brazil

- Forest management: for legal and institutional reasons, the FSC's strict requirements for land tenure have been problematic. CERFLOR has separate standards for plantations and natural forests. Companies have difficulties in obtaining government approval for forest management plans (inefficiency of bureaucracy).
- Economic: SMEs are likely to have similar limitations under the FSC and CERFLOR.
- Social: due to the rainy season in natural forests, the permanent employment of logging workers is difficult to arrange; workers are often not from the local community. Large FMUs attract the attention of social movements. FMUs have limited interface with local communities. Only eleven community forests are certified under the FSC and none under CERFLOR.
- Environmental: the FSC's requirements for the monitoring of flora and fauna have created significant costs due to the use of outside experts; justification of some requirements for corrective action has not always been felt appropriate by FMUs.

Congo

- Forest management certification is appropriate in large concessions but not in small concessions, which often lack a long-term management approach.
- The economic feasibility of certification depends on it generating additional revenue.
- Social: there is a need to clarify access and use rights in legislation/concession agreements.
- Environmental: SMEs are unable to meet certification requirements.
- Institutional: local institutions have insufficient capacity to develop a national certification scheme.

Gabon

- Economic: the cost of upgrading forest management will be relatively high for SMEs. Large concessions also face significant additional costs.
- Social: both the FSC and PEFC systems have the potential to improve working and living conditions for workers: the FSC's social criteria are not adapted to Gabon. No certification system considers wage differentials between local and expatriate staff.
- Environmental requirements are not adapted to small concessions, where they should favour labour-intensive techniques. The FSC's HCVF concept appears difficult to apply in Gabon.
- Institutional: accreditation services must be arranged from abroad.

Ghana

- Forest management: off-reserves have no sustainable management planning and are often converted to other land uses.
- Economic feasibility requires cost-competitive, locally-based certification bodies and a price premium to help pay additional compliance costs.
- Social: legal reforms are required to provide access rights to local communities.
- Environmental: capacity-building in the SME sector is required as well as engagement of the Environmental Protection Agency.
- Institutional: regulations should be adjusted to allow forest management planning by private bodies and to separate the Forestry Commission functions of management and regulation in production forests.

[109] See Annexes I–VI.

Indonesia

- The LEI system is complex but comprehensive and, in general, well adapted to local conditions.
- Forest management: gaps in the demarcation of FMU boundaries is a problem in the application of the FSC; another general problem is the lack of updated standard operating procedures for road construction. LEI has separate standards for natural forest and plantations and an operational system for phased approaches.
- Economic: the lack of a long-term vision in the regulatory framework provides an inadequate basis for the economic sustainability of FMUs.
- Social: provisions for full access by and support to local communities for the use of non-timber forest products in concession areas is a problem in auditing under both systems. LEI's provisions are location-specific and address a variety of social situations. LEI has a special set of standards for community forests.
- Environmental: there is a lack of local capacity to implement the FSC's HCVF concept; LEI's requirements are location-specific.
- Institutional: LEI acts as both accreditation body and standard-setting body.

Malaysia

- Forest management: MTCC audits have indicated problems in evidence on the implementation of forest management and harvesting plans and on guidelines and the implementation of forest road planning.
- Economic: locally based support services and auditing make certification cost-competitive.
- Social: there is concern about transparency, participation and particularly Indigenous customary rights.
- Environmental: impact assessments are conducted at the annual harvesting unit level, not for the FMU as a whole; this is a limitation for the MTCC. There is a need for regulation on the scope of environmental impact assessments in forest management.
- Institutional: the MTCC is in the process of converting itself into a national governing body.

Conclusions

Based on this largely subjective assessment, the following conclusions can be drawn:

- All the schemes suffer from inadequate regulatory and institutional conditions that should be addressed.
- National schemes are, by definition, adapted to local conditions, but they have other problems of appropriateness that need to be addressed.
- Experience in four countries suggests that it is possible to implement FSC certification, but the strict performance requirements of the P&C pose a number of limitations in tropical timber-producing countries.
- There is clearly a need to develop national standards in all countries, independent of the system applied.[110]
- Separate standards for natural forests and plantations at the national level appear to be well justified.
- Differentiation by FMU type and social category improves local appropriateness but, as suggested by the Indonesian experience, it also involves trade-offs because of the need to organize local or regional multi-stakeholder forums.
- There is a general problem of the appropriateness of all the systems for SMEs, smallholders and, with the exception of LEI, community forests.
- Only LEI has a formal procedure for a phased approach, which reduces the barrier of entry to certification.

[110] The recently published voluntary guidelines for the responsible management of planted forests would be a useful reference document for this purpose (FAO 2006).

Table 8.1 Appropriateness of forest certification systems in selected ITTO producer countries

Indicator	Brazil	Congo	Gabon	Ghana	Indonesia	Malaysia
Certification system/standard						
National	CERFLOR	-	PAFC-Gabon	-	LEI	MTCC
FSC national initiative	Yes	-	Yes	-	-	-
Certified forests ('000 hectares)[a]						
National scheme	763	680b	1,1861[b]	-	1,107	4,731
FSC	4,762	296	-	-	739	72
Institutions						
National accreditation body (IAF)	INMETRO	-	-	-	LEI	DSM planned to be involved
National certification bodies	Yes	-	-	-	Yes	Yes
Assessment of appropriateness[c]						
FSC						
Forest management	Largely appropriate	Appropriate in large concessions, not in SMEs	Appropriate in large FMUs	Appropriate in on-reserves but not in off-reserves	Yes	..
Economic	Limited in small FMUs	Appropriate with limitations	Limited in small FMUs	Appropriate with conditions	..	..
Social	Appropriate	Appropriate with preconditions	Largely appropriate	Appropriate with preconditions	Appropriate with some limitations	..
Environmental	Appropriate	Appropriate	Appropriate in large FMUs, limited in small FMUs	Appropriate	Appropriate	..
National system						
Forest management	Appropriate	..	Appropriate in large FMUs, limited in small FMUs	..	Appropriate	Largely appropriate
Economic	Appropriate	..	Appropriate in large FMUs, limited in small FMUs	..	Appropriate	Appropriate
Social	Limited in community forests	..	Fairly appropriate in large FMUs but inappropriate in small FMUs	..	Highly appropriate with some limitations	Appropriate with some limitations
Environmental	Appropriate	..	Fairly appro-priate in large FMUs but inappropriate in small FMUs	..	Appropriate	Appropriate
Institutional	Appropriate		Under development	Inadequate local conformity assessment institutions	Appropriate but still evolving	Appropriate with planned revisions

[a] As of June 2007

[b] Validation against Keurhout requirements

[c] Assessment based on the country case studies

Source: Annexes I–VI

Impacts on the ground

There has been a lot of debate about whether the different certification standards and systems lead to different impacts on the ground, and the views differ. Most studies have been based on documentary analysis of the standard requirements, a methodology which has inherent limitations in this context because it does not reveal how standards are interpreted in practice. Another approach has been to look into the corrective action requests of certification audit reports, but this also has inherent limitations (see Chapter 5).

In a recent study comparing standards related to biodiversity, Marjokorpi and Salo (2007) found significant differences in the extent to which standards can ensure biodiversity management in plantation forests. This analysis covered the ITTO guidelines for plantation forests, CERFLOR, CERTFLOR, the FSC and LEI. The results (see summary in Appendix 14) indicate that some elements of biodiversity are covered fairly comprehensively, while others are ignored or receive only minimal attention. The study emphasized the need to differentiate standards and guidelines between plantations and natural forests. Location-specific standards are particularly called for in natural forests, where the variety of operating environments is even greater than in the case of plantations. This is compatible with an earlier conclusion on the harmonization of forest management standards (Chapter 6).

A comparative analysis of forest management in the Amazon and Congo Basin forests, including in certified FMUs, revealed a number of valuable observations on regional differences concerning the appropriateness of forest certification systems. In certified natural forests in Brazil[111], it was observed that there was no long-term or medium-term vision in forest management planning. Even the cutting cycle was not always defined. There was a lack of information, for example, on how the forest would look 8–10 years after harvesting. Several other key questions also remained unanswered, possibly because of a lack of long-term data on the ecological effects of harvesting. This is quite different from the African concessions surveyed, which had well prepared forest management plans that showed a good understanding of these issues, thanks largely to extensive research carried out over several decades (Cassagne 2005).

[111] The FMUs analyzed were certified under the FSC.

On the other hand, the analysis found that environmental and social aspects were well covered in the Brazilian standards and the working conditions and workers' accommodation were duly taken care of in the certified natural forests studied. Forest workers were provided with all necessary services. This was not the case in Africa, where the company was expected to meet the social needs of both the workers and their families. Compared to the Congo Basin, there is often much less population pressure in Brazilian forests. This is why the costs of social management in certified forests in Africa tend to be much higher than in Brazil. Another difference is that, in the absence or limited availability of public services in Africa, concession enterprises frequently play (and are expected to play) a major role in community development. This extends the role of the industry beyond its mandate, which can lead to a number of problems and even conflicts of interest in social relations (Cassagne 2005). The industry should not be expected to substitute the services of government because it can lead to socially and politically undesirable outcomes. These differences should be considered in the national standards of different certification systems.

There is a need for more objective research concerning the on-the-ground positive and negative impacts of certification at the FMU level (eg Ozinga 2004). Any comparative studies should be designed to obtain defensible results that can guide future periodic revision of forest management standards.

Certification of community forests

A significant share of forests in ITTO producer countries is under community tenure or management and this share is expected to increase (White & Martin 2002). It is therefore important to examine the appropriateness of forest certification in these forests. The FSC and LEI are the only certification systems which, for the time being, have been able to certify community forests in tropical timber-producing countries. These forests represent 9.3% of the total FSC-certified area in Africa, Asia-Pacific and Latin America and the Caribbean combined. In 2007, the 61 certified community forests covered a total area of 1,242,600 hectares, of which more than 80% were located in Mexico and Guatemala (Table 8.2). This can be considered a significant achievement, since, with the exception of LEI (which has only recently completed its standards for community forests) no other certification schemes have certified

community forests in the tropics. LEI has certified five FMUs, with a total area of 5,223 hectares, but their experience is still incipient.

An examination of FSC data reveals that, with the exception of Mexico and Guatemala, there has been little or no recent growth in certified community forests. In three countries where there were certified community forests in 2002, there was none in 2007. This was compensated by newly certified community forests in four other countries. In Mexico, the number of certified community forests more than doubled, to 44[112], but elsewhere there was a net increase of only two certificates. Ten countries have certified community forests but only Mexico and Guatemala have more than two (Table 8.2). In fact, outside Latin America, community forestry certifications have been isolated cases, mostly funded by donors for reasons other than export market access. This clearly shows that there are important barriers to the certification of community forests that the existing certification systems have been unable to address. Of those countries with certified community forests, only Bolivia and Brazil have approved national certification standards, which indicates that their role might not be fundamental for advancing community forest certification. The lessons of the leading countries can help guide measures to accelerate certification development elsewhere.

Community forestry enterprises have a number of common features with implications for achieving SFM and forest certification. These include: (i) informal and limited management capacity; (ii) low production, often at a small scale; (iii) low mobility and inefficient use of capital; (iv) sporadic activity with seasonal variation influenced by other activities; (v) poor physical accessibility due to their often remote locations and poor roads coupled with limitations to electricity supply; and (vi) a lack of supportive policies and inefficient government support (Bass et al. 2001, Molnar et al. 2007). However, the main barriers to certification are often related to a lack of involvement of community forestry enterprises in international trade, regulatory barriers to community use, and barriers to community enterprises in general.

The costs of compliance and auditing are relatively high for community forestry enterprises, partly because of weaknesses in their management systems and therefore a low capacity to provide the necessary documentary evidence. Certification audits generally provide a lack of reasonable time to implement required changes, and there is a lack of financial resources to introduce less harmful technology, a lack of capacity to meet customer quality, delivery and other commercial conditions, and high operational costs associated with low productivity. In addition, certification auditors have lacked an understanding of community operations, which has led to undue rigour in assessments. This, in turn, has resulted in unrealistic corrective action requests related to ecological and other costly studies and inventories as well as comprehensive management plans for SLIMFs (Markopoulos 2003a). Investments in such undertakings are only rarely priorities in community development.

On the other hand, the market and other benefits are often insufficient to encourage certification, although in some cases very high price premiums have been reported (Molnar 2002). Many other benefits (eg strengthened community organization, improved transparency of operations, changes in forest management) are usually less tangible and take longer and therefore provide communities with less motive to embark on the certification process without external financial support (Bass et al. 2001). In addition, there is probably a reluctance to adopt externally imposed requirements or management models deemed irrelevant by community members, who have managed their lands traditionally for decades or centuries. In these situations, certification brings more difficulty and complexity to forest management (van Dam 2002; Markopoulos 2003b).

The FSC recognized these problems in its Social Strategy (FSC 2002) and has simplified procedures and some of its criteria for low-intensity and small-scale forest management operations. The package includes more flexibility in rules for group certification, less frequent audits for forests with intermittent harvesting, reducing requirements if environmental and economic risks are low, and an adjusted field-check methodology. Despite these changes, however, the slow development of community forest certification suggests that more fundamental conditions need to be met before significant progress will be made.

[112] In 2002, about 100 CFEs were certified or in the process of certification (Molnar 2002) but in 2007 only 44 certificates had been issued, demonstrating that the process is difficult to implement.

Table 8.2 FSC-certified community forests in developing countries, 2002–07

Country	2002		2007		Change
	Number of certificates	'000 hectares	Number of certificates	'000 hectares	Number of certificates
Latin America					
Bolivia	1	53.0	2	27.0	+1
Brazil	1	0.9	2	25.3	+1
Guatemala	9	245.4	6	348.7	-3
Honduras	2	13.9	1	34.6	-1
Mexico	21	517.2	44	718.1	+23
Nicaragua	-	-	1	4.5	+1
Paraguay	-	-	1	0	+1
Peru	-	-	1	32.6	+1
Sub-total	**34**	**830.4**	**58**	**1,190.7**	**+24**
Asia-Pacific					
Laos	-	-	1	35.0	+1
Nepal	-	-	1	14.1	+1
Papua New Guinea	1	4.3	1	2.7	0
Philippines	1	14.8	-	-	-1
Sub-total	**2**	**19.1**	**3**	**51.8**	**+1**
Africa					
South Africa	1	1.7	-	-	-1
Zimbabwe	1	24.8	-	-	-1
Sub-total	**2**	**26.5**	**-**	**-**	**-2**
Grand total	**38**	**876.0**	**61**	**1,242.6**	**+23**

Sources: Molnar (2002) and www.fsc.org (accessed 24 August 2007).

The experience in Asia and Africa shows that purely donor-supported certifications are unsustainable (Markopoulos 2003b). In Guatemala, certification is required by government regulation and donors have mainly financed the certification process (Molnar 2002), but there has also been demand and support from external buyers. Initially, in Mexico, donor support and niche buyers of certified community products were important drivers for the certification of community forests but technical and financial support from government has probably become more important since. The secure tenure of community forests in Mexico has been an important precondition for certification there; tenure is a constraint in many other countries, where communal lands are not clearly demarcated and titles have not been formally issued. Five years ago, community forest certification in Bolivia was expected to increase rapidly (Molnar 2002), but these expectations have not been realized, suggesting that there have been other serious constraints.

The Mexican experience demonstrates the importance of technical assistance and financial support. If markets for timber and non-timber forest products cannot reward SFM and forest certification, other mechanisms are needed to ensure tangible long-term benefits for community enterprises. The focus of capacity-building should be on supporting competitive production chains rather than solely on certification. If this is unsuccessful, then complementary ways of demonstrating sustainability in community forests will be needed, since forest certification is inappropriate in many cases where market communication (or access to international financing) is not needed (Molnar 2002; Richards 2004). Promoting a direct interface between communities and buyers can also be important in improving understanding of each other's constraints and priorities.

In order to avoid certification becoming an instrument which puts community forests at a disadvantage, its potentially positive role in building up community forest management capacity needs to be recognized. Experience shows that both the requirements of certification standards and certification procedures must be adapted to suit community forestry conditions, but this does not mean lowering the standards. The present provisions of existing certification schemes should be reviewed, since, in developing countries, only two systems are active in this field. It is also essential that auditors have an adequate understanding of local situations (Gretzinger, pers. comm.).

Many countries have implemented specific projects to develop community forestry with the aim of engaging in the certification process, but results are still limited. External support is best devoted to building capacity in forest management, training, financing and commerce rather than covering the cost of external audits (Quevedo 2006). Another, more fundamental constraint is a common mistrust among forest authorities in the capacity of communities to manage their forests, which is slowing the transfer of use and management rights to them (eg in Thailand) (ITTO 2006b). In these situations, a strong political commitment to promote community forestry is needed to create the necessary preconditions for using certification as a tool for achieving sustainability.

Certification of smallholder forest owners

Smallholder private forest owners are becoming an important source of timber supply as a result of their involvement in plantation development; in some tropical countries (eg Brazil, Mexico), private individuals also own natural forests.[113] In implementing certification, these owners are faced with similar hurdles to those of community forests but, due to economies of scale, the issue of auditing costs is an even more serious barrier because of the very small size of many FMUs. In addition, forest owners are typically weakly organized and often depend on cooperation with the local forest industry enterprise(s) that is purchasing their output. Smallholder plantations have proved to be a practical way by which industry can reduce stakeholder pressure related to industrial plantations and minimize the capital requirements in the wood raw material resource base. This kind of outsourcing of plantation management is increasingly practised by companies in the pulp and panel sectors in countries such as Brazil, India, Indonesia, the Philippines and Thailand. Concerns have been expressed that this trend simply entrenches the power of the industrial enterprise, which provides seedlings (and thereby dictates the choice of species), while land costs, planting and maintenance are born by the smallholder.

The certification of small-scale forest owners has proved to be particularly difficult, even though their forest management can often meet the requirements of the standard. Small landowners in tropical timber-producing countries rarely have formal management systems, which has made certification a long process during which the necessary records have to be accumulated and activities organized to make operations auditable by a third party. If the owners do not obtain tangible benefits from certification due to their often already limited access to markets or other reasons, their interest in certification is bound to be nil.

The issue was recently explored by The Forest Dialogue[114], which noted that the private forest-owner sector is very heterogeneous, independent and beyond the reach of most conventional means of promoting and recognizing SFM.[115] The primary difficulty for small-scale forest owners seeking certification is the complexity of the process, the irrelevance of some standards to their scale, and cost. The FSC's SLIMF initiative has had some success since its inception, but the main instrument for engaging forest owners in Europe has been the PEFC's system of regional certification, which draws on existing organizations and participation by all the actors in the forestry sector to promote and implement the requirements of forest certification standards. This has ensured that forest owners are directly engaged in the process, increasing their personal motivation for successful implementation. The potential for such arrangements in tropical timber-producing countries is reduced by the weak organization of forest owners. A number of measures are needed to facilitate access by small-scale forest owners to certification in these countries, including: (i) strengthening the organization of owners through regional associations, cooperatives, and similar

[113] In many European countries, smallholder private forestry is the dominant type of forest ownership.

[114] Held in Brussels, 26–27 June 2007.

[115] The Forests Dialogue was conducted within the regional European context but many of the points raised are also valid for tropical timber-producing countries.

arrangements; (ii) the full recognition of these owners in national forest policy and public support; (iii) improving market transparency, including in regard to certified timber and timber products; (iv) extending communication and extension services to these owners; and (v) improving the data on private forest owners and their resources as well as their awareness of and motivations towards SFM (The Forest Dialogue 2007).

Certification of tree crops

The world's approximately 7 million hectares of rubber plantations produce a major raw material for the furniture industries (FAO 2005). These plantations are mostly in the hands of about 3.5 million smallholders and thereby provide important contributions to rural livelihoods, particularly in Southeast Asia, where about 80% of the world rubber plantations are located. Despite their socioeconomic contributions, the certification of these plantations has proved problematic, as rubber trees are not grown in the context of SFM. How to meet the market demands for certified wood from this renewable resource is an open question. One option could be to develop a specific standard and an appropriate, simplified assessment procedure within existing certification schemes with the purpose of ensuring that timber harvesting in tree-crop plantations complies with legal requirements, does not cause harmful social and environmental impacts, and is implemented within a sustainable development framework. The ongoing work on certification under the Sustainable Palm Oil Roundtable could offer a useful reference point.

9. ITTO's Policy Work and Capacity Building Related to Forest Certification

Policy work

The idea of certification in tropical forests was first explored in an ITTO study on economic instruments to promote sustainable management (ITTO 1993a). ITTO's relevant normative work includes ITTO's C&I (including the harmonized ATO/ITTO PCI), and guidelines on: the sustainable management of natural tropical forests; the establishment and sustainable management of planted tropical forests; the conservation of biological diversity in tropical production forests (a revised version is to be published in 2008); fire management in tropical forests; and the restoration, management and rehabilitation of degraded and secondary tropical forests. These have been used to varying degrees as a framework reference for national certification standards (PEFC, CERFLOR, LEI and MTCC), which has allowed the linking of these certification schemes with an internationally agreed framework on the principles, criteria and indicators for SFM. This link provides an avenue for the international recognition of national systems in tropical timber-producing countries.

The compatibility and linkages between the ITTO C&I and guidelines and the certification standards were identified in a PEFC-commissioned study, which concluded that the basic PEFC reference document for the national certification standard (PEOLG) is fully compatible with the ITTO C&I and the ITTO Guidelines for Sustainable Management of Natural Tropical Forests (Savcor Indufor 2006). If a national standard in a tropical country is in conformity with these ITTO normative documents, only a few identified aspects need to be added for it to fully conform with PEFC requirements. If the national standard has been prepared within the framework of the ATO/ITTO PCI, even fewer aspects need to be added. This development has significantly added value to the ITTO normative documents and built a practical link between the work on C&I and forest certification.

Since 1994, ITTO has made significant efforts to promote the comparability of certification schemes through studies and international workshops.[116] According to interviews carried out for this study, ITTO"s work has contributed to an awareness among certification schemes of the problems that tropical timber producers face in the implementation of forest certification and, at least indirectly, it has contributed to the development of the requirements and procedures of individual schemes.

In 2003–05, ITTO invested a significant effort through analytical work and extensive stakeholder consultations to promote phased approaches to certification (ITTO 2005a; Pinto de Abreu & Simula 2004). This was deemed necessary because of the long process that is often required in tropical FMUs before they can become fully certifiable. After some hesitation, the forest certification systems have started to implement the idea. Recognizing the challenges that developing countries have in meeting its P&C requirements, the FSC has approved a policy on modular ('phased', 'stepwise') approaches to certification, seeking ways to actively promote and support such approaches (FSC 2005). A roundtable with various parties (certification bodies, WWF, GFTN, etc) was convened in 2005 to identify implementation options and a process is under way to develop a framework for the FSC Modular Approach Program.

The PEFC issued a position paper on phased approaches which concluded that such an approach within the PEFC system should be in compliance with their requirements for credibility, including a national standard, forest certification process, CoC, minimal confusion for customers in communication, different performance levels, including a timeline prescribed in a multi-stakeholder agreed standard, and the verification of compliance. The PEFC Council also indicated its willingness to work with ITTO and others to deliver technical and politically acceptable solutions once demand, market and political support could be demonstrated (PEFC 2006c).

[116] This work has been partly carried out in cooperation with FAO, such as through the International Workshop on Building Confidence among Forest Certification Schemes in 2001 and the Meeting of CEOs of Forest Certification Schemes in 2003.

LEI's operational system for phased approaches was approved in 2007. According to the LEI Guideline Series 77, the first phase of the LEI phased approach certification program is the legality of timber, which means that the operation has to comply with the national standard for legality. Several other actors, such as GFTN, the Tropical Forest Trust and TTAP, are implementing phased approaches in various ways, and a number of private certification bodies are offering related services (eg WWF 2006). ITTO's policy work has contributed substantially to these developments and it is expected that, apart from monitoring, no further action from the Organization should be required.

ITTO also has a competitive advantage to explore, with other relevant international organizations (FAO, CITES, etc), the feasibility of developing a common approach for standards of legal compliance and their verification as the first step in phased approaches to certification in tropical timber-producing countries.

It is apparent that ITTO's work on monitoring the comparability and equivalence of forest certification schemes operating in tropical timber-producing countries needs to continue. A number of new drivers might also speed up the development of SFM certification, such as the verification of carbon sequestration within the context of CDM and new carbon finance mechanisms, particularly the planned compensation of reduced emissions from deforestation and forest degradation, and the certification of sustainable forest-based biofuels. The planned initiative on certifying sustainable palm oil production might offer feasible approaches for certifying tree crops such as rubberwood and coconut wood, which, under the SFM certification framework, do not currently qualify.

Financial support to the sustainable management of natural tropical forests

Whether the certification of individual FMUs should be supported financially is an open question. According to one traditional view, such support is justified because SFM brings along a set of global public environmental and social goods that might otherwise be unavailable or diminished. The certification requirements are usually broader and higher than what is required by law alone, which should justify the paying of compensation to forest owners and managers. An alternative, presently dominant view is that such compensation should be arranged through a market mechanism, which in this case would mean that buyers and consumers of tropical timber would pay the additional cost of certification (the cost of standard compliance and verification by certification bodies). However, it is also questionable whether only timber consumers should be paying for global goods, which benefit all. This might explain why buyers have generally been unwilling to pay higher prices for certified products. There is also another equity issue related to the forest owners and managers. It is generally agreed that the public good values of natural tropical forests are higher than those of natural temperate or boreal forests. The maintenance and enhancement of these values means additional costs (including lost income), for which those who own and manage the resource should be compensated.

As explained in Chapter 3, price premiums for certified timber are not generally obtained or at least are believed to be short-lived and will disappear as the certified supply expands. The main benefits from certification are, therefore, in market access and in avoiding the sale of (discounted) uncertified goods (Simula et al. 2005). Consumers of tropical timber derived from sustainably managed sources who do not pay a premium to compensate the cost of certification are, in fact, free riders. When the consumer body comprises a very large group of people in a large number of countries, it is difficult to foresee a practical market mechanism for compensating forest owners and managers for the additional costs incurred.

In this situation, official development assistance to SFM and forest certification can be justified. Some donors (eg France, the European Commission and the US), NGOs (eg WWF) and philanthropic organizations have provided direct support to tropical timber producers to build up their capacity to get certified. Limited support has also been provided by a number of private companies, which might have been motivated by a commercial interest in receiving preferential access to certified supplies. ITTO has also provided financial support to individual FMUs as pilot cases in the achievement of certification. On the whole, however, the financial support received by producers has been limited compared with the vast needs of the tropical timber-producing countries.

As the market mechanism of timber trade would in any case take too long a time to internalize the costs of sustainable management of tropical natural

forests due to the competition from substitutes (certified temperate hardwoods) and illegally logged timber, there is a need to accelerate the process through targeted financial support. This issue needs consideration in the context of future funding through ITTO or other appropriate channels. A study on alternative funding sources and mechanisms should be carried out about the subject, which could also be a possible contribution to the development of the future financing mechanism for SFM under the UNFF. The study should consider the complex issue of accounting for biodiversity, social and the global benefits of SFM in tropical timber-producing forests. This is a more nebulous task than, for example, accounting for carbon benefits. Bundling the various global goods into a single compensation package should be considered as one possible way of taking into account the opportunities emerging in climate-change mitigation. SFM certification could be a feasible instrument for such bundling.

Building local capacity

ITTO's support for certification in tropical timber-producing countries has been subject to debate because some members have been concerned that it could be interpreted as an endorsement of particular certification schemes. Nevertheless, capacity-building for both SFM at the FMU level and certification as a way to demonstrate it cannot be considered separately. This is a dilemma because the same governments that have concerns about the ITTO role have often provided, through other channels, direct support to certification schemes or operators to achieve certification under particular schemes.

A number of ITTO projects (Appendix 15) have directly or indirectly aimed to build local capacity for implementing SFM and forest certification. It was beyond the scope of this study to examine these projects in detail, but an overview was made and the following points identified:

- as a first step, it is necessary to establish a multi-stakeholder forum, working group or other mechanism to guide the process and to develop national certification standards (Brazil, Congo Basin, Indonesia and Côte d'Ivoire). It is advisable to organize consultation processes at both national and regional levels to enable the participation of local communities and actors;
- the ITTO C&I and guidelines provide a useful reference for identifying the key elements of SFM under varying country conditions, but they need to be elaborated at the national level (all countries). This is particularly important in the development of national systems, as it opens up the possibility of their mutual recognition;
- separate standards for plantations and natural forests appear to be justified (Brazil and Indonesia) and this might also be the case for community forests (Indonesia);
- national forest management standards should be endorsed as official national standards by the appropriate standards body;
- home-grown arrangements for certification should be avoided; to avoid later needs for system adjustment (Indonesia, Malaysia), ISO and other international guidance documents should be followed as closely as possible;
- certification can be developed through successive steps (Brazil, Congo Basin, Indonesia and Malaysia). A clear vision of the strategy and the type of certification system(s) to be implemented is needed;
- training in auditing is necessary, but it should be linked clearly to the certification process. To build confidence in the certification process, training should target: (i) FMU staff; (ii) government agencies; (iii) private-sector auditors; and (iv) other stakeholders;
- to motivate them to embark on certification, FMUs and industry need adequate market information on certified products and buyer requirements (Brazil). Promotion and communication are key action areas, both within the country and in target markets (Indonesia);
- pilot certification projects can be very useful in convincing other actors to embark on certification; and
- there is a need to specifically support community forests, smallholders and industrial SMEs to gain access to certification and appropriate procedures for its implementation (Indonesia).

10. Recommendations

ITTO

(i) As a priority, continue to support the development of voluntary national certification standards and capacity-building in ITTO producer countries, capitalizing on the various instruments that have been produced under ITTO projects on auditing, training, etc.

(ii) Drawing on its competitive advantage, and together with other relevant international organizations (eg the Food and Agriculture Organization of the United Nations – FAO, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora – CITES), explore the feasibility of developing a common approach to standards of legal origin and legal compliance as well as their verification procedures. This would be highly synergistic with the implementation of SFM certification in tropical timber-producing countries, because implementation could be within, or linked to, existing certification schemes and would help them to respond to market demand for legal timber in major importing countries. The exercise, possibly involving a preliminary scoping study, would complement initiatives such as FLEGT and provide a positive solution for exporters in those countries which do not have the preconditions for bilateral agreements with importing countries.

(iii) Prepare a discussion paper on the feasibility of including social criteria in CoC certification standards. Together with ILO, FAO and other relevant organizations, organize an international workshop involving the participation of forest certification schemes and other stakeholders to explore the inclusion of social criteria in CoC certification in a way that increases the contribution of forest management to social goals.

(iv) Support objective research on the positive and negative impacts of forest certification, including on the demand, supply and prices of tropical timber and timber products and on forest management at the FMU level. Comparative studies should be designed carefully in order to obtain defendable results that can guide policy design, operator decision-making, and the future periodic revision of forest management standards.

(v) Conduct a study on alternative funding sources and differentiated concessional financing mechanisms for SFM, with a focus on natural tropical forests and their global public goods. The study could contribute to the development of a future financing mechanism for SFM under the United Nations Forum on Forests. The study should explore the complex issue of accounting the combined carbon, biodiversity and social benefits of SFM and their verification through certification, as well as options for compensation mechanisms.

(vi) Continue to monitor the comparability and equivalence of forest certification schemes operating in tropical timber-producing countries, including emerging issues such as the verification of carbon sequestration within the context of the Clean Development Mechanism and other existing or proposed carbon finance mechanisms (particularly compensation for reduced emissions from deforestation and forest degradation), as well as the certification of sustainable forest-based and other biofuels. Possibilities for promoting further convergence between certification systems should be explored in future monitoring work and, if deemed appropriate, international workshops should be organized, together with other interested parties, such as FAO, in order to facilitate cooperation and convergence.

(vii) Conduct a study on strategies and measures for promoting SFM and forest certification in community forests and smallholdings. The study should identify and assess options for assisting communities and small-scale private forest owners to manage their forests sustainably, and to solve social conflicts that frequently occur between communities and forest concessionaires in developing countries.

Governments in producer and consumer countries

(i) Implement appropriate timber procurement policies for the promotion of legally and sustainably produced tropical timber.

(ii) Governments in consumer countries: work towards the further harmonization/convergence of timber procurement policies, considering specific provisions to enable tropical timber producers to comply more easily with the requirements of these policies, including those related to alternative evidence.

(iii) Governments in tropical timber-producing countries: recognizing the value of voluntary forest certification as an instrument to promote SFM and tropical timber products from legal and sustainably managed sources, establish clear timber procurement policies and provide supporting measures for the implementation of certification, giving particular emphasis to the involvement of community forests and small-scale private forest owners.

(iv) Governments in member countries of the ATO: make a clear and firm decision on the future role of the ATO, including the eventual provision of a regional framework for forest certification, in order to enable countries to make informed decisions on their certification development strategies, and, if necessary, to arrange eventual sub-regional cooperation through other mechanisms.

Tropical timber trade and industry

(i) Promote the alignment of enterprise-level purchasing policies with relevant public procurement policies as a measure for reducing the proliferation of requirements for legal and sustainable supplies of tropical timber and timber products. As a minimum, avoid introducing terms, concepts and requirements that are not in line with those already agreed internationally. Legal provisions for anti-trust laws and regulations should be respected in these efforts.

(ii) To respect the principles of transparency and openness, make public any assessment criteria and reports on the acceptability of certification systems.

Certification systems

(i) Consider further arrangements to facilitate the implementation of forest certification in developing countries, with particular emphasis on tropical timber-producing countries.

(ii) Consider measures to shorten national standard-setting processes (so that they take one year or less) in order to provide a firm, locally appropriate basis for FMUs in moving towards certification.

(iii) FSC: improve communication on and, if needed, adjust FSC rules and policies related to the recognition of nationally developed certification standards and schemes, with the aim of enabling enterprises and other stakeholders to make more-informed decisions on forest certification.

(iv) PEFC: consider arrangements for accelerating PEFC development in developing countries, including in community forests and in situations where national certification systems are unviable.

(v) National schemes in tropical timber producing countries: make further efforts to communicate internationally on the scope and contents of their schemes, the progress made on the ground, and obstacles encountered, and, in key markets, undertake promotional initiatives to ensure that these markets have the necessary information to assess and recognize their schemes.

(vi) Recognizing that certification schemes are competing with each other in the marketplace, explore opportunities to further increase convergence between schemes for the benefit of tropical timber-producing countries, including the verification of legal compliance and origin, the inclusion of social criteria in CoC standards, etc.

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www.accreditation-services.com	www.iaac-accreditation.org	www.panda.org
www.apec-pac.org	www.ifc.org	www.pefc.org
www.bre.co.uk/services/BREEAM	www.ikea.com	www.proforest.net/cpet
www.builderandengineer.co.uk	www.inmetro.org.br	www.sanas.co.za
www.fsc.org	www. interscience.wiley.com.	www.usgbc.org
www.fscglobalfund.org	www.kingfisher.com	www.worldbank.org
www.fsc-watch.org	www.lei.or.id	www.wto.org
http://corporate.homedepot.com/wps/portal/Wood_Purchasing	www.mtcc.co.my	www.walmart.com

Appendix 1 Study on Monitoring Progress in Comparability and Acceptance of Forest Certification Systems – Terms of Reference

[ITTO Yokohama Action Plan, Section 3.1, Goal 2, Action 3]

1. Preamble

The steady expansion of forest certification worldwide has involved the development of a range of forest certification standards and schemes, but progress for tropical forests has been slow, due to the complexity of forest ecosystems, the lack of resources, skills and green premiums. While there are commonalities among these standards and schemes, there are also significant differences. This is because forests and forest management standards have to be based on, and adapted to, the respective regional and local ecological and socio-economic conditions. Establishing appropriate and globally applicable standards for sustainable forest management is neither possible nor desirable especially when tropical forests are compared to temperate and boreal forests. In this context, comparability and acceptance among forest certification standards and schemes has arisen in light of the challenges posed by the proliferation by such standards and schemes and difficulties encountered by producer countries. Several efforts have been undertaken to address the issue taking into account similar practice in other fields of standardization and conformity assessment and with emphasis on market requirements and acceptance.

The purpose of the study is to review and assess progress in comparability and acceptance of forest certification standards and systems and particularly the promotion of certification with respect to tropical timber, bearing in mind as a background the ITTO's achievements and standards including the ITTO Guidelines on sustainable management of natural tropical forests, establishment and sustainable management of planted tropical forests, conservation of biological diversity in tropical production forests, fire management in tropical forests, and the restoration, management and rehabilitation of degraded and secondary tropical forests.

The study also aims to identify the relevance of each system in a local, social and economic context; including the impact that certification can have on addressing illegal logging.

2. Terms of Reference

The study will:

(i) Collect and analyze information on forest certification and chain of custody certification including economic implications and incentives under different schemes.

(ii) Identify and recognize the appropriateness of each system, taking into account local, social, economic and forest conditions and institutional arrangements.

(iii) Review various mechanisms and initiatives with respect to comparability and acceptance of forest certification standards and systems, including criteria and requirements used or proposed for assessing such standards and systems.

(iv) Review current and emerging market requirements and preferences both in public procurement and the private sector with regard to certified/legally produced timber particularly tropical timber, with particular emphasis in identifying commonalities and differences in these requirements.

(v) Assess the implications of market requirements and preferences and various initiatives for tropical timber producers and their competitiveness.

(vi) Present the main findings on progress in comparability and acceptance of forest certification systems and standards and related market requirements.

(vii) Make full use of available information and studies on certification. FAO, the private sector and civil society will be invited, including the Trade Advisory Group (TAG) and Civil Society Advisory Group (CSAG) to provide input to the study.

(viii) Suggest areas of cooperation, with regard to certification of tropical timber, including arrangements and possible incentives in implementation by phases, which include legal compliance.

Appendix 2 FSC Certificates in Developing Countries by Certification Body, July 2007

	SW		SGS		GFA		SCS		IMO		SA		CU		Total	
	No	'000 ha	No	'000 ha	No	'000 ha	No	'000 ha	No	'000 ha	No	'000 ha	No	'000 ha	No	'000 ha
Latin America																
Argentina	4	135.9	7	86.8	-	-	-	-	-	-	-	-	-	-	11	222.7
Belize	1	104.9	-	-	-	-	-	-	-	-	-	-	-	-	1	104.9
Bolivia	14	1920.4	-	-	1	3.1	-	-	-	-	-	-	-	-	15	1923.5
Brazil	33	2648.8	7	460.5	-	-	19	1652.4	-	-	-	-	-	-	59	4761.7
Chile	3	97.7	7	157.5	1	26.1	-	-	4	43.5	-	-	-	-	15	324.8
Colombia	-	-	1	38.4	1	0.3	-	-	-	-	-	-	-	-	2	38.7
Costa Rica	10	17.8	2	9.4	7	17.7	1	6.6	-	-	-	-	-	-	20	51.5
Dominican Republic	-	-	-	-	1	1.0	-	-		-	-	-	-	-	1	1.0
Ecuador	-	-	-	-	2	10.0		-		-	-	-	-	-	2	10.0
Guatemala	11	509.1	-	-	-	-		-			-	-	-	-	11	509.1
Honduras	3	49.2	-	-	-	-		-			-	-	-	-	3	49.2
Mexico	40	589.2	-	-	-	-		-			-	-	-	-	40	589.2
Nicaragua	1	3.6	-	-	1	4.5	1	3.5			-	-	-	-	3	11.6
Panama	3	1.1	5	9.7	-	-	-	-			-	-	-	-	8	10.8
Paraguay	-	-	2	0.0	1	2.7					-	-	-	-	3	2.7
Peru	3	308.0	-	-	1	32.6	-		1	26.9	-	-	3	21.1	8	388.6
Uruguay	4	30.3	17	351.6		-	-				-	-	-		21	381.9
Venezuela	1	139.6	-	-		-	-				-	-	-		1	139.6
Sub-total	131	6555.6	48	1113.9	16	98.0	21	1662.5	5	70.4	-	-	3	21.1	224	9521.5
Africa																
Congo	-	-	1	296.0	-	-	-	-	-	-	-	-	-	-	1	296.0
Kenya	-	-	-	-	-	-	-	-	-	-	1	1.8	-	-	1	1.8
Morocco	-	-	1	203.0	-	-	-	-	-	-	-	-	-	-	1	203.0
Mozambique	-	-	2	71.1	-	-	-	-	-	-	-	-	-	-	2	71.1
Namibia			2	57.2							1	162.4			3	219.6
Republic of South Africa	-	-	18	1089.4							4	462.1			22	1551.5
Swaziland	-	-	-	-	-	-	-	-	-	-	2	86.9	-	-	2	86.9
Tanzania	-	-	-	-	-	-	-	-	-	-	1	15.6	-	-	1	15.6
Uganda	-	-	1	25.0	-	-	-	-	-	-	-	-	-	-	1	25.0
Zimbabwe		-	3	108.4	-	-	-	-		-		-		-	3	108.4
Sub-total			**28**		**-**	**-**	**-**	**-**	**-**	**-**	**9**	**728.8**	**-**	**-**	**37**	
Asia-Pacific																
China	1	5.2	2	433.4	1	2.9	-	-	1	0.9	-	-	-	-	5	442.4
India	-	-	-	-	-	-	-	-	1	0.6	-	-	-	-	1	0.6
Indonesia	4	649.2	1	90.2	-	-	-	-	-	-	-	-	-	-	5	739.4
Laos	2	45.0	-	-	-	-	-	-	-	-	-	-	-	-	2	45.0
Malaysia	-	-	1	55.1	-	-	2	16.5	-	-	-	-	-	-	3	71.6
Nepal	1	14.1	-	-	-	-	-	-	-	-	-	-	-	-	1	14.1
PNG	-	-	-	-	-	-	1	2.7	-	-	1	19.2	-	-	2	21.9
Solomon Islands	-	-	-	-	-	-	-	-	-	-	1	39.4	-	-	1	39.4
Sri Lanka	-	-	3	11.6	-	-	-	-	-	-	-	-	-	-	3	11.6
Thailand	-	-	2	2.7	-	-	-	-	-	-	-	-	-	-	2	2.7
Vietnam	-	-	1	9.9	-	-	-	-	-	-	-	-	-	-	1	9.9
Sub-total	**8**	**713.5**	**10**	**602.9**	**1**	**2.9**	**3**	**19.2**	**2**	**1.5**	**2**	**58.6**	**-**	**-**	**26**	**1398.6**
Grand total	**139**	**7269.1**	**86**	**3566.9**	**17**	**100.9**	**24**	**1681.7**	**7**	**71.9**	**11**	**787.4**	**3**	**21.1**	**287**	**13499.0**

Source: www.fsc.org (accessed 20 July 2007)

Appendix 3 Participants in the Global Forest Trade Network, 2007

Country	Number of companies	Total roundwood equivalent traded	Managed forest area	Certified to FSC
		'000 m^3	'000 ha	
Latin America				
Bolivia	4	26.7	401.0	300.0
Brazil	51	13.6	1 223.5	1 095.2
Costa Rica	3	75.0	34.4	34.4
Honduras	1	-	8.0	8.0
Nicaragua	3	..	..	..
Panama	2	..	3.0	3.0
Peru	8	433.1	362.0	280.0
Sub-total	**72**	**548.4**	**2 031.9**	**1 720.6**
Africa				
Cameroon	5	445.0	1 131.2	-
Ghana	5	768.0	329.8	-
Sub-total	**10**	**1 213.0**	**1 461.0**	**-**
ASIA				
China	14	2 153.0	433.5	433.5
Indonesia	13	650.6	641.1	269.7
Malaysia	3	202.5	..	..
Vietnam	4	875.0	..	..
Sub-total	**34**	**3 881.1**	**1 074.6**	**703.2**
Total (all 3 regions)	**116**	**5 642.5**	**4 567.5**	**2 423.8**

Source: www.panda.org/about_wwf/what_we_do/forests (accessed 19 July 2007)

Appendix 4 Status of Certification Initiatives in Africa, Asia and Latin America, 2007

Country	FSC			PEFC				Other
	National initiatives	Accredited national standard	FSC-certified forest[1)]	PEFC member	National system	Certified areas	CoC certificates	
Africa								
Burkina-Faso	x							
Cameroon	x							
Congo			296.0					
Côte d'Ivoire	x							
DRC	x							
Ethiopia	x							
Gabon	x			x	PAFC Gabon [2)]	-	1	
Kenya			1.8					
Morocco			20.3				1	
Mozambique	x		71.1					
Namibia			219.6					
Republic of South Africa	x		1 551.5					
Swaziland			86.9					
Tanzania			15.6					
Uganda			25.0					
Zambia	x							
Zimbabwe			108.4					
Sub-total	**9**		**2 375.9**	**1**			**2**	
Asia-Pacific								
China	x		442.5			-	4	
India			0.6				1	
Indonesia			739.4			-		LEI
Laos			45.0					
Malaysia			71.7	x	MTCC[3)]		1	
Nepal			14.1					
PNG	x		21.9					
Solomon Islands			39.4					
Sri Lanka			11.6					
Thailand			2.7					
Vietnam	x		9.9					
Sub-total	**3**		**1 398.8**	**1**			**6**	**1**
Latin America								
Argentina			222.6					
Belize			104.9					
Bolivia	x	x	1 923.5					
Brazil	x	x	4 761.9	x	CERFLOR	762.7	2	
Chile	x		369.0	x	CERTFOR	1 681.6	14	
Colombia	x	x	38.7					
Costa Rica			51.4					
Dominican Republic			1.0					
Ecuador	x		10.0					
Guatemala			509.1					
Honduras			49.2					
Mexico	x		589.2					
Nicaragua			11.5					
Panama			10.8					
Paraguay			2.7					
Peru	x	x	388.7					
Uruguay			381.9					
Venezuela			139.6					
Sub-total	**7**	**4**	**9 563.7**	**2**	**2**	**2 444.3**	**16**	
Total developing countries	**19**	**4**	**10 962.25**	**4**	**3**	**2 444.3**	**24**	**1**

[1)] July 2007

[2)] Applied for PEFC endorsement

[3)] PECCC member, the scheme not endorsed by PEFC

Appendix 5 FSC-Accredited Forest Stewardship Standards

Country	Forest management				Non-timber forest products
	National	Regional	Natural	Plantation	
ITTO producers					
Bolivia			Lowlands 2004		Brazil nut 2002
Brazil			Terra firme2002		
Colombia			2003	2003	Bamboo 2006
Peru			Amazonian forest 2002		Brazil nut 2001
Sub-total			**4**	**1**	**3**
ITTO consumers					
Canada	2004	2(1999,2005)			
Denmark	2005				
Germany	2001				
Finland	2006				
Czech Rep.	2006				
Netherlands	2005				
Sweden	1996				
Spain	2005				
UK	2006				
USA		8 (2001-2004)			
Sub-total	**9**	**10**	**0**	**0**	**0**
Total	**9**	**10**	**4**	**1**	**3**

Source: www.fsc.org (accessed 20 July 2007)

Appendix 6 Comparison of Forest Management Standards and Standard Setting of Certification Systems

Attribute	FSC	PEFC	CERFLOR	LEI	MTCC
Standards					
International framework	FSC P&C	PEOLG/ITTO	ITTO /Amazon Treaty	ITTO, FSC	ITTO C&I, FSC P&C [2)]*
Generic international standard	Under development	No[1)]	N.a.	N.a.	N.a.
Compliance with legislation	Yes	Yes	Yes	Yes	Yes
Definition of land tenure & property rights	Yes	Yes	Yes	Yes	Yes
Recognition of customary rights	Yes	Yes	Yes	Yes	Yes
Sustained production level	Yes	Yes	Yes	Yes	Yes
Biodiversity maintenance	Yes	Yes	Yes	Yes	Yes
Historic and cultural sites	Yes	Yes	Yes	Yes	Yes
Preference for native species	Yes	Yes		Yes	Yes
Soil erosion, watercourses	Yes	Yes	Yes	Yes	Yes
Prohibition of genetically modified organisms	Yes	Not	Not	No	Yes
Controlled use of fertilization	Yes	Yes	Yes	No	Yes
Minimum use of pesticides & herbicides	Yes	Yes	Yes	Implicit	Yes
Prohibition of highly hazardous pesticides	Explicit	No			
Special ecosystems	Yes	Yes	Yes	Yes	Yes
Prohibition of conversion	Yes	No			
Endangered species	Yes	Yes	Yes	Yes	Yes
Forest health and vitality	Implicit	Yes	Yes	Yes	Implicit
Recreation	Implicit	Yes	Yes	No	Implicit
Local rural employment	Yes	Yes	Yes	Yes	Yes
FMP inventory, monitoring	Yes	Yes	Yes	Yes	Yes
Requirement for public consultation during operations	Explicit specifications	General (local experience & knowledge)	Explicit specifications	Yes	Yes
Standard setting					
Regional/national adaptation of principles	Yes	Yes	Yes	Yes	Yes
Conformity with international rules	ISEAL	ISO Guide 59	ISO Guide 59	ISO	Yes[3)]
Participatory balanced process	Yes	Yes	Yes	Yes	Yes
Initiation of the process	FSC national initiative	Forest owners or related	Forest industry and owners	Forest industry, NGOs, academicians	National Steering Committee
National working group/ forum	Yes	Yes	Yes	Yes	Yes
Consensus targeted	Yes	Yes	Yes	Yes	Yes
Appeals procedures	Yes	Yes	Yes	Yes	Yes
Periodic revision of standard	General provision	5 years	5 years	5 years	5 years

[1)] PEFC Council has no own standards

[2)] The assessment of the MTCC scheme is based on the MC&I (2002) which is based on the FSC P&C template.

[3)] For MC&I (Forest Plantations)

Sources: Forest Industries Intelligence (2006a); scheme documentation

Appendix 7 Comparison of Chain of Custody and Labelling Requirements of Certification Systems

Attribute	FSC	PEFC	CERFLOR	LEI	MTCC
Chain of custody					
Physical separation	Yes	Yes	Yes	Yes	Yes
Input/output (volume credit) system	Yes	Yes	Yes	Yes	Yes
Batch calculation, maximum length days	365	90	90		60
Minimum average percentage	Yes	Yes	Yes	Yes	Yes
Management/quality system requirements	Yes	Yes	Yes	Yes	No
Minimum certified content % (excl. recycled fiber)	70	70	70	100	70 (assembled product) or 30 (fibre/chip products)
Maximum recycled content %	100	100[1)]	100	N.a.	N.a.
Exclusion of uncertified controversial sources	Yes	Yes	Yes	Yes	Yes
Exclusion of illegal sources	Yes[2)]	Yes	Yes		Yes[3)]
Risk assessment of non-certified wood	Yes	Yes	Yes	No	No
Other schemes' certificates used as indicator of low risk	No	Yes (eg FSC)	Yes	No	Yes (eg PEFC, FSC)
CoC of non-wood products	Yes	Yes	Yes	Yes	No
Project certification	Yes	Yes[4)]	Yes[3)]	No	No
CoC of multi-site organizations	Yes	Yes	Yes	No	No
Social criteria in CoC standard	No	No	No	No	Yes
Labelling					
100% certified label	Yes	Yes	Yes	Yes	Yes
Mixed label	Yes	No	Yes	No	Yes
Recycled label	Yes	"PEFC- Certified" [1)]	Yes	N.a.	No
On-product & off-product regulations	Yes	Yes	Yes	Yes	Yes
Allowance of on-product use of other forest certification labels	No	Not specified as prohibited	Not specified as prohibited	N.a.	Currently no

[1)] Recycled raw material certified against PEFC CoC standard

[2)] Addressed through the controlled wood standards covering also other controversial sources

[3)] Addressed through exclusion of controversial sources

[4)] Addressed through PEFC CoC standard

Source: Scheme documentation

Appendix 8 Comparison of Certification and Accreditation Procedures of Certification Systems

Attribute	FSC	PEFC	CERFLOR	LEI	MTCC
Certification					
Standards of assessment	National FSC standard or generic CB standard[1)]	National standards	National standard	National standard	National standard
Independent third party audit	Yes	Yes	Yes	Yes	Yes
Conformity with ISO Guides 62, 65 & 66	ISO Guide 65 and own rules	Yes	Yes	Yes	Yes[2]
Public summary report	Yes	Yes	Yes	Yes	Yes
Surveillance audit, minimum interval	Annually	Annually	Annually	Annually	Annually
Group certification	Yes	Yes	Yes	No	No
Regional certification	No	Yes	No	No	No
Other provisions for smallholders	Yes[3])	Yes[4])	No	Yes	No
Use of external information in audits	Yes	Yes	Yes	Yes	Yes
Issuance of certificate	CB	CB	CB	CB	MTCC
Peer review of audit report	Yes	Yes	Yes	Yes	Yes
Accreditation					
Accreditation body	FSC	National AB	National AB	LEI	MTCC/ National AB[5)]
Procedures in conformity with ISO 17011	Own procedures with ISO 17011 provisions	Full compliance	Full compliance	Own procedure with international compliance	Own procedures/ ISO 17011

[1)] Based on FSC P&C

[2)] Beginning 1 April 2007, only certification bodies (CBs) which are accredited with the national AB are used to conduct.

[3)] SLIMFs initiative, eligibility criteria and special provisions in forestry standards.

[4)] Eg special national standard for smallholders

[5)] Transition of accreditation from MTCC to national accreditation body in process.

Sources: Forest Industries Intelligence (2006a); scheme documentation

Appendix 9 Comparison of Requirements for Standard Contents: Elements in the Definition of Legality

	National laws	International laws	Legal harvesting rights	Scope of legislation						Customary rights of indigenous people
				Forest	Environ-ment	Labor	Health & supply	Land tenure	Payment of royalties and taxes	
Public procurement										
Denmark	x	CITES	x	x	x	x	x	x	x	x
Netherlands	x	CITES	x	x	x	x	x	x	x	x
UK	x	CITES	x	x	x	x	x	x	x	
FLEGT	x	CITES	x	x	x	x	x	x	x	
World Bank Operational Policy 4.36	Relevant law	Relevant law								x
FCAG	x	x				x		x		x
IFC Perf.Std. 6						x		x		x
ICFPA	x	x	x					x		x

Sources: www.forestrycertification.info; World Bank Operational Policy 4.36 / FCAG; IFC Performance Standard; UK and Danish public procurement policies (for Denmark, 2007 draft)

Appendix 10 Comparison of Requirements for Contents of Forest Management Standards: Sustainability Elements

Attribute	Global SFM criteria	ICFPA	World Bank Group	Public procurement policies		Keurhout
				Denmark	UK	
Legal policy and institutional framework	x	x	x	x	x	x
- customary land tenure		x	x	x	x	x
- use rights of indigenous people		x	x	x	x	x
- mechanisms for solving disputes			x	x		x
Extent of forest resources	x	x		x	(x)	x
- regeneration		x		x		x
- conversion to others uses		x	x	x		
Forest health & vitality	x	x		x	x	
- protection against unauthorized activities		x		x	x	
- protection against fire, pests, etc		**x**		**x**	**x**	
Productive functions	**x**	**x**		**x**	**x**	**x**
- timber		x		x	x	x
- non-timber products		x		x		x
- efficiency/economic viability		x				
- specific provisions for plantations			x			
- appropriate silvicultural and harvesting system						**x**
Protective functions	**x**	**x**		**x**	**x**	**x**
- prevention/minimization of environmental impacts			x	x	x	x
- soil, water		x	x	x	x	x
- use of chemicals		x		x	x	x
- waste disposal				x	x	x
Biological diversity	**x**	**x**	**x**	**x**	**x**	**x**
- critical areas/habitats/high ecological value		x	x	x[1)]		x
- set-aside areas for conservation and protection of features and species of exceptional value				x	x	
- endangered species		x		x	x	x
- exotic species		x		x		x
- Genetically modified organisms		x				
Socio-economic functions of forests	x	x		x	Under review	x
- participation of forest owners		x	x			
- participation of local population			x	x		x
- public access		x	x			x
- workers' rights			x	x		x
- employment		x	x	x		x
- community relations			x			x
- health and safety		x		x		x
- multiple benefits			x[2)]			x
- recreation		x[3)]				
- historic, cultural, spiritual values		x	x	x		x
Management planning		x	x	x	x	x
Monitoring and assessment		x	x	x	x	x
Training of personnel		x		x	x	x

[1)] Protection of features and species of outstanding on exceptional value

[2)] Also special provisions for game management and efficient utilization of forest products

[3)] Special provisions for landscape and esthetic value and visual impact harvesting operations

Sources: Ramtsteiner & Simula (2005), www.forestrycertification.info; World Bank Operational Policy 4.36/FCAG; IFC Performance Standard 6; UK and Danish public procurement policies (for Denmark, 2007 draft)

Appendix 11 Comparison of Requirements for Setting Forest Management Standards

Attribute	ICFPA	World Bank FCAG	Public procurement policies		Keurhout
			Denmark	UK	
Compatibility with international standards					
- ISO Guide 59	X	X	X	X	
- ISEAL Code of Practice		X	X	X	
- Affiliation of the standard setting body with ISEAL		X			
Process characteristics					X
National adaptation		X	X		
Transparence		X	X		X
Consultative process	X	X	X	X	X
- stakeholder invitation		X	X		
- description of participation	X	X	X	X	
- procedure to involve stakeholders		X	X	X	
Balanced representation		X	X	X	
- open to all affected parties		X	X		
- desirable for all major groups involved			X		
Input from economic, environmental, social categories				X	
- active seeking for input	X[1)]			X	
- meaningful participation		X		X	
- efforts to include stakeholders and consideration of issues raised		X		X	X
Public availability of standard	X		X	X	X
Field testing					X
Documentation of the process		X			X
Decision-making					
Decision-making body	X				X
Decision-making process		X			X
- no single interest dominate		X	X	X	X
- no decision in absence of agreement from the majority of an interest category		X	X	X	
- process based on consensus		X	X	X	
- majority voting		X	X	X	
- no decision					
- without major group influence		X		X	
- strong opposition from a major group		X		X	
- acceptable for a large number of affected parties					X
- dispute resolution process	X	X	X		X
Formal approval based on evidence of consensus or voting			X	X	

[1)] *Proactive steps taken*

Sources: www.forestrycertification.info; World Bank Operational Policy 4.36/FCAG; IFC Performance Standard 6; UK and Danish public procurement policies (for Denmark, 2007 draft)

Appendix 12 Comparison of Requirements for Chain of Custody and Labelling

Attribute	ICFPA	World Bank FCAG	Public procurement policies		Keurhout
			Denmark	UK	
Chain of custody					
Procedure for CoC/Standard	X	X	X	X	X
Conformity with ISO Guide 62/65/66	X	X	X	X	X
Compliance with ISO 9001					X
Percentage content calculation			X		X
Input - output model			X		X
Rules for non-certified materials	X		X	X	X
Accreditation of CoC certifiers	X	X	X	X	X
Exclusion of illegal sources		X	X	X	X
Exclusion of wood from conversion of forests		X			
Verifiable system for recycled material			X	X	
Chain of custody from forest to final product		X	X	X	X
Verifiable system for non-certifiable material if >30%				X	X
Labelling and claims					
On-product labelling	X			X	X
Off-product claims	X			X	X
CoC certification	X	X		X	X
Prevention of logo use on uncertified timber		X	X	X	X
Claims in conformity with ISO 14020/14021		X	X		
Mechanism for control of claims			X	X	X
Reliable distinction of certified products				X	X

Sources: www.forestrycertification.info; World Bank Operational Policy 4.36/FCAG; IFC Performance Standard 6; UK and Danish public procurement policies (for Denmark, 2007 draft)

Appendix 13 Comparison of Requirements for Certification and Accreditation

Attribute	ICFPA	World Bank FCAG	Public procurement policies		Keurhout
			Denmark	UK	
Certification					
Third party certification/accreditation body	X	X	X	X	X
Conformity with ISO Guides 62/65/66	X	X	X	X	X
Audit covers performance and management system			X	X	X
Requirements of forestry competence in audit team	X			X	X
Consultation with external stakeholders		X[1]	X	X	X
Collection of field evidence	X	X	X		X
Sampling	X	X			
Public availability of assessment methodology and surveillance intensity		X	X	X	X
Local interpretation of the standard	X				
Handling of non-conformance	X		X	X	X
Surveillance audits	X	X	X	X	X
Peer review	X				
Conditional certificates		X[2]			
Small forest enterprise requirements	X	X[3]			
Group certification	X	X[4]			X
Public summary audit reports	X	X	X	X	X
Mechanism for dealing with complaints and disputes		X	X	X	X
Accreditation					
Accreditation body		X			X
- national	X		X	X	
- international			X	X	
Conformity with ISO Guide 61/17011	X		X	X	X
AB affiliated with IAF	X	X			X
AB affiliated with ISEAL		X			
Accreditation scope (forestry)	X	X	X	X	
Criteria for auditors and consultants	X			X	X
Publication of report on accreditation		X		X	X
Complaints and appeals mechanisms		X		X	

[1] *Publicity of the time and place of evaluation; procedures for stakeholder comments consideration*

[2] *Requirements include deadline for corrective action requests*

[3] *On the level of standards or accreditation*

[4] *Four specific requirements for the contents of the report*

Sources: www.forestrycertification.info; World Bank Operational Policy 4.36/FCAG; IFC Performance Standard 6; UK and Danish public procurement policies (for Denmark, 2007 draft)

Appendix 14 Coverage of Certification Standards and ITTO Guidelines of Biodiversity in Tropical and Subtropical Forest Plantations

Standard/ guideline	Level of Biodiversity			Elements of conservation/management							
	Within species	Species	Ecosystems	Habitat degradation	Endemism	Rare/threatened species	Invasive species	Inter-actions among organisms	Spatial & temporal variability of ecosystems	Ecosystem processes	Rehabilitation & restoration
ITTO plantation guidelines	2	2	2			2	2	3	2	2	3
CERFLOR	2	2	2	2		1	1		2	1	2
CERTFOR	2	2	2	2		1	2		2	1	3
FSC	1	2	1	2		1	1		1	1	2
LEI	2	2	2	2		2			3	1	3
Score: 1 good, 2 fair, 3 poor											

Source: Marjokorpi & Salo (2007)

Appendix 15 ITTO's Project Work Related to Forest Certification

Code	Title	Scope	Implementation period	ITTO contribution US$
PD1/95 Rev.4(M)	Training Development on Certification of Sustainable Forest Management in Indonesia	Assessor training for LEI, production of training materials	1997-1999	627,774
PD3/97 Rev.1(M)	Development of an Export Intelligence Monitoring System in Fiji	Information system and marketing strategies	1997-2000	169,500
PD80/01 Rev.6(M)	Consolidating Sustainable Forest Management in Indonesia	Awareness raising, training system, assessor training, institution building	2003-2006	368,799
PD124/01 Rev.2(M)	Promotion of Sustainable Management of African Forests	Capacity building for implementation of ATO/ ITTO PCI and regional cooperation	2003-2005 2003-2007	(Phase I) 807,733 (Phase II) 1 615,465
PD140/02 Rev.2(M)	Development of Criteria and Indicators for Sustainable Management Appropriated to Brazilian Tropical Forests	Development of C&I for forest certification standard for natural forest, training materials and training	2003-2005	396,313
PD338/05 Rev1 (M,I)	Promotion of Guatemalan Certified Timber and Timber Products Trade	Institutional strengthening for marketing support organization and promotion of the production and utilization of LKS	2007-2009	240,468
PD391/06 Rev.2(M)	Promotion and Creating Market Demand for Certified Tropical Wood and Verified Legal Tropical Wood in Japan	Establishment of a market promotion centre, market research, trade facilitation, awareness raising	2007-2009	257,472
Total				**4,483,524**

Source: ITTO secretariat

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