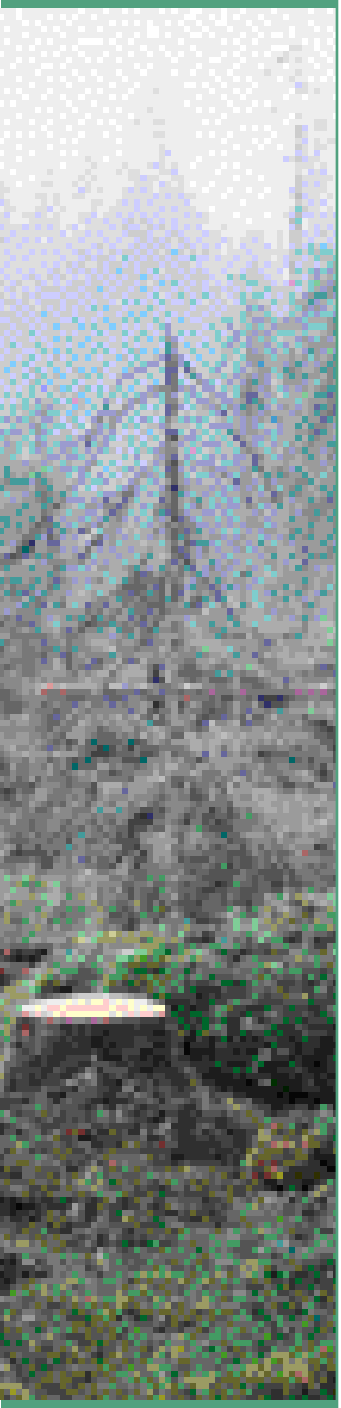
Behind the logo

An environmental and social assessment of forest certification schemes



Report produced by Fern, May 2001,
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The report and the case studies are available at: www.fern.org and www.cmnet.org.

Fern advocates changes in EU activities to achieve the sustainable management of forests and respect for the rights of forest peoples.

Contents

The winter grazing rights of reindeer herds owned by Sweden's indigenous people, the Sami, being contested by local forest owners. Certification schemes have a vital role to play in the dispute. *See page 19.*

1 Introduction

Forest certification is widely seen as the most important initiative of the last decade to promote better forest management. Backed by both Non Governmental Organisations (NGOs) and the private sector, it has led to greater recognition of the importance of environmentally and socially sound wood products and has engaged producers, consumers and retailers in a positive effort to help clean up the timber industry. It has also strengthened a global debate on the future of forestry. Issues such as standards for forest management, who should participate in forest management decisions, and the merits of certification as a forest management tool, are now openly and thoroughly investigated.

The only forest certification scheme currently operating at a global level is that of the Forest Stewardship Council (FSC), created in 1993. In recent years, several regional forest certification schemes have been set up. With all these schemes active in the same market, it is important that the significant differences between these schemes are understood and publicly known. Using the information presented here, forest-based-industries, governments, retailers, environmental and social NGOs, and forest owners can judge the validity of different certification schemes with a sound knowledge of their strengths and flaws.

The focus of this report is on the Forest Stewardship Council (FSC), the Canadian Standards Association's Sustainable Forest Management Standard (CSA), the Sustainable Forestry Initiative (SFI) and the Pan European Forest Certification Scheme (PEFC). Although other schemes are in operation, we chose to limit our research to these four schemes because together they supply over 90% of certified timber to the market and, in terms of hectares certified, are by far the largest[1].

Each of the four certification schemes is assessed against a set of criteria, based on recommendations by governments, academics and the forestry industry. We believe that these criteria establish the essential minimum requirements of any certification scheme seeking the support of the NGO community. Our report aims to make an objective evaluation of the merits of each scheme.

Although we would encourage everybody to read the whole report, those with little time available, are encouraged to refer to the summary and conclusions chapter, as well as to the introductory paragraphs that summarise the outcome of each criterion's assessment in chapter 5.

Last but not least, the certification debate is clouded by misunderstandings over terminology. This report contains a glossary explaining the most important technical terms. *Please see the five-minute guide to the key technical terms on page 9.*

High-altitude old-growth forest of Aitatsivaara, Finland. Tens of hectares of this old-growth forest have been logged and certified under the PEFC Finland scheme (FFCS).

2 Forest certification

Five-minute guide to the key technical terms

Forest certification Forest certification is a tool to help consumers choose ethical and environmental products from well-managed forests. The idea behind certification is that consumers, who are concerned about deforestation and forest degradation, will prefer to buy timber products from well-managed forests. The process of certification identifies these forests, and the products coming from them. Through certification, individual forests are assessed against publicly available standards and, if the forest scores highly, the forest owner obtains the right to label the products from that forest. At the point of sale, the label tells the consumer that the product is sourced from a forest that meets certain environmental and social standards. A certification scheme should include three main elements: the development of standards, certification against those standards, and a process for the accreditation of certifiers.

The development of standards This is the process by which quality-control measures for forest management are established. In consultation with stakeholders, each certification scheme develops its own 'standard' using technical specifications and criteria. Two complementary types of standards exist. Performance-based standards evaluate whether managed forests reach specified ecological and social performance targets. Performance standards cover the forestry operations and their impacts. System-based standards evaluate whether systems are in place to allow forest owners/managers to achieve and review the targets they have set. System standards cover enterprise policies, management-systems and processes. The two concepts are complementary, and most forest certification schemes have elements of both. *See below, as well as page 17.*

Certification This is the process whereby an independent third-party (called a certifier or certification body) assesses the quality of forest management in relation to a set of predetermined requirements (the standard).The certifier gives written assurance that a product or process conforms to the requirements specified in the standard.

Accreditation process This is the procedure by which a regulatory body formally recognises that another organisation is competent to evaluate compliance with certification standards. Accreditation refers to the process of evaluating, endorsing and monitoring organisations that independently conduct forest management assessments and/or chain of custody audits. In short, accreditation refers to the process of certifying a certifier.

Performance-based standards Performance-based standards are used to evaluate whether the managed forests meet specified ecological and social performance measures. Monitoring is carried out to verify whether the specified performance requirements (for example conserving biodiversity) are being met. Performance-based standards focus on outcomes and give forest managers flexibility in the process of achieving them. For performance-based standards, it is essential that

minimum thresholds be established at the outset. Performance-based standards offer an accurate and independent representation of conditions on the ground. *See also page 17.*

System-based standards *(also called process-standards)* System-based standards are used to evaluate whether systems are in place that allow forest owners/managers to achieve and review targets they have set. System-based environmental standards focus on process rather than on outcome. Under such a system, the environmental management system is evaluated rather than the forest. In a system-based certification process, two forestry organisations carrying out similar activities but having different environmental performances, may both comply with the requirements of the standard. *See also page 17.*

Sustainable forest management Defining and assessing sustainable forest management poses many difficulties. The concept is young and the relevant timescales are long. To assess adequately whether a forest is managed 'sustainably' takes centuries, more time than has passed since these discussions began at the end of the eighties. What is clear is that many forests are not sustainably managed. It is also clear that sustainable forest management is about more than sustained yield. It includes all forest values: social, environmental, cultural and spiritual. Although governments have developed different definitions of sustainable forest management[2], most NGOs prefer to promote the term 'responsible forest management', or definitions that reflect the concept of sustainability developed in Rio, in 1992, i.e.: environmentally sound, economically viable and socially responsible forest management.

Mutual recognition This is a reciprocal arrangement under which one standards body or system recognises and accepts other standards or certification schemes as substantively equivalent in intent, outcome and process. Given the proliferation of certification schemes on the market, it is not surprising that there are calls for mutual recognition between different schemes. Such calls are often supported by governments and industry, which prefer to deal with only one scheme. This report shows that, at present, the differences between the certification schemes appear too great to justify mutual recognition.

3 Methodology

This report aims to provide reliable information to companies, governments and NGOs on the differences and similarities between certification schemes and the potential of each scheme to contribute to improvement of forest management. The starting point for evaluation is that no scheme is preferred above any other; our objective is to evaluate the merits of each scheme against our published criteria. The report is based on case studies exploring the implementation of four forest certification schemes in six different countries.

The four schemes investigated are the Forest Stewardship Council (FSC), the Canadian Standards Association's Sustainable Forest Management Standard (CSA), the Sustainable Forestry Initiative of the American Forest & Paper Association (SFI) and the Pan European Forest Certification scheme (PEFC). These four schemes were chosen because they supply the greatest amounts of certified timber to the market, and they compete within the same markets[1].

Six countries were chosen: the USA, Canada, Germany, Finland, Sweden and France. Within these countries, the CSA is operational in Canada; the SFI in the USA and Canada; the PEFC in Germany, Finland, Sweden, and once approved, in France; and the FSC in the USA, Canada, Sweden and Germany. Six consultants were contracted to carry out the case studies and report on their findings. For an overview of all FSC and PEFC certifications *see Appendix C.*

Each of the consultants developed their reports by answering a detailed questionnaire. For every scheme under investigation, questions covered the quality of the certification standards, the standard-setting procedure, the certification and accreditation process, the accountability of the organisation and the rules for labels and chain of custody. The questionnaire is reprinted in Appendix A. The consultants collected their answers from written information, web-sites, face-to-face interviews and telephone interviews. To ensure the information was factual and correct, each report was sent to representatives of the relevant certification scheme (or affiliated organisations) for comments before publication; where factual errors were noted, changes were made to correct them. No field studies were carried out. The full case studies are available at www.fern.org and www.cmnet.org. The analysis presented in this report is based on the outcome of the case studies.

Several existing documents were used to develop the questionnaire. These include: '*Institutional requirements for forest certification*' by Vallejo and Hauselmann[3]; '*Elements for the assessment of forest certification schemes*' by Kanowski, Sinclair and Bass[4]; '*A comparative matrix of forest certification schemes*' produced by the Confederation of European Paper Industries (CEPI)[5]; and '*Report on mutual recognition between credible sustainable forest management standards and certification systems*' produced by the International Forestry Industry Roundtable (IFIR)[6]. Furthermore, the requirements for certification schemes, as spelled out by the Intergovernmental Panel on Forests and the FAO's Committee on Forestry, were used as a starting point[7].

Although these reports provide useful analysis and criteria, only one provides a comparison between the different schemes. The matrix developed by the Confederation of European Paper Industries

(CEPI), compares all of the schemes, but has several handicaps. The main one is that it does not provide an independent comparison, as the matrix is based on self-assessment of the different schemes. *See Box 1 'Comments on the CEPI matrix', below.*

Box 1 Comments on the CEPI matrix

In November 2000, the Confederation of European Paper Industries (CEPI) presented a second version of its *"unbiased approach to the comparison of different certification schemes"*. Although CEPI deserves credit for making this comparison, there are several problems with the CEPI approach.

1. The matrix was developed on the basis of a questionnaire sent out to different bodies responsible for certification worldwide. Therefore, the matrix is dependent on information supplied by the governing bodies of certification schemes themselves – i.e., it relies on self-assessment by the schemes under investigation. CEPI did not see it as its task to control or judge the value of the statements made. This has allowed the certification schemes to provide incorrect statements. These are included but not limited to the following:

- Under the criterion *'there are rules established to ensure no single interest dominates the decision making process'*, the PEFC, FSC, SFI and CSA all score double plusses. However, with the exception of the FSC, all schemes have rules that allow one single interest (either forest owners or the forestry industry) to dominate the decision-making process[8].
- The criterion *'requirement for certification applicants to be certified to ISO140001 or EMAS'* indicates plusses for PEFC Finland/FFCS, PEFC Germany, and double plusses for SFI, PEFC Sweden, and the CSA. However ISO or EMAS certification is not a requirement of any of these schemes.

2. As CEPI states: *"The matrix provides little information on the actual content of the forestry performance standards and the level at which they are set"*. And therefore *"the matrix provides no real indication of a scheme's relative effectiveness and efficiency in actually promoting sustainable forestry management on the ground"*.

Beech forest in Germany.

4 Who's who in forest certification: FSC, PEFC, SFI and CSA

In the mid 1980s, European environmental NGOs concerned about the forest crisis received requests from NGOs and Indigenous Peoples Organisations in the South to support them in their endeavour to save their forests. This resulted in campaigns all over Europe, and later in the USA and Canada, for the recognition of land rights of forest peoples and campaigns to restrict the import of tropical timber (often translated as boycotts) so that no timber from these disputed areas could enter the consumer countries. By focusing on tropical timber, the message the general public understood, was 'tropical timber is wrong and non-tropical timber is right'. In the 1990s, NGOs in timber-producing countries in the North (mainly Scandinavia and Canada) strongly objected to this message; they felt the forest management in their countries was in many cases as unsustainable as in the tropics and needed great improvement. Furthermore, a few producers in tropical countries did manage their forests responsibly and wanted to market their timber as such.

Therefore, the NGOs campaigning in consumer countries had to reformulate their message. For most of them it was clear that, from an environmental point of view, timber coming from well-managed forests is better than some plastics (particularly PVC and polystyrene) and aluminium. However, timber from badly managed forests, or from areas where local people's rights are not respected, should be avoided. A mechanism needed to be found to allow consumers to make that distinction. That is how the idea of certification came about. A group of timber users, traders and representatives of environmental and human-rights organisations met in 1990 to discuss how they could combine their interests in improving forest conservation and reducing deforestation. Their meeting confirmed the need for an honest and credible system for identifying well-managed forests as acceptable sources of forest products. From these beginnings, the FSC and the certification debate developed.

FSC The Forest Stewardship Council was created in 1993 to harmonise a global framework for performance standards and to act as an accreditation body for certifiers. *'Providing an incentive in the market place for responsible forestry'* is its motto. Contributing to better forest management was one of the FSC's founding aims[9]. The FSC's main tasks so far have been the accreditation of certification bodies and the elaboration of global, regional and national certification standards, based on the FSC's global principles and criteria, which are binding [10]. FSC-certified timber and wood products are marked with a distinctive logo, which is promoted to consumers via in-store publicity and media coverage. Promotion has mainly taken place via the Buyers Groups or Forest and Trade Networks, often co-ordinated by environmental NGOs. There are to date FSC certified forests in 40 countries around the globe[11].

PEFC The Pan European Forest Certification scheme was set up between 1998 and 1999 by the national forestry interest groups of several European countries. The creation of the scheme was a direct response to the FSC, as these groups felt that the FSC process did not address the needs of the small private forest owners and was dominated by NGOs [12]. The purpose of the PEFC scheme *'is to establish an internationally credible framework for forest certification schemes and initiatives in*

European countries (in first instance), which will facilitate mutual recognition of such schemes'[13]. The certification criteria used in the national PEFC schemes are based on the criteria and indicators developed by governments in the Pan European Process, as a common framework[14]. The criteria and indicators are not binding. The PEFC has a distinctive logo. The PEFC scheme has seven objectives. These include: *"strengthening and improving the positive image of forestry and wood as a renewable raw material and giving assurance to customers and the general public that forests certified under the program are sustainably managed*[15]*"*. Some commentators see the PEFC mainly as an initiative by private forest owners associations designed to better accommodate the specific situation of its many small-scale forest owner members[16]. Five European countries have PEFC certified forests[17].

SFI The Sustainable Forestry Initiative was launched in 1995 by the American Forest & Paper Association (AF&PA). The AF&PA is the national trade association for the USA forest products and paper industry, whose members control 90% of USA industrial forest land, 84% of paper production and 50% of solid wood production[18]. The program was developed in response to public concerns about the forest products industry's environmental performance. AF&PA research on public perceptions found that the public was especially negative about the industry's ability to protect wildlife, lakes and streams, preserve wilderness and practice sustainable forestry. Clear-cutting was a major concern. The SFI was established as a 'proof of performance' program to help improve forest mamagement and to promote what the industry felt it was doing well, such as tree planting following logging, in order to overcome negative public perceptions. As of January 1995, all AF&PA member companies are required to participate in SFI as a condition of continued membership in AF&PA. Members can chose between first-party (self-assessment), second-party and, as of July 2000, third-party verification. Only third-party verification is called 'certification'. The SFI is in the process of developing a label, expected in 2001.

CSA The Canadian Standards Association's Sustainable Forest Management Standard was initiated through funding from the Canadian Sustainable Forestry Certification Coalition, a collective of forest industry associations. The goal was to *'promote the use of sustainable forest management standards, nationally through the CSA and internationally through the ISO, in order to continually strive towards sustainable forest management, secure a sustainable supply of forest products and ensure support for our practices at home and abroad'*[19]. The standard was developed by the CSA's Technical Committee on Sustainable Forest Management and adopted in 1996 by the Standards Council of Canada as Canada's National Standard for Sustainable Forest Management. At present, the standard does not provide for on- or off-product labelling, and is, therefore, more adequately described as a 'registration' than a 'certification' system. The CSA uses the term 'registration' for forests that have been audited against the CSA standard. Although no logo is yet available, the CSA has asked the PEFC Council to begin the process of PEFC recognition for its standard[20]. The PEFC Council expects adoption of the CSA standard in the middle of 2001[21]. This will presumably allow the CSA to use the PEFC logo.

Table 1: **The number of hectares certifiedunder the FSC, the PEFC, the CSA and the SFI** (March 2001)

	Total number of hectares	*Smallest-largest certification (in ha)*	*Region where the scheme operates*	*Years in which certification took place*	*Total number of certificates*
FSC[22]	22,165,741	5–1,800,000	Global	1996-2000	284
PEFC[23]	32,370,000	Mostly regions	European	2000-2001	Unclear
CSA[24]	4,215,000	12,000–1,000,000	Canada	1996-2000	10
SFI[25]	11,336,032[26]	4,050–2,914,980	US and Canada	2000-2001[27]	21[28]

5 The assessment

The direct purpose of certification is to verify that something (a product, service or process) has been carried out as prescribed. With regard to forests, certification allows timber growers to invite accredited, independent bodies to assess their forest management practices against agreed criteria (such as maintaining or restoring biodiversity) and, if they perform well against these criteria, to earn the right to label their timber (for example, with the FSC or PEFC logo). The label enables consumers to discriminate in favour of products from well-managed forests and gives forest owners/managers an incentive to improve their management.

Different stakeholders have different and sometimes competing ambitions for forest certification. For environmental and social NGOs (speaking for concerned consumers), the original hope was that the certification process could improve forest management and conditions for forest peoples. For forest owners and the forestry industry, certification provides an opportunity to maintain or obtain market access, promote wood as a renewable resource, or obtain a price premium for certified products, although many also sincerely want to improve forest management.

Using a set of criteria reflecting the demands of governments, industry and NGOs, this report compares the four certification schemes. Unlike previous assessments, our analysis focuses on the development and the implementation of each scheme in practice, as well as on the strengths and weaknesses of each scheme on paper. The starting point for evaluation is that no scheme is preferred above any other. Our report aims to evaluate objectively the merits of each scheme.

To provide a credible certification scheme that can lead to improvement in forest management, a broad spectrum of environmental and social NGOs support forest certification schemes that are or include:

I. Objective, comprehensive, and performance-based standards, with clear environmental and social thresholds.
II Equal and balanced participation of a broad range of stakeholders.
III Labelling system, including a credible chain of custody.
IV Independent third-party assessments, adequate control mechanisms and stakeholder consultations.
V Full transparency to all concerned parties and the public.
VI Certification at the forest management unit level, rather than at country or regional level.
VII Cost effectiveness and voluntary nature.
VIII Commitment from the forest owner/manager to improving forest management.
IX Applicability to all forest sizes and tenure systems.
X An effective and transparent complaints procedure.
XI Repeatability and consistency.
XII A transparent and high quality accreditation procedure.

In essence, all of these criteria (with the possible exception of item I and VIII) have been acknowledged as vital for a credible certification scheme by governmental bodies such as the IPF, by independent studies, and by the forestry industry. *See box 2 'Governments and industry demand certification'.*

Box 2: Governments and industry demand certification

The criteria used in this report reflect the recommendations of several inter-governmental policies and industry-backed studies. The most relevant government and industry positions are repeated below; the corresponding criteria of this report are shown in parentheses.

The Intergovernmental Panel on Forests (IPF) was created in 1995 to follow-up the implementation of Agenda 21 and the Rio Forest Principles, developed at the UN Conference on Environment and Development (UNCED) in Rio, in 1992. At its final meeting in February 1997, the IPF adopted a package of over 130 proposals for action to address a range of forest problems[31].

In one of its conclusions, the IPF states: *"Governments have a role in encouraging transparency, the full participation of interested parties; non-discrimination and open access to voluntary certification schemes" (II, V, IX)*. IPF Proposal 133, relating to certification and labelling, reads: *"urged countries to support the application to certification schemes of such concepts as: open access and non-discrimination in respect of all types of forests, forest owners, managers and operators; credibility[32] (II, V, X, XI, XII); non-deceptiveness (III, IV, XI, XII); cost-effectiveness (VII); participation that seeks to involve all interested parties including local communities (II); sustainable forest management and transparency" (I, V, VII)*.

Concerning criteria and indicators for sustainable forest management the panel noted: *"Criteria and indicators should be formulated through a transparent process involving all interested parties, including forest dwellers, indigenous people and local communities, as well as forest owners and other major groups, where applicable"*.

Other Government bodies such as the EU have elaborated on these criteria. So has the forestry industry, particularly the international forest industry round table (IFIR) in its report on mutual recognition[33]. The IFIR's report lists the following criteria (criteria referred to in the present study are noted in parentheses):
conformity with SFM standards and legislation (I);
participation (*"the influence of all stakeholders shall be balanced and consensus outcomes shall be sought"*) (II);
scientifically supported (I?);
continual improvement (VIII);
non-discriminatory (*"accommodating all forest types, sizes and ownership structures"*) (IX);
repeatability, reliability and consistency (XI);
independence and competence (IV);
transparency (*"procedures and documentation shall be clear, concise and readily available"*) (V);
SFM claims (*"all SFM claims are clear, unambiguous and substantiated"*) (III);
chain of custody (III).

I Objective, comprehensive and performance-based standards, with clear environmental and social thresholds

The level at which performance-based standards are set will determine whether forest certification will lead to improvement of forest management. Clear rules on issues such as biodiversity conservation, recognition and respect of local peoples' rights, workers' rights, equal benefit-sharing, use of pesticides and Genetically Modified Organisms (GMOs) are essential for any certificate that claims that the product comes from well-managed forests.

Our research shows that the FSC has by far the strongest performance-based standard, which includes social, economic and ecological aspects of forest management. The PEFC, the CSA and the SFI do not have binding, performance-based standards with clear environmental and social thresholds. These three schemes are built upon system-based standards, although they do include some performance-based elements. Social standards are weak in the PEFC and CSA and non-existent in the SFI.

Box 3 Performance or system-based standards?

There are two complementary but fundamentally different types of standards: performance-based standards and system-based standards. Performance-based standards focus on the outcome, while system-based standards focus on the process *(see five-minute guide to certification, page 9)*. System-based standards are useful, particularly for large, complex companies managing a wide variety of impacts. However, a growing body of literature shows that implementation of system-based standards is not, on its own, enough to improve performance. *'An analysis of information from 280 European companies at 430 production sites turns up no statistically significant relationship between better environmental performance and certification either to ISO 14001 or the EU's eco-management and audit scheme'.*[34] In the absence of appropriate performance-based standards, a label based on a systems audit is no guarantee of actual good forest management. Forest certification can, therefore, only be effective on the ground if a certification scheme includes strong performance-based elements.

Our research shows that the FSC is the only certification scheme built on a performance-standard, although it does have management-system elements as well. The SFI, CSA and PEFC are all created as system-based certification schemes, although some national PEFC schemes (notably in Sweden and Finland) have performance-based standards, and the SFI and CSA standard include some performance-based elements. Because there is no overall performance-based standard to which SFI, CSA and PEFC certifications must adhere, the certification standard is not consistent within these schemes. For the CSA and SFI, standards and indicators used may vary widely on a case-by-case basis, as they are set, in part, by the organisation that applies for certification. PEFC standards vary widely on a country-by-country basis, as there is

no European-wide performance-based standard to which all national standards have to adhere. The FSC criteria and indicators also vary on a region-by-region, or country-to-country basis, according to the national standard setting process, but all have to implement the binding global performance-based FSC principles and criteria. The FSC scheme is, therefore, more consistent. *See also section XI of Chapter 5.*

FSC The FSC is a performance-based scheme based on a set of 10 principles and 56 criteria, covering economic, social and environmental issues *(See Appendix D)*. Although there is considerable variation between national standards, the process is such that all standards have to deliver the global principles and criteria of the FSC in a way that is appropriate for that country. Although some NGOs see the FSC principles as too lax (specifically principle 10 on plantations), issues such as biodiversity conservation (including set aside areas), recognition of and respect for local peoples' rights, workers' rights, equal benefit-sharing, use of pesticides and GMOs must be addressed in all national FSC standards. Hence, the standards do include the most relevant environmental and social issues, in every country in which they are applied.

PEFC The PEFC standards are based on the criteria and indicators established by governments under the Pan-European Process as a common – but not binding – framework. As Appendix D shows, most of these criteria and indicators are not performance-based. The more detailed and performance-based Pan European Operational Level Guidelines, developed by governments within the same process, form only a non-binding reference point[35]. There is, consequently, no binding, uniform set of criteria to which national PEFC schemes must adhere. This means that national PEFC schemes can vary widely between countries and even within countries. Some are clearly performance-based (Sweden and Finland), others emphasise system elements (Germany and France). There is very little evidence that system-based schemes alone can lead to environmental improvement. *See also Box 3 'Performance or system based standards', page 17.* Even a proper performance-based scheme, such as the PEFC scheme in Sweden, does not fully address some of the major environmental and social issues related to forestry in Sweden. *See table 2.*

Table 2. **Comparison between the PEFC Sweden standard and the FSC Sweden standard** [36]

Forestry Practice	*FSC*	*PEFC*
Indigenous peoples' rights	Requires respect for Sami customary grazing rights	Requires dialogue but no respect for Sami customary grazing rights
Set aside areas	5% of productive forest land	0% - 5% of productive forest land
Harvesting in mountain forests	Restricted	No specific restrictions
Protection of key biotopes	Protected	Temporarily but not permanently protected
Retention of eternity trees	10 trees per hectare	5 –10 trees per hectare
Use of fertilisers	Restricted	Not restricted
Use of chemicals	Relatively strict	Less strict
Ecological landscape planning required	Yes (>5000 ha)	No requirements

Reality check **Because of the large differences between the different national PEFC schemes, it can be argued that the PEFC does not provide a label of consistent quality to consumers. A PEFC certificate in Germany and France [37] does not even require a field visit before the forests are certified** *(see page 31)***, while a PEFC certificate in Sweden is based on a field assessment.**

Reality check **The PEFC scheme is based on the Pan European Criteria and Indicators and its Operational Level Guidelines. The Pan European Operational Level Guidelines state that *"legal customary and traditional rights related to the forest land should be clarified and respected"*[38]. Nonetheless, in the Swedish PEFC standard, the customary rights of their indigenous people, the Sami are not respected. In this regard, the Guidelines are simply ignored by PEFC Sweden, despite the fact that disputes between private forest owners and the reindeer-herding Sami people about winter grazing rights have lead to court cases and political turmoil. These disputes have put the future of the Sami people in Sweden in jeopardy[39].**

CSA The CSA Standard is a system-based standard with a framework for performance requirements built into it. The system is based on ISO procedures adapted to the needs of the CSA scheme. The standard consists of six criteria and 21 critical elements, which are adapted to the local situation by the applicant, who elaborates values, goals, indicators and objectives for a defined forest area to be audited. No minimum thresholds with regard to key indicators for environmentally, socially and economically sound forest management exist. Thus, the system describes a process whereby the management of a forestry operation (the applicant) makes certain commitments pertaining to the environmental performance of its operations in a 'defined forest area' that can be verified by an independent auditor.

A performance-based standard (described as a 'sustainable forest management plan') based on the six criteria is developed once a company or forest owner (applicant) applies for certification. This 'sustainable forest management plan' is drawn up by the applicant with the advice of a 'Public Advisory Group' for which the applicant chooses the criteria and the members. The final decision on the level of the performance criteria used, remains with the company (applicant) that applies for certification. Therefore these standards vary widely per company, as no common set of criteria to assess on-the-ground forest management has been developed.

Reality check **The final decision on the level of the performance criteria used (described in the CSA as 'the sustainable forest management plan') lies with the company that applies for certification. An initial assessment of the sustainable forest management plans reveals that few, if any, indicators are chosen that relate directly to silviculture or logging practices. Despite the fact that the CSA standard requires that a sustainable forest management plan contains a description of practices intended to achieve each of the six listed criteria, management plans have been approved without a clear description of the logging practices used in the CSA registered/certified forest[40].**

SFI The SFI standard and certification process emphasise evaluation of system-based measures and indicators, rather than field performance-based measures and indicators. The standard does not address social and economic issues. On issues of concern to environmental NGOs and the public at large (such as protection for old-growth and high conservation value forests, curbs on large clear-cuts and reductions in chemical use) the SFI scores very badly in comparison with the FSC-USA standard *(see Table 3)*. For SFI certification ('third-party verification'), forestry operations must meet a subset of core-indicators. These indicators focus largely on system-based measures that can be assessed in an office rather than in the field. The use of all other SFI verification indicators remains discretionary. Therefore, SFI provides neither a strong set of standards, nor consistent benchmarks for environmental or social performance.

Reality check **The single largest SFI certification (millions of hectares and 25% of SFI's total certified forest area) was given to Interfor, which is known for its controversial clear-cutting of**

old-growth, coastal temperate rainforest in British Columbia, Canada. In December 2001 SFI endorsed Interfor's operations as 'sustainable' (i.e. meeting its standards) even as major corporate buyers around the world were cancelling new business with the company due to its ecologically destructive practices. Rather than distinguish 'sustainable forestry' from the rest, as its name would imply, the SFI standard endorses unsustainable forestry practices that have provoked local, regional and even international protests.

Table 3. **Comparison: SFI standard and the FSC-USA standard**[41]

Forestry practice	*FSC*	*SFI*
Old growth and High Conservation Value Forests (HCVF[42])	Includes old growth and HCVF protection measures	Does not include protection of old growth and does not address HCVF
Chemical use	Reduces/limits use (strive to avoid and some prohibited)	Does not reduce or limit use (follows required laws)
New conversions of natural forests to plantations	Not allowed	Allowed
Clear-cuts	Allows smaller clear-cuts. Retention specified.	Allows larger clear-cuts (up to 116 football fields in size) No retention specified
Conservation zone	Specified under certain conditions	Manage special sites appropriate to their value
Ecological Restoration	Specified under certain circumstances	Not addressed
Genetically Modified Organisms	Not allowed (with exceptions)	Allowed
Snags and downed woody debris	Required	Not required
Maintenance of ecosystem processes	Allows natural forest and plantation management. Specifies practices that maintain forest ecosystem processes, structures and diversity at stand and landscape levels	Allows plantation and natural forest management. Does not prevent intensive management from truncating and over-simplifying forest ecosystem processes, structures and diversity at stand and landscape value
Public trust values on USA public land	Recognised	Not recognised

Box 4 Criteria and indicator processes and their relation to certification

Many Governments have worked towards a common understanding of the concept of sustainable forest management in line with the Forest Principles agreed at Rio, through the development of common criteria. They have also agreed on a number of indicators by which 'sustainability' can be assessed, monitored and reported. This has been accomplished through nine major international processes including the Pan European Process that developed the Helsinki Criteria and Indicators, and the Montreal Process that developed the Montreal Criteria and Indicators. *See Appendix D.*

These criteria and indicators were developed primarily for reporting forest conditions at the national level. They were not intended to assess the performance of forest management at the level of the forest management unit. Therefore, they are poorly adapted for certification, even though more recently a number of these processes have developed forest management unit level criteria and indicators. As stated by the FAO's Committee on Forestry these criteria and

indicators *'are neutral assessment tools for monitoring trends'* and *'therefore cannot be used as substitutes for minimum agreed-upon forest management standards which underpin certification'*[43].

The same committee states that certification efforts should make use of national level programmes and that national level efforts should make strenuous efforts to ensure that activities related to implementation of criteria and indicators are compatible with certification efforts. Also the European Union made this clear when it stated that *'it is important to recognise the differences between indicators for sustainable forest management and certification standards. While indicators are used to show the state of the art and to monitor changes with regard to relevant aspects of sustainable forest management (as defined by criteria), certification standards lay down a certain quality level or performance standards that has to be achieved'*[44].

SFI-certified logging in the Great Bear Rainforest in British Columbia, Canada.

II Equal and balanced participation of a broad range of stakeholders

According to intergovernmental agreements standard-setting processes must be fully participatory[45]. As the standard-setting process is arguably the most politically contentious part of forest certification, any credible scheme must engage all stakeholders in participation, and no stakeholder group should be allowed to dominate. As stated by Kanowski[46], '*participation is more than a passive consultation process: it implies that stakeholders are able to influence outcomes.*' Or, as the CEPI matrix criteria indicates[47], *'no single interest group should be able to dominate the decision making process'*. A standard developed by one interest group for the same interest group cannot be seen as a credible certification standard.

Our research shows that the development of the SFI standard was dominated and controlled by the USA forest products industry trade association. The CSA standard setting process, although initiated by the forestry industry, was open and transparent. The different PEFC national standards have all been developed – with the exception of Finland – in a process where private forest owners and wood-processing industry hold the majority of votes, and could in all cases overrule the joint votes of trade unions and environmental or consumer organisations. The FSC is the only scheme where the global principles and criteria and the national standards have been developed by social, environmental and economic interests all having an equal say.

FSC The FSC has procedures whereby its global principles and criteria are 'translated' to national or regional standards. The FSC board then approves those national standards that fully implement the global principles and criteria. The FSC requires evidence that all three chambers (social, economic and environmental) have been involved in and support the national standard, although not all representatives of all interest groups have to support it. The balance of votes is 33% for each of the three sectors, so none of the sectors can dominate the process.

PEFC The PEFC has based its national standards on the criteria and indicators of the Pan European Process, and uses the Pan European Operational Level Guidelines as a reference. Governments adopted these Guidelines, despite environmental and social interest groups' concern regarding their content[48]. Furthermore governments as well as environmental NGOs have repeatedly stated that Criteria, Indicators and Guidelines developed by the Pan European Process can not be treated as a certification standard, as they do not contain any minimum requirements. A comment recently repeated by the FAO's Committee on Forestry[49] (*see also box 4 'Criteria and indicator processes and their relation to certification', page 20)*. Furthermore the decision making process with PEFC France, Sweden and Germany is such that economic interests can always overrule the combined

interests of the social sector (unions, indigenous peoples, etc.) and the environmental sector.

PEFC Finland/FFCS[50] In Finland, what later became the national PEFC standard, was developed with input from NGOs, although a year later these NGOs distanced themselves from the process. During the process of defining the standard, Finland's indigenous peoples, the Sami, were not sufficiently heard, resulting in a conflict between the Sami and the Finnish Forest and Park Service[51]. PEFC Finland/FFCS does not appear to have binding guidelines for the standard-setting process or requirements for the composition of the working group.

PEFC Sweden In Sweden, the PEFC Interim Council developed the standard. Members of the Council were forest owners associations and saw mill associations. Sections of the Swedish church and the federation of forest machine entrepreneurs participated as observers. No environmental or social NGOs participated in the drafting of the standard. As PEFC Sweden has currently divided its members in three chambers (forestry, primary processing industry and other interests) and voting power is equally divided between the three chambers, the decision making process is in the hands of economic interests: they can always overrule the 'other interests', which include social and environmental interests [52].

PEFC Germany In Germany, the PEFC standard was developed by the German Forest Certification Council. Half of the 18 council members are private forest owners. Another four seats are allocated to immediate market partners of forest owners and a maximum of four seats are attributed to environmental and labour union stakeholders. The Council decides by simple majority or 75% of the votes, depending on the issue. Given that trade unions and environmental interests together have a maximum of 22% of the votes, their interests can be overruled at any time. In case of parity of votes, the chair of the board (who must be a representative of the forest owners according to the statutes), casts the decisive vote[53].

CSA The CSA standard was drafted by a technical committee that represented a wide spectrum of interests including academics, research institutes, ministries and forest industry. It was funded by a collective of 22 forest industry associations, headed by the Canadian Pulp and Paper Association. Most NGOs and First Nations raised concerns about the process and declined participation as they felt the process was dominated by vested interests. Nonetheless, the standard- setting process has been described as open, inclusive and consensus oriented[55]. Drafts were made available to NGOs and the wider public. Comments were taken on, and the standard was tested in the field and adapted before being approved by the Standards Council of Canada.

Because the CSA standard itself does not include clearly defined and quantified entry-level criteria that would set minimum performance thresholds for on-the-ground forest management, the applicant is required to determine the performance requirements for the area to be certified. It is in the process of developing these requirements that performance levels for forest management are set. This process of setting the 'local certification standard' is carried out by the applicant, with advice from a Public Advisory Group[56] created for this specific process. The final decision about performance requirements rests with the company seeking registration of its operations under the CSA scheme.

> **Reality check** **Practical experience with Public Advisory Groups has revealed that the development of indicators or performance objectives directly related to logging practices usually fell outside the mandate of the Public Advisory Group. Alternatively, whenever indicators affecting the status quo of logging practices were suggested, the advisory nature of the group became very apparent. Examples of indicators and quantified objectives rejected by the companies include not increasing road access, substantially increasing the amount of coarse woody debris left on site,**

setting a target for the percentage of selective logging carried out in the 'defined forest area' or maintaining and increasing the number of jobs per cubic meter cut[56].

SFI The SFI's standards and procedures have been developed and approved by industry for industry, rather than by a balance of environmental, social and economic interests. To develop the SFI standards and procedures, the American Forest & Paper Association (AF&PA) established a forest resources task force in February 1994, which hosted regional workshops to gather input from members and allied organisations. In October 1994 the AF&PA board formally approved the SFI's first set of standards. The current set was approved by the board of the AF&PA in July 2000.

SFI-certified logging by Interfor in British Columbia, Canada

III A labelling system, including an credible chain of custody

If certification is to influence a consumer's purchasing choice, the certifying process must follow an item through its entire production process, from the forest to the shop. For a product from a certified forest to carry a label claiming that the product comes from well-managed forests, it is necessary to certify the 'chain of custody', including log transport, processing, shipping and further processing. To allow consumers to make a choice with positive impacts, a reliable chain of custody is essential. Without this, there is nothing to link the product to the certified forest.

Our research shows that the only schemes that provide labels and therefore require a chain of custody, are the FSC and the PEFC. The FSC rules are more stringent than the PEFC rules. The SFI and CSA provide no label and therefore do not require a chain of custody. However, this is about to change: the SFI intends to produce a label in 2001 and the CSA has asked the PEFC to recognise its standard, which would presumably allow the CSA to use the PEFC label.

FSC The FSC label can be used only on products where the chain of custody has been audited (and monitored annually). If there are several stages of processing in different plants or even different countries, each stage must be audited to ensure that the certified product genuinely originates from a specific certified forest. Any FSC-labelled product will have a chain of custody certificate number on the label and this can be used to trace the product in the event of a question arising. Products made from timber from multiple sources, such as paper and chip products, can be labelled indicating the percentage of the material that is from FSC-certified forests, provided a certain minimum percentage is certified[57]. In these cases the chain of custody audit includes checks on the percentages of material from different sources. Keeping track of the flows of timber can be carried out in several ways, depending on the value of the product and the risk of contamination from other sources. These include physically marking and segregating the wood, bar-coding individual logs and using waybills and shipping documents to track species and volumes[58].

PEFC The PEFC offers the following approaches to chain of custody: 1) an input-output system; 2) a minimum average percentage system; and 3) physical segregation. The first approach means that when a known percentage of PEFC certified wood enters into processing, the same percentage of the production output is considered to be certified. This does not have to be -and quite likely will not be- the same timber that was originally certified. The minimum average percentage approach means that a total batch of products can be labelled as certified when the amount of certified wood in the input batch exceeds 70% or more, by volume or by weight. Physical segregation means that certified timber is kept separate from non-certified timber. Only when the last option is used can the claim *'from*

sustainably managed forests' be used. When options 1 or 2 are used only the claim *'promoting sustainable forest management'* is allowed[59].

PEFC Sweden The certification scheme of PEFC Sweden includes mechanisms for labelling and chain of custody certification. Two basic approaches to chain of custody certification exist: 1) process certification of routines that are not part of a management system covered by an ISO certificate and 2) certification of the wood handling organisation's management system according to ISO 14001. Organisations with valid chain of custody certificates are also required to apply an official policy that states that the company does not accept wood deliveries from 'controversial sources', such as wood from illegal logging operations or wood from key biotopes as defined by the PEFC policy on key biotopes. Use of the PEFC logo requires a valid logo license issued by PEFC Sweden. There are two alternative approaches to labelling based on the input-output principle. All products may be labelled if a minimum of 70 percent of incoming raw material is PEFC certified. If less than 70 percent of the incoming raw material is certified, a proportion of the output, which corresponds to the proportional input of certified raw material, may be labelled[60].

PEFC France In France, the PEFC system will allow, once operational, the use of the PEFC logo on products for up to three years without the forest in the regions having undergone full certification: *'considering the period of time required for implementing the ISO procedure within the concerned bodies [CRPF and ONF], the benefit of using the logo may be granted provisionally and for a maximum period of one year, renewable twice[61]'*.

CSA The CSA scheme is not a labelling scheme and does not provide for any claims to be made that link specific products to forests managed according to the CSA system. The standard does not at present provide for on- or off-product labelling. Though the original system was not intended to provide a chain of custody framework, the CSA is now investigating a chain of custody procedure in light of the international debate on and demand for chain of custody procedures as part of a certification scheme[62].

SFI The SFI has no chain of custody tracking process. The American Forest and Paper Association (AF&PA) argues that chain of custody tracking is not viable in the US, where millions of private forest owners control a significant portion of the commercially productive forests. At the moment, the SFI has no label, therefore it does not matter that there is no chain of custody. However, the SFI expects to launch a label in 2001 in response to market demand for FSC certified products. Products such as boards will be stamped, but the boards themselves will not be certified because there is no chain of custody. Thus labelled boards from SFI-certified companies need not originate from SFI-certified forests. They may also come from uncertified, 'open market' log purchases. Current standards for wood coming from outside suppliers are insufficient to ensure sound forestry practices are taking place on those lands[63].

IV Independent third-party assessments, adequate control mechanisms and stakeholder consultations

There is universal agreement that to deliver a credible label, certification assessments or audits must be carried out by an independent certifier (third-party assessment) and not by the forest owners or managers themselves. Furthermore, once certified, the forests should be monitored regularly (preferably annually) to ensure that management is in accordance with management plans and that required improvements have been carried out. Consultation of all stakeholders should be an essential part of the certification process.

Our research shows that all certification schemes require independent assessments for certification. There is, however, substantial difference concerning what exactly is assessed and how the assessment takes place. The FSC requires desk studies of management plans as well as field visits. Annual follow-up monitoring visits are mandatory. The PEFC scheme has no clear rules on how the certification process takes place, leading to different processes in different countries. In Germany and France, forests can be (and have been) certified without a certifier entering the forests, in Sweden and Finland that is not possible. The CSA and SFI have clear rules for certification, but allow applicants significant flexibility to decide the details of the standards used in their assessment. Therefore, the standard against which the certifier carries out the certification varies on a case-by-case basis.
All schemes require regular audits once the forest is certified. The FSC and CSA require field audits every year. The SFI requires an initial audit after three years and every five years thereafter. PEFC does not require annual audits, although the PEFC schemes in Germany, Finland and Sweden all carry out annual field visits.
The requirement to consult all stakeholders, as part of the certification process, is only present in the FSC and CSA schemes. None of the national PEFC schemes includes this requirement, although stakeholder consultation has taken place in Finland. Stakeholder consultation is absent in the SFI scheme.

FSC Within the FSC scheme, certification is a voluntary process that each forest owner or manager chooses to undergo with a certifier. The process starts with a desk study of management plans and monitoring records, followed by an office visit and field inspection of the operation. Each certifier uses a field checklist that could be used by any auditor to assess the same operation. The certificate is usually valid for five years. Annual monitoring visits are mandatory. As part of the certification process the certifier will consult other interested parties such as employees, neighbours, government authorities and environmental groups to help identify issues that need special attention in relation to

that operation. A report on the operation is prepared and reviewed by independent experts before a decision is taken on whether to award a certificate, which in turn may attach conditions to certification. A public summary of the report is then made available to all interested parties. The applicant has some control over the scope of the audit. The applicant can also comment on (but cannot determine) the members of the audit team[64].

PEFC The PEFC has no detailed certification procedures for PEFC certification bodies. The PEFC technical document only lists the elements of the certification procedure. Stakeholder consultation is not mentioned as one of the elements. Certification procedures are, in most cases, developed by the PEFC certifier together with the national accreditation body. The procedure, therefore, differs across countries[65].

PEFC Germany In Germany the focus of the assessment is on compliance of the regional report with the German PEFC standard. Later assessments, as part of a weighted sample after the certificate is issued, focus on whether forest management in the region is moving towards achieving goals set out in the regional forest report. The PEFC systems documentation does not specify quantified targets for the area to be sampled annually, or a process that would ensure that during the lifetime of a certificate all certificate holders in the region have been subject to at least one field visit. There further appears to be no process in place to ensure that in the case of non-compliance a forest management unit will be re-visited during the next annual round of field visits. No stakeholder consultation is required[66].

> **Reality check** **In none of the six German states certified under the PEFC scheme were field visits carried out, before the certificate was issued. In Germany the PEFC scheme does not require the certifier to carry out a field visit before certification, as the certification body does not certify the foreststs but the regional forest report. The scheme allows the certifier to demand a field visit as part of assessing the regional forest report, if the certifier can substantiate the necessity to verify data provided in the regional forest report[66].**

PEFC Sweden According to the national Swedish accreditation body (SWEDAC) the Swedish PEFC standard determines what the certification bodies are to do. Relevant aspects that it does not include need to be covered by the certification bodies' routines. The ambition has been to identify such aspects during the test audits in order to complement the PEFC documents in such a way that the certification bodies work with common interpretations and guidelines. These specific routines are not yet finalised and consequently, not available. SWEDAC is aiming for a document that does not regulate the certification bodies in too great detail. It is more important, according to SWEDAC, to ensure that the certification bodies have competent staff on their teams (expertise on forest management, management systems, industrial processes, etc). It is up to the professional judgement of the certification bodies to interpret the standards. SWEDAC explains that the certification process will include: mandatory field visits during which compliance with the standard will be checked before certification is granted; monitoring visits one or two times a year; and specific requirements on sampling procedures. No stakeholder consultation is required[67].

CSA The CSA standard requires both a documentation audit and an implementation assessment including field inspection of the forest site ('defined forest area'). With regard to the quality of forest management, the key document used by the certifier to assess whether performance requirements are met is the local certification standard (or sustainable forest management plan in CSA terminology). This standard is developed by the applicant. Before granting a certificate, the certifier ('auditor' in CSA terminology) will:

- seek assurance that the objectives of the sustainable forest management plan on the 'defined forest area' are being achieved;
- collect evidence to determine whether the sustainable forest management plan is effective;
- verify the accuracy of measures of changes in forest values and indicators;
- carry out a comparison of performance against objectives;
- assess compliance with legislation and regulatory requirements and with other commitments.

The operation is revisited six months after the initial audit; further surveillance audits, including field visits to review sustainable forest management system documentation and implementation, follow annually. The certificate is granted for three-year intervals.

Reality check **From the standards documents or the audit reports that were publicly available, it was not clear which of the tasks listed above were verified during field visits and which were verified during the documentation audit only.**[68] *(see box 2 'Governments and industry demand certification' page 16)*

SFI The SFI certification applicant has considerable influence over the certification process, as the SFI program procedures allow the certification applicant to work with the certifier to tailor the scope, location and extent of the audit, the audit plan, the audit team and the audit report content. Participants define their own corrective actions. There is no stakeholder consultation or public input process. An initial control audit will take place within three years and then every five years thereafter[69].

Reality check **Consulting all stakeholders before a certificate is issued, is one of the demands for a credible certification scheme expressed by governments in the IPF process. *See box 2.* An adequate procedure for stakeholder consultation is probably one of the best ways to ensure that certification will contribute to better forest management, as it is this process that allows parties to express their wishes, concerns and visions about certain forest management practices, land use etc. Only the FSC and the CSA have so far developed a mechanism for stakeholder consultation. The PEFC and SFI have not.**

Felled trees from old-growth forests in Finland, which were logged by the Finish Forest and Park Service for StoraEnso.

V Full transparency to all concerned parties and the public

Transparency is one of the most essential elements to ensure a certification scheme is credible, a fact acknowledged by governments, NGOs and industry alike. Transparency relates to the standard-setting process, as well as to the accreditation and the certification procedures. This section deals mainly with transparency in the certification process, and specifically that part which is most easily tested: the availability of information. Certification reports, or summaries thereof should be available to the public and decisions made in the certification process should be clearly communicated.

Our research shows that all certification schemes can and should improve transparency, however there are great differences between the four schemes. The FSC is more transparent than the CSA, the PEFC and SFI. Virtually all summary reports of FSC-certifications carried out were available on the certifier's websites. By contrast, despite PEFC requirements to publish summary reports of certifications, such reports were, in most cases, not available. The CSA scheme does not require audit reports to be publicly available. Where summary reports were publicly available, these were prepared by the company and not the certifiers. SFI certified companies are required to prepare public summaries together with their certifiers, but the content is not specified and public summaries have not been readily available.

FSC The FSC's processes are quite transparent at all levels, from national standards-setting consultations to accreditation procedures. Public summaries of accreditation reports, accreditation-monitoring reports and certification reports must all be publicly available. The reports are written by the certifier, although the applicant can ask for information to be taken out on grounds of commercial confidentiality. The report highlights the strengths and weaknesses of the forest management and gives details of the corrective conditions that have been issued. Some commercial details may be excluded to ensure sufficient client confidentiality, but this should not include information that is critical to the certification or accreditation. In addition, both at national and international levels, minutes of meetings and other documentation are publicly available on request. Despite these clear rules, there have been complaints about lack of information from environmental NGOs[70] and communication between members and the FSC secretariat should be improved.

PEFC The PEFC states in its technical document that *"an executive summary of assessments containing important results shall be made available to the public"*[71]. The report must include the number and types of non-conformities found in certification. The applicant and the certifier must agree on the content of the public report. There are some glitches:

PEFC Germany In Germany, the PEFC documents suggest that a summary of the audit report, containing the key-findings, should be made public. It is however the applicant who decides both the content of the summary report and whether or not (and how widely) a summary report is distributed. No summary reports were available in March 2001[72].

PEFC Sweden In Sweden, the technical document states that *"available information about certification status should be open for questions regarding the validity of the certification. No other information may be released"*. PEFC Sweden adds that the forest management plans that form the basis of certification may be released with permission of the forest owner[73].

PEFC France In France, the PEFC states that *"after assessment by the certification body, the applicant entity decides to which extent the report will be made public"*[74].

CSA The CSA standards are not publicly available free of charge, but can be purchased for CAN $ 245. A list of certified forests is available, although not on the CSA web-site but on the Sustainable Forest Certification Coalition website. Certifiers do not provide audit reports. Because the CSA standard does not specify any requirements regarding publicly available documentation, applicants/companies do not always have a publicly available version of the audit report they receive from the auditor. Furthermore it is not apparent who an interested person would have to approach to obtain a copy of the full / summary audit report[75].

SFI SFI certified companies wishing to publicly proclaim their independent third-party certification should work with the certifier to prepare an audit summary for public disclosure. No information is specifically required. The audit summary provides, at a minimum, the general results concerning conformity. Thus, a press release claiming conformity could theoretically suffice, although program expectations would appear to be higher. Public summaries for SFI certified operations have not been readily available from the SFI or the American Forest & Paper Association, or on company websites. As of March 2001 only one public summary was known to be available[76].

VI Certification at the forest management unit level, rather than at country or regional level

To test whether certification improves forest management, certification needs to take place at the forest management unit level. Certification at the regional or country level does not allow the certifier actually to check what is happening in the forest. Therefore, to be credible, certification should take place at the forest management unit level. This has been confirmed repeatedly by governments and, most recently, by the FAO's Committee on Forestry[77].

Our research shows that the FSC, the CSA and the SFI all carry out certification at the forest management unit level. The SFI typically certifies at the level of the entire ownership or regional division of companies. The PEFC is based on regional certification in all countries, with the exception of PEFC Sweden, where certification takes place at the forest management unit level.

FSC The FSC requires that all certifications take place at the forest management unit level. Group certification is possible, but still requires certification at the forest management level. Group certification can take place when a group of owners of small forest properties with similar forests, and similar practices, is monitored by a 'group manager'. Each year, the certifier inspects the results of this monitoring plus a sample of the forest units. Group certification makes certification cost-effective for small operations. Poor practices by group members can lead to withdrawal of the certificate from all members if they reflect deficiencies in the internal group monitoring.

PEFC The PEFC scheme is *'based on regional certification levels and is open for other options if appropriate'*[78]. With the exception of Sweden, so far all PEFC certifications have been regional. In Germany no guidelines have been developed for individual or group certification processes, and no certification at the forest management unit has taken place. In Germany a certificate is based on a regional report, which is often written with the support of the state ministries and is not based on any field assessments. Typically field visits occur at the earliest six months after certification, but some forest areas may never be visited. The model in France is similar.

> **Reality Check** **With regard to its scope, the PEFC certificate in Germany is granted on a system-based regional report. No field visits need to take place before a certificate is issued; in none of the six states certified have field visits been carried out before the region was granted a certificate of conformity with the PEFC Germany standard. The regional reports largely contain inventory data gathered for other national and regional reporting purposes. They do not contain information related to quantified and binding performance requirements pertaining to forest management on the ground. Following a successful audit of a regional report, forest owners in the region receive a certificate indicating that they practice sustainable forest management[79].**

PEFC France PEFC France has set up a system for regional certification. Private forest owners join the PEFC regional entity, once the region is potentially certified. The certification of the regional entity entails the certification of all the forests in that region. No field verification of the forests that are part of the scheme is required before certification[80].

PEFC Sweden PEFC Sweden certification operates on the forest management unit level. This implies that a certification contract is signed with every individual forest owner or entrepreneur included in an umbrella group. Similarly, individual certification contracts are established with larger owners that are audited directly by the certifier[81].

PEFC Finland/FFCS Certification is carried out primarily at the regional level. All forests in the 13 Finnish Forestry Centres were certified in 1999 and 2000. So far no certification of individual forest holdings has been carried out, although it is technically possible. All forests within a Forestry Centre are certified automatically unless forest owners notify in writing that they do not wish to participate in certification[82].

CSA The CSA scheme certifies at the level of the forest management unit (defined forest area in CSA terminology).

SFI Certifications have been completed for defined forest areas under the management of a single entity (large corporation or specific state managed units). Therefore forest management unit certification is the rule. The applicant and the lead verifier (certification body) establish the scope of the certification. Certifications are typically at the level of the entire ownership or regional divisions of companies.

Typical old-growth demanding species, the three toed woodpecker

VII Cost effectiveness and voluntary nature

On several occasions governments have stated that certification should be cost effective. However, as Kanowski says[80] *"as certification initiatives ultimately stand or fall in the broader arenas of public policy and the marketplace, a specific criterion for cost-effectiveness seems redundant"*. To be complete, we have included cost-effectiveness in our research.

Our research shows that the FSC, PEFC and SFI seem to be cost-effecive and do not differ substantially in costs. No information was available on the CSA scheme. Although all schemes claim to be voluntary, doubt has been raised concerning whether the PEFC schemes in Germany and Finland can be called voluntary. The FSC and CSA schemes are fully voluntary and, although the American Forest & Paper Association requires all its members to participate in the SFI program, certification (third-party verification in SFI terminology) is voluntary.

Costs

FSC Germany FSC certification in Germany is both suitable and affordable for small forest owners. The average cost for FSC certification in a pilot project directly comparing FSC and PEFC, was Euro 0.13 per hectare per year (range of Euro 0.11 – 0.20 /ha per year). For other FSC certifications in Germany, certification costs have ranged from Euro 0.15/ha (1000 ha certified) to Euro 0.15/ha (50,000 ha certified)[84].

PEFC Germany For PEFC certifications, the costs are predetermined independently from the actual expenses for the certification audits at a base rate of Euro 10 plus Euro 0.10 per hectare (plus 16% tax). These costs are applicable regardless of the type of forest ownership or size of the forest holding

FSC Sweden The Swedish FSC Council does not have any compiled information on costs of FSC certification. The costs do, however, vary depending on whether an individual certificate, a group certificate, or a chain of custody certificate is being obtained, and on the size and complexity of the operation. Two examples of costs for FSC group certification are presented below. The examples are based on prices as of spring 2000 *Skogssällskapets Förvaltning AB* (group manager): Cost to enter the group; Euro 0,5 – Euro 1,0 per hectare (200-2000 hectares). *Grönt Paraply i Sverige AB* (group manager): Cost to enter the group; Euro 110 + Euro 0,1 per hectare (< 1000 hectares); Euro 110 + Euro 0,8 per hectare (1000-3000 hectares)[85].

PEFC Sweden The cost of PEFC certification in Sweden varies depending on whether an owner is a member of a forest owners association, what kind of agreement he has with the association as well as what the cost calculation includes. The fee is normally subsidised by the forest owners associations.

Many forest owners associations subsidise the certification process and they pay a price premium to members who commit to sell their timber through the associations[86].

PEFC France No information is available, as the system is not yet operational. However, Henri Plauche-Gillon, president of PEFC France, declared: *'It is very hard today to say what will be the real cost per hectare of the certification process. This cost will not be the same for each region and will depend on the quality policy and on the sustainable management objectives defined in each region'*[87].

PEFC Finland/FFCS No information has been made available in time.

CSA No information has been made available.

SFI Costs vary enormously due to different sizes of the holdings that members have certified. For a very large company, figures run generally in the range of several hundred thousands US dollars to employ a certification firm. Licensee certifications, which typically occur on smaller holdings, may be comparable in cost to FSC certifications[88].

Voluntary

FSC The FSC scheme is fully voluntary.

PEFC Voluntary actions are done freely, not because one is forced to do them. In the PEFC scheme in Finland and in some cases in Germany, forest owners do not freely choose to have their forests certified. In Finland all forests are certified automatically once a region is certified. Forest owners, who are members of the Forest Management Association, would have to inform their association if they do not want to be certified. In Germany forest owners marketing their timber through co-operatives may loose their marketing channels if the management of the co-operative decides only market PEFC-certified timber.

> **Reality check** **PEFC Germany cannot be called a strictly voluntary scheme in cases where marketing co-operatives decide to market only PEFC certified timber, even if not all members of the co-operative want to subject their forest management to PEFC certification.**
> **Typically these co-operatives are set up to assist small forest holdings, to market their timber co-operatively. Should the management of a co-operative decide to market only PEFC-certified timber, forest owners who may not wish to apply for PEFC certification would need to change their trading channels, a situation that would render PEFC certification a de facto obligation[89].**

> **Reality check** **Research in Finland has shown that, in some cases, private forest owners were not aware of their involvement in the certification process or of the fact that their forests were about to be certified[90]. PEFC Sweden is voluntary, although stimulated by various subsidies to forest owners[91].**

CSA The CSA scheme is fully voluntary.

SFI Although membership in the SFI is obligatory for members of the AF&PA, third party verification or certification is fully voluntary.

VIII Commitments from the forest owner/manager to improving forest management

Continuous improvement is a widely accepted concept in forest management. Certification should lead to a continuous improvement in forest management; therefore, the certification scheme should be adaptive and revised regularly. Equally important is that the forest manager/owner shows a real commitment to improving forest management. Certification of the status quo does not lead to improvement in forest management.

As mentioned in the methodology, field assessments were not included in this research. Therefore, the impact of certification under the different schemes 'on the ground' falls outside the scope of this report. However, a number of points emerge from our assessment, concerning the way in which the various schemes have been formulated.

Our research shows that the FSC is the only scheme in which economic, social and environmental stakeholders have an equal say. Section I of this chapter shows that the certification standards of the PEFC, the SFI and the CSA are much lower than those of the FSC. It is to be expected that the fact that the PEFC, SFI and CSA are principally governed by economic interests have had some impact on the level the standards were set; forestry industry and private forest owners are not likely to set standards at a level that would require substantial changes to existing practices. Furthermore, as the SFI and CSA allow applicants to develop their own certification standard (within certain limits), applicants can obtain a certificate without making substantial changes to unsustainable forestry practices on the ground. There is consequently, no clear incentive for applicants to the SFI and CSA schemes to drastically improve their forest management.

FSC Because the FSC has clear and relatively high performance based standards and because a process is in place to monitor whether forest managers adhere to these standards, the FSC has a clear potential to improve forest management. No independent research has yet been carried out on the environmental impact of FSC certification and such research falls beyond the scope of this study. However, there is reason to believe that FSC certification has contributed to some improvement in forest management, as certified operations have improved management plans and implemented required changes. There is ample evidence that FSC certification has supported local and indigenous groups in retrieving their land rights[100] (such as the Sami in Sweden) and broadened the scope of traditional forest management to include wider objectives (such as biodiversity conservation and benefits for local people)[101].

PEFC The leading force within the PEFC, (the forest owners' associations) has often stated that all European forests are managed sustainably[102] despite sufficient evidence that that is not the case[103]. As the PEFC has no overall performance-based standard, and since it has certified large forest areas in Europe (including remaining old-growth forests), without requiring significant improvements in forest management, there is some doubt among the NGO community whether the PEFC system will lead to improved forest management.

> **Reality check** **Because of the nature of regional certification, a forest owner in Germany can loose a certificate even if his management does comply with the standard set. If a regional report in Germany, does not pass a re-assessment, all certifications in the entire region become invalid. Thus, a forest owner could loose his certificate even though the management of his forests may be in compliance with all PEFC performance requirements he pledged to comply with. In Finland there is also limited incentive for forest owners to improve their forest practices as they can get certified without having been consulted in an adequate manner[104].**

CSA Regarding CSA audits, there are no independently determined criteria and indicators against which performance at the level of the forest management unit is audited. If a company that wants to get certified sets low standards, it's forestry operation could pass a CSA certification without substantial changes to unsustainable forestry practices on the ground. Consequently, there is no clear incentive for applicants/companies to improve their forest management. There is no indication that the CSA scheme has led to improvement in forest management.

SFI Membership in the SFI program is mandatory for American Forest & Paper Association (AF&PA) members. Members have to show 'continuous improvement'. All companies (including those that do not want third-party verification or 'certification') are required to submit confidential progress reports to AF&PA annually, using a standard reporting form developed by SFI. It is up to the company to ensure the information reported is sound. This requirement is expected to lead to some improvement of forest management, specifically combined with the SFI's educational efforts to raise the level of awareness and practices among its members, loggers and private landowners. The main improvements appear to be greater documentation of forestry practices, greater compliance with soil and water quality laws and best management practices, greater compliance with label instructions for chemical use, greater compliance with clear-cut and replanting rules, as well as implementation policies and projects for wildlife and biodiversity, and donations (e.g. for research). However, the fact that AF&PA members still use highly unsustainable and ecologically harmful practices indicates that the program's standard is too weak and its bottom line is too low to provide a credible basis for certification of sustainable forest management[105].

IX Applicability to all forest sizes and tenure systems

To make sure that the system does not distort trade by discriminating against certain types of operations, certification should be applicable to all tenure types: private forest owners, governments, and companies, both big and small. This criterion is widely acknowledged by governments, industry, NGOs and forest owners.

Our research shows that in principle all schemes are open to large and small companies, and private forest owners. In practice only the FSC has certified forests of a wide variety of tenures (companies, small forest owners, government lands, etc) and sizes (from 5 hectares to 1.8 million hectares). *See Table 1.* The FSC is also the only scheme applicable at the global level. The CSA has certified only large corporate forests. The SFI has certified mainly large landowners and companies. The PEFC has certified mainly entire regions or states, including the land of private forest owners as well as state-lands.

FSC FSC requires its certifiers to provide equitable access to their services. This is not always easy because inevitably larger operations have less difficulty responding to new demands and absorbing the costs of certification. Some of the ways in which FSC certifiers and FSC itself have responded to this challenge include 1) developing group certification and resource manager certification schemes, 2) providing inspection services at reduced costs for small operations, 3) providing donor subsidised services to community forestry operations and 4) developing simplified systems for small enterprises[106]. Although it is often said the FSC system is not suitable for small private forest owners, we could not find significant evidence that this is, in fact, still the case[107].

PEFC The PEFC system is based on regional certification. The exception is Sweden where certification takes place at the forest management unit level. In Finland and Germany whole regions (sometimes states) are certified.

> **Reality check** **PEFC Germany has only developed procedures for regional certification. No procedures for individual or group certification outside a certified region yet exist. To date, out of the 15 German states with a substantial forest cover seven are PEFC certified regions. In the eight remaining regions all forest owners are excluded from a PEFC certification process. Because the PEFC certification process in Germany depends on a regional forest report, the state's ministry of forests has an integral part in the regional certification procedure. As four state forest authorities have decided in favour of FSC certification, it is unlikely they will all support the development of a regional forest report. Therefore it is unclear when – if ever – PEFC certification will be possible in**

these four states, or the remaining four states, that have not decided in favour of FSC or PEFC. FSC certification is possible in all states as it takes place at the forest management unit level[108].

CSA The CSA is, in theory, applicable to all forest types and sizes of operations. Nonetheless to date, CSA audits have been carried out exclusively on holdings of large forestry companies.

SFI The SFI program is mainly applicable to large companies that are members of American Forest & Paper Association (AF&PA). For non-members with large forest ownerships, the SFI has a licensing programme. Programme licensees may include government land management agencies, non-AF&PA member companies, public and private institutions, and Crown lands in Canada. SFI itself is not designed to certify small private landowners, but has a mutual recognition agreement with the American Tree Farm System, recognising its standard for forestry on smaller private non-industrial forestlands. The American Tree Farm System standard has few specifically measurable performance requirements and does not include third-party certification of landowner performance[109].

Sweden's Sami people are fighting to protect their traditional winter grazing rights for their reindeer herds. These rights are recognised under the Swedish FSC scheme, but not under the PEFC scheme.

X An effective and transparent complaints procedure

To be credible, a certification scheme must have a complaints mechanism to allow it to address complaints and rectify mistakes made during certification or accreditation procedures. Ideally, an independent dispute panel or similar body should deal with complaints.

Our research shows that all certification schemes have developed some sort of complaints mechanism. The FSC has a very detailed dispute-resolution procedure that spells out how complaints must be dealt with. A dispute resolution panel exists to deal with claims that cannot be resolved at lower levels. The PEFC requires national schemes to set up an independent dispute settlement board to deal with disputes between the certifier and the applicant. Such a board exists in Finland and France – although its independence is disputed – and is under development in Sweden. PEFC does not require a complaints mechanism allowing third-parties to put forward a complaint. The CSA and the SFI have a generel complaints mechanism, although the level of transparency and relief provided to the public remains uncertain.

FSC At the international level the FSC has a dispute-resolution procedure that lays out in detail how complaints must be dealt with. The principle followed is to exhaust remedies as close to the source of dispute as possible. The procedure comprises five levels, beginning directly with the forest manager for a complaint about a certified forest, and moving up the levels if the disagreement remains unresolved. The second level involves the certifier, who is required to have procedures for dealing with complaints. The final recourse lies with the FSC's Dispute Resolution Panel, which is independent of the Board and the Secretariat and is elected from amongst the membership. If the matter still cannot be resolved to the satisfaction of both parties, they are free to use the courts outside FSC.

PEFC The PEFC requires national schemes to set up an independent dispute-settlement board to take care of all complaints arising from specific decisions concerning the issuance of certificates that cannot be solved between the certification body and the applicant. The PEFC does not require a complaints mechanism allowing third-parties to put forward a complaint. In none of the countries does such a dispute settlement board exist. In France and Finland a dispute settlement body exists that deals with internal complaints relating to the certification disputes between the parties involved. It is, however, not possible for 'outsiders' such as environmental NGOs or social groups such as reindeer herders to file a complaint. No complaints have yet been filed.

PEFC Sweden In Sweden, the responsibility for complaints and conflict resolution is shared between PEFC Sweden and the certification- and accreditation bodies. PEFC Sweden is developing a mechanism for complaints regarding the standard. This document is currently under development. It is still unclear

who will have the right to file a formal complaint. The responsibility for handling complaints regarding certification and/or accreditation decisions lies with the national accreditation body SWEDAC. According to SWEDAC, the normal procedure is that anybody who is dissatisfied with a certification decision may complain to the certification body. There is a documented complaints process based on ISO guidelines that certification bodies have to follow. Conflicts that are not satisfactorily resolved at the level of the certification bodies, may be taken to the accreditation body. Where interpretation of the PEFC certification standard is unclear, the certification bodies will refer the issues to PEFC Sweden[110].

PEFC Germany The PEFC standard does provide for a complaints mechanism. Depending on the nature of the complaint, resolution is sought by tabling a request for a special audit at the level of the forest management unit subject to the complaint. There is no independent appeals body within the PEFC Germany structure, representing different stakeholder interests to address complaints[111].

CSA Under the CSA, objections to a successful audit and subsequent certification ('registration') can be filed with the certifier. If satisfaction is not found there, a certification can be appealed to the Standards Council of Canada. The mechanisms for this appeals process are not described in any of the CSA Sustainable Forest Management Standard documents nor do the documents include any reference to other CSA or Standards Council of Canada documents and procedures, which are said to provide details on a complaints process. No complaints have yet been filed either with the certifiers or with the Standards Council of Canada; the system has not yet been tested[112].

SFI The SFI has a mechanism to hear complaints from the public, loggers and others. Its genesis is as follows. In the summer of 1999, loggers submitted a formal letter of protest and withdrawal at the semi-annual SFI National Forum. They were concerned about whether the SFI evaluations and logger training programs were being conducted consistently and fairly. They wanted greater clarification of the terms and definitions in the standard and a procedure for reporting violations. By the end of 1999, SFI's executive committee approved an Interim Inconsistent Practices Protocol, whereby complaints can be filed for review by a member of the SFI Expert Review Panel, who then makes a recommendation for action.

Complaints regarding certifications and the SFI program also are dealt with through the SFI State Implementation Committees (SIC). Although some SICs have yet to establish procedures for reporting and reviewing complaints, all states are expected to do so. These will serve as the main method of examining whether a landowner is in violation of any SFI rules. In the absence of a satisfactory resolution, the complaint can be addressed at higher levels of management in the AF&PA. Many of the complaints centre on the use of clear-cutting, according to AF&PA. However, even where unsustainable practices occur, it is difficult to demonstrate actual violations of the SFI program because the SFI standard and third-party certification requirements are vaguely formulated, and because so much information about a forestry operation is considered confidential.

SFI also has a mechanism to address disputes between certifiers and applicants. Normally, the SFI verification process relies on consensus between the certifier and the applicant in reaching agreement on the scope of the audit, interpretation of evidence, significance of findings, and relevance to the standard. When conflicts arise between the applicant and the certifier, SFI arranges for a Program Interpretations Sub-group to provide opinions on interpretation, although this group does not serve as the final arbiter[113].

XI Repeatability and consistency

It is vital that certification schemes ensure that certifiers make the same decision in similar situations. Repeatability and consistency rely on a clear definition of standards and terminology, objective and measurable critical elements of good forest management and clear and precise procedures. Furthermore, the issue of consistency is central to the credibility of certification schemes. Specifically, where a label is attached to a certification scheme, consumers need to know what that label exactly represents.

Our research shows that the FSC has the clearest and most rigorous procedures for standard setting, certification and accreditation. The PEFC standards and certification procedures vary widely by country, thereby rendering the PEFC label of very unclear status. The SFI and CSA certification and accreditation processes are quite clear, but applicants/companies are granted significant flexibility to tailor the standard that will be used to assess and certify them. Companies with a good record can be certified, as can companies with a bad record. Neither of these schemes, therefore, provides a clear message for consumers, or a benchmark for what 'certification' means.

FSC The FSC has a well-documented system for certification, accreditation and standard setting at the national level. As all national FSC standards have to implement the FSC's global set of principles and criteria, the standards are of a comparable level and scope although some of the details will vary because they are interpreted through stakeholder processes at the national level. As the certifiers all have to follow the same procedures it is to be expected that the end result of a certification by two different certifiers would be similar. Nonetheless, the performance of the certifiers is one of the issues over which the FSC receives the most criticism. Further clarification of binding guidelines for certifiers on how to interpret criteria would be an important improvement.

PEFC The PEFC requires national standards to be based on the Helsinki Criteria and Indicators and to use the Pan European Operational Level Guidelines as a reference. Neither of these are binding and therefore the different PEFC national standards vary enormously *(see sections I, IV and VI)*. Furthermore, certification procedures vary across countries. Although within one country the certification itself might be repeatable (e.g. provide the same result with a different certifier), there is no consistency in the system between different countries.

CSA The CSA has no quantified entry-level criteria that set a minimum threshold with regard to key

indicators for environmentally, socially and economically sound forest management, as the standard is based on the 6 Montreal criteria. *See Appendix D.* The performance requirements on which the certification is based (described as the 'sustainable forest management plan ') are developed once a company or forest owner (applicant) applies for certification. This 'sustainable forest management plan' is developed by the company, with the advice of a 'Public Advisory Group', for which the applicant sets the criteria and chooses the members. Therefore these locally adapted performance requirements vary widely per company. No common set of criteria to assess on-the-ground forest management has been developed in the CSA. The meaning of a CSA certificate varies therefore considerably across companies. Consequently, one company 's certification might mean something very different from another, yet both can claim compliance with the CSA standard and receive the same certificate.

SFI While compliance with by-laws requirements of SFI is a condition of continued membership in American Forest & Paper Association, the actual level of performance achieved is uneven and uncertain. The SFI standard is very flexible and open-ended. Under the SFI's verification procedures, participants are granted significant flexibility to tailor the standard and define the indicators that will be used to assess them. Furthermore, many of the 'core' indicators required for third-party verification do not require assessment of field-level performance. Consequently, the SFI standard fails to require a consistent benchmark for environmental performance. One company's field performance under the SFI may mean something very different from another, yet both can claim compliance with the SFI standard, and receive the same certificate.

Pine plantation, Mirow Mecklenburg, Germany

XII A transparent and high quality accreditation procedure

The practice and results of certification must be credible to the market and stakeholders and therefore transparent and independent. To assure these characteristics, an assessment of the skills, the procedures and the impartiality of the certifiers themselves is required. This process is called accreditation of certifiers. Accreditation mechanisms are well established in other sectors. Most countries have national accreditation bodies for certifiers in several sectors.

Our research shows that the PEFC, SFI and CSA scheme all use national accreditation bodies for accrediting their certifiers. However, many of these accreditation bodies have not yet developed the competence to deal with forestry-related issues. The FSC was set up as a global accreditation body, specifically because there was insufficient forest specific competence within the national accreditation bodies. Concern has been expressed over the fact that the FSC is involved in both accreditation and standard development. On the other hand, concern has also been expressed over the lack of experience in social and environmental issues of national accreditation bodies[114].

FSC The FSC was originally set up to provide accreditation services in the forest sector because at the time not many national accreditation bodies had that competency or were planning to develop it. FSC has now accredited eleven certifiers, all of which are monitored annually through office and field visits to a sample of certified operations. The FSC accredits certification bodies against the FSC Accreditation Manual, which is designed to ensure that certifiers comply with ISO guide 62 and is fully cross-referenced against this standard. Once accredited the certifiers are licensed to inspect forests and chain of custody procedures and to issue the FSC trademark to certificate holders. However, concern has been expressed over the fact that the FSC is involved both in accreditation and standard development. FSC is considering this matter.

PEFC The PEFC requires its certification bodies to be accredited with national accreditation agencies. In Finland and Sweden there are two certifiers in the process of accreditation by the national accreditation body: Det Norske Veritas (DNV) and SFS-Certification SFS in Finland and SEMKO-DEKRA Certification AB and Det Norske Veritas (DNV) in Sweden. In Germany, four certifiers have been accredited: Gesellschaft für Qualitätsmanagementsysteme (DQS), Landesgewerbeanstalt Bayern (Intercert/ LGA), TÜV Nord Zertifizierungs- und Umweltgutachter Gesellschaft (TÜV Nord), AGRIZERT Gesellschaft zur Qualitätsförderung in der Agrarwirtschaft mbH.
The PEFC also states that *"where for some reason this is not possible or practical and an adequate credible alternative exists, a special application requesting exemption from this clause and outlining the alternative procedure to ensure credibility can be made to the General Assembly of the PEFC*

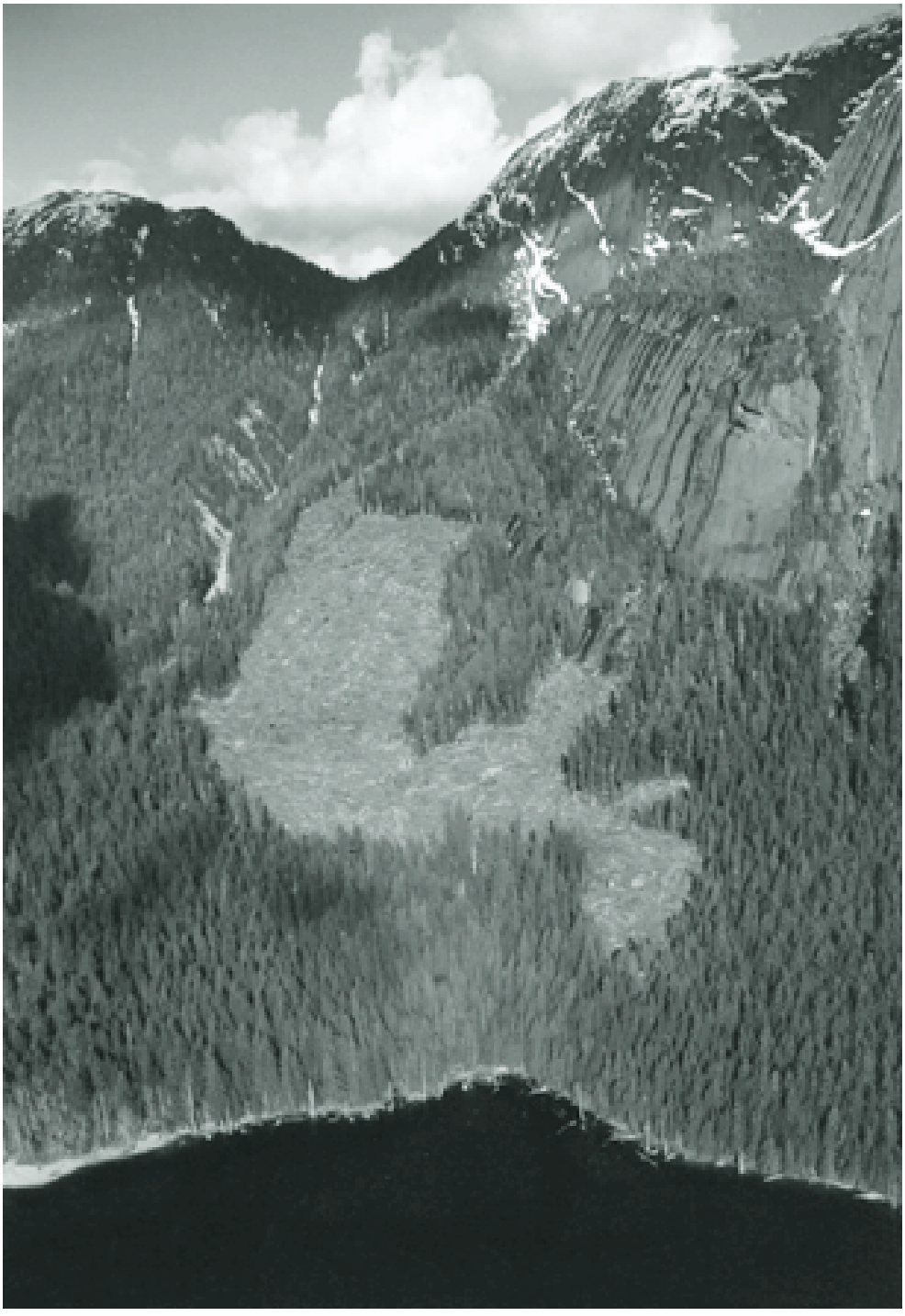
Council[115]*"*. This leaves the door open for certification bodies that have not been accredited by national accreditation bodies.

> **Reality check** **There are currently no certification bodies accredited for PEFC certification in operation in Sweden. The 'certified' forests are consequently not yet audited by a PEFC-accredited certifier. Only some of them have undergone a third-party audit. In Finland the situation is similar. Currently, 95% of Finland has been certified under PEFC although accreditation is not yet operational**[116]**.**

CSA The CSA certification audits are to be conducted by independent third-party certifiers that are accredited by the Standards Council of Canada or their delegated registrar. At present, two auditors have been accredited by the Standards Council Canada to carry out audits of the CSA's Sustainable Forest Management standard. One is the Quality Management Institute, QMI, a division of the CSA which is accredited by the Standards Council of Canada (SCC) as a third party registrar. The other is KPMG Quality Registrar, Inc.

SFI The SFI requires at least one member of the certifying team to be a professional forester. The lead certifier must be accredited to conduct International Organization for Standardization (ISO) 14001 certifications, or the lead certifier must have completed a week-long training course and must be accredited by a national accreditation body. There is no chain of custody certification process. SFI certifiers currently include: Price Waterhouse Coopers, KPMG, QMI, Bureau Veritas Quality International, the Plum Line and BioForest Technologies.

The dramatic landscape of British Columbia is being changed forever by logging. This example shows an SFI-certified logging operation.



6 Summary and conclusions

The FSC scheme was originally supported by many NGOs as a credible, international scheme for the certification of forest products. It was recognised by both NGOs and businesses as a unique attempt to provide a market mechanism to support better forest management. As the only scheme in operation at the time, NGOs were asked to determine whether the scheme merited their support or not. They majority decided that FSC did merit their support.

In response to the success of the FSC scheme, a number of other schemes have been developed. Companies and governments are now asking NGOs whether these schemes are also credible. In order to respond, Fern has carried out the present evaluation. The starting point is that no scheme is preferred above any other. NGO preferences should be based on an objective evaluation of the merits of each scheme. With this report Fern has carried out an initial assessment of the four main, existing schemes: the Forest Stewardship Council (FSC), the Pan European Forest Certification Scheme (PEFC), the Canadian Standards Association's Sustainable Forest Management Standard (CSA) and the Sustainable Forestry Initiative of the American Forest & Paper Association (SFI).

This report is based on six country-case studies (Sweden, Finland, France, Germany, the USA and Canada) that examine in detail the development and implementation of these four certification schemes. The report focuses principally on the national implementation of the different schemes and less on specific certification cases. The facts on which this report is based have been checked by the relevant certification organisations (or affiliated organisations), and mistakes have been corrected. To the best of our knowledge, the information presented here is factual and correct.

The overall conclusion is that there are large differences between the four certification schemes. The certification-standards used vary enormously, as do the certification and accreditation procedures. The FSC is the only scheme with rigorous performance-based criteria that gives consumers the assurance that the product they buy comes from well-managed forests. The FSC standard addresses all aspects of sustainability: ecological, social and economic. It covers issues such as respect for indigenous peoples' rights and labour rights, chemical use, genetically modified organisms (GMOs), set-aside areas for conservation and rules for high conservation value forests, almost none of which are present in the other schemes. The FSC's certification and accreditation procedures are rigorous. Representatives from economic, social and ecological chambers have equal decision-making power, in line with government commitments made at the UN Conference on Environment and Development in Rio, in 1992. The FSC is the only global scheme on the market. It is also the only scheme that has proven to be capable of certifying all sorts of forests, large and small, and all sorts of tenure systems, such as private forest owners, companies, communities and governments.

This does not mean that the FSC is perfect. Formal complaints have been brought to the FSC's complaints mechanism. Consultation procedures need improvement, as does the communication between the FSC and its stakeholders. Access to FSC certification by small businesses could be improved further, although many improvements have been made recently. Also, concerns have been raised about the fact that the FSC is both an accreditation and a standard setting body.

Of the other three schemes, the PEFC raises the greatest concern. No overall performance-based standard exists to which national PEFC standards must adhere. The criteria and indicators developed in the Pan European Process are used as a basis for the PEFC system. However, these criteria concentrate more on putting systems in place than on outcome. No minimum environmental or social thresholds have been defined. This absence of an overall performance-based standard has led to widely different national standards, some of which are better than others. Of even greater concern is the certification process itself. No clear rules are described on how certification should take place. This has led to a situation where, in some countries, almost all forests have been certified without a visit by a third-party certifier (Germany); while in other cases forests are listed as certified although certifiers have not yet been accredited (Sweden and Finland).

Another concern is that the PEFC system gives one group of stakeholders (notably the forest owners and wood-processing industry) the opportunity to dominate the process, thereby violating one of the principles of certification endorsed by governments and industry. Although attempts have been made to include other stakeholder groups, such as trade unions and environmental NGOs, the system is designed so that economic interests can always overrule environmental and social interests. According to the PEFC statutes, the higher the annual cutting rates, the more votes a national governing body gets in the PEFC General Assembly. Clearly, the PEFC is an organisation by and for private forest owners or their associations. Furthermore, the PEFC's certification, accreditation and chain of custody procedures are not rigorous, and often vaguely formulated, leaving room for different interpretations. In most countries, no dispute-settlement body is operational that allows for complaints by third-parties. Finally, in all but one country, the system has only certified whole regions or states, rather than forest management units.

The SFI scheme is not a credible certification and labelling scheme, although it can be considered a worthwhile initiative as it has led to some measure of improvement in forest management. Its credibility as a certification scheme is undermined by various factors. Its standard is weak, flexible and open-ended. Social issues are not addressed. Companies are granted significant leeway to tailor individually the standard that will be used to assess them. Furthermore, the core indicators that must be met for third-party certification emphasise performance measures that can be assessed in an office, rather than in the field. The SFI does not provide strong guidance on environmental performance or a consistent benchmark for field performance across certified companies, whose practices may vary widely. No annual field audits are required. The SFI is led by industry interests it does not equally share desision making power with different stakeholder groups. Finally, the SFI plans to launch a product label in 2001; however, according to current plans, the label will not be based on a chain of custody tracking system to assure that labelled products originate in certified forests. SFI-certified companies can label wood from forests that are not certified.

The CSA standard for a sustainable forest management system focuses more on whether an adequate forest management system is in place than on the impact of such a management system on the forests. Although the CSA has not developed a label and a chain of custody, it has asked to the PEFC to endorse its system, presumably to allow it to use their logo. This development is not to be encouraged: the PEFC system has serious shortcomings. Aside from this, the CSA system itself is not a credible certification scheme: it has no overall performance-based certification standard. The company applying for a certificate decides against which benchmark it wishes to be measured, rendering a label for consumers of unclear value.

Certification must be based on clear, uniform and high-quality performance-based standards. However, with the exception of the FSC, none of the certification schemes examined here, have a uniform performance-based standard, let alone an environmentally and socially sound one. Therefore, products labelled by the PEFC, the CSA, or the SFI schemes claiming to come from sustainably-managed forests are misleading.

To be credible certification must be independent: no single party should be able to dominate the process. However, in the PEFC, the SFI and the CSA one group (representing economic interests) is able to dominate the process. Certification must be based on well-documented and transparent standard-setting, certification and accreditation procedures. However, the PEFC, the SFI and the CSA standards vary on a country-by-country or case-by-case basis, as do the PEFC's certification procedures. Certification reports, or at least summary reports, must be publicly available. However, only the FSC's certifiers are conscientious in making summary reports available to the public.

Despite calls from governments and others to develop a framework for mutual recognition between different forest certification schemes, this report shows that at present the differences between these four certification schemes appear too great to justify mutual recognition.

In sum, while the PEFC, the CSA and the SFI incorporate a few of the essential elements of a credible forest certification scheme, the FSC delivers on every component. Consequently, we consider the FSC to be the only available framework that meets the basic requirements outlined in this report. With an FSC label the consumer knows what he or she gets. This is not the case with any of the other schemes.

Activists mark trees from old growth forestin Finland

Endnotes

1 Despite rumours that there are a large number of certification schemes on the market, currently only the FSC and PEF are able to bring labelled products on the market. The SFI and CSA hope to label their products some time in 2001. The only other operational schemes on the market are 1) American Tree Farming scheme, which has certified 10 million hectares and has a mutual recognition agreement with the SFI; 2) Lembaga Ecolabeling scheme in Indonesia (LEI) and 3) the National Timber Certification Council (NTCC) in Malaysia. Both LEI and NTCC have made an agreement with the FSC.

2 To name just two: 1) The ITTO definition: 'Sustainable forest management is the process of managing permanent forest land to achieve one or more clearly specified objectives of management with regard to the production of a continuous flow of desired products and services without undue reduction of its inherent values and future productivity and without undue undesirable effects on the physical and social environment'. 2) The Helsinki definition: Sustainable management means the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil now and in the future relevant ecological, economic, and social functions, at local, national and global levels, and that does not cause damage to other ecosystems. Quoted in Blom (1997); Hierarchical Framework for the Formulation of SFM standards.

3 Hauselmann, P and Vallejo, N (2000) Institutional requirements for forest certification; working paper for GTZ- June 2000.

4. Kanowski P, Sinclair D, Freeman B and Bass S for the Department of Agriculture Fisheries and Forestry Australia; Critical elements for the assessment of forest management certification schemes; September 2000.

5 CEPI (2000); Comparative matrix of forest certification schemes; November 2000.

6 IFIR (2000); Report of the working group on mutual recognition between credible sustainable forest management standards and certification schemes. December 2000.

7 See box 2: Governments and industry demand certification, page 16.

8 Similar critique is possible on the criterion 'all relevant interests involved in the decision making process' and 'procedures established to ensure all relevant interests are given opportunities to participate and influence decisions'.

9 FSC statutes (www.fscoax.org): 'To promote an adequate management of forests, providing the assistance required to achieve an environmentally appropriate and economically viable exploitation of natural resources, avoiding deterioration or affectation of such resources, of the ecosystems, or of the surrounding communities'. 'To promote a viable management of the forest resources and a forestry production that preserves the environment'.

10 See Appendix D.

11 See Appendix C.

12 See ffcs-finland.org, among others. Original with the author.

13 See 'about the PEFC' at: www.pefc.org. Original with the author.

14 See Appendix D.

15 See www.pefc.org. Original with the author.

16 Ewald Rametsteiner (2000); Sustainable forest management certification; Boku and European Commission 2000.

17 See Appendix C.

18 Heaton, K (2001); An Analysis of the Sustainable Forestry Initiative (SFI) in comparison with the Forest Stewardship Council (FSC). Report for Fern.

19 www.csa.ca

20 PEFCC newsletter no 5 January 2001.

21 Presentation Ben Gunneberg, 19-20 February, Rome on a seminar on 'confidence building between different certification schemes, organised by GTZ, the FAO and the ITTO.

22 FSC website: www.fsoax.org. Original with the author.

23 PEFC newsletter no 4 December 2000.

24 Kill, J (2001); The Development, Standards and Procedures of the CSA in Canada. Report for Fern.

25 Heaton, K (2001). Op cit.

26 Expected by the end of 2001 is 31,578,947 million hectares certified. Quoted in: Heaton, K. Op cit.

27 While some companies were third-party audited prior to 2000, SFI did not formally create a 'certification' designation until 2000.

28 This is not necessarily the number of certificates. It represents 21 major companies that are already certified or pledge to be certified according to the SFI website (www.afandpa.org) and company press releases. Many are expected to achieve certification in 2001. See endnote 26.

29 PEFC newsletter no 4 December 2000.

30 Nature League (2000); The Development, Standards and Procedures of the FFCS in Finland. Report for Fern. Lindahl, K.B. (2001); The Development, Standards and Procedures of the Forest Stewardship Council (FSC) and the Pan European Forest Certification Scheme (PEFC) in Sweden.

31. IPF Proposals for Action are at www.un.org/esa/sustdev/ipf.htm. These proposals for action were subsequently adopted by governments at the UN general Assembly Special Session (UNGASS) in June 1997.

32 The term credibility is a vague term. Bass and Simula 1999 have interpreted this term as multi-stakeholder support, transparency, reliability and accountability. Quoted in Kanowski. Op cit.

33 IFIR. Op cit.

34 Business and the Environment, ISO 14000 update (2001). No link found between management systems and performance, Vol VII, No 1. Quoted in Vallejo, N & Hauselmann P (2001); PEFC, an analysis.

35 PEFC Common Elements and Requirements. Technical Document at www.pefc.org. April 2001. Original with the author.

36 Based on Lindahl, K.B. (2001). Op cit.

37 Once the PEFC France scheme is approved by the PEFC Council.

38 See Pan European Operational Level Guidelines, Lisbon at www.pefc.org. The relevant guideline reads: Pan European Operational Level Guidelines: Criterion 6. Maintenance of other socio-economic functions and conditions 'Property rights and land tenure arrangements should be clearly defined, documented and established for the relevant forest area. Likewise, legal, customary and traditional rights related to the forest land should be clarified, recognised and respected' and 'Adequate public access to forests for the purpose of recreation should be provided taking into account the respect for ownership rights and the rights of others, the effects on forest resources and ecosystems, as well as the compatibility with other functions of the forest'

39 For more information see www.taigarescue.org.

40 Kill (2001). Op cit.

41 Based on Heaton, K(2001). Op cit.

42 High Conservation Value Forests is a formally designated category of forests in the FSC system

43 COFO, fifteenth session 12-16 March 2001 Rome: Criteria and Indicators of sustainable forest management of all types of forests and implications for certification and trade.

44 EU statement regarding agenda item 6: criteria and indicators of sustainable forest management of all types of forests and implications for certification; 7 March 2001

45 See box 2: Governments and industry demand certification.

46 Kanowski. Op cit.

47 CEPI. Op cit.

48 See joint NGO statement on the PEOLG at www.fern.org.

49 See box 4: 'Criteria and indicator processes and their relation with certification', page 20.

50 The Finnish Forest Certification Scheme (FFCS) is, unlike other national PEFC schemes a self-standing certification scheme. It had developed its standard before the PEFC was operational, although it did not have a label or chain of custody at that time.

51 Although talks are underway which intend to solve this problem. Personal email conversation with Auvo Kaivola, secretary general of the FFCS, 25-4-2001.

52 Personal email conversation with Auvo Kaivola, 25 April 2001.

53 Lindahl, K, B. (2001). Op cit.

54 Kill, J and Fenner, R (2001; The development, standards and procedures of the PEFC and FSC in Germany. Report for Fern.

55 Kill, J (2001). Op cit.

56 Membership in the local Public Advisory Groups need not be completely open to anyone but the criteria for membership must be clearly documented and available to anyone. It was reported that generally, the companies had made an effort to have a 'balanced and fair' representation of local stakeholder interests in the Public Advisory Groups and that the Public Advisory Groups did develop establish consensus on the process, including on how to replace inactive members etc. It was further noted that, within the constraints of the process as a whole, facilitation was impartial. Kill, J (2001). Op cit.

57 As a result of new rules on percentage-based claims, it is now technically possible to have solid wood products from non-certified forests labelled with the FSC logo. This is permitted where the overall level of wood in the product line achieves FSC's minimum requirements, and where there are controls over the sourcing of the non-certified wood being used. Nevertheless, the principle that 'all products carrying the FSC label contain a percentage of wood from certified forests' is no longer a requirement in all cases.

58 See www.fscoax.org for chain of custody rules. Original with the author.

59 See technical document at www.pefc.org. Original with the author.

60 Lindahl, K, B. (2001). Op cit.

61 Berenger, E and Deletain, P (2001). The development, standards and procedures of the PEFC scheme in France. Report for Fern.

62 Kill, J. (2001). Op cit.

63 Heaton, K. (2001). Op cit.

64 See www.fscoax.org. Original with the author.

65 See www.pefc.org. Original with the author.

66 Kill, J and Fenner, R (2001). Op cit.

67 Lindahl, K.B (2001). Op cit.

68 Kill, J (2001). Op cit.

69 Heaton, K. (2001). Op cit.

70 See www.fern.org for some examples.

71 www.pefc.org. Original with the author.

72 Kill, J and Fenner, R (2001). Op cit.

73 Lindahl K.B. (2001). Op cit.

74 Berenger, E. (2001). Op cit.

75 Kill, J. (2001). Op cit.

76 Heaton, K (2001). Op cit and Bill Barclay, Greenpeace US, personal communication.

77 See box 4: Criteria and indicators and their relation to certification, page 20.

78 See: www.pefc.org.

79 Kill, J and Fenner, R. (2001). Op cit.

80 Berenger, E (2001). Op cit.

81 Lindahl, K, B. (2001). Op cit.

82 Nature League (2001). Op cit.

83 Kanowski (2000). Op cit.

84 Kill, J and Fenner, R (2001). Op cit.

85 Lindahl, K.B (2001). Op cit

86 The forest owners association Mellanskog practices a price system for certification which is differentiated in the following way: Members with a forest management agreement with Mellanskog get 100% discount, members without forest management agreement get 50% discount, non members pay Euro 0.44/ha.
Mellanskog is also granting a price premium of Euro 0.33 per cubic meter for deliveries from certified forestry. The real cost depends on what you include in the calculation. Mellanskog estimates the cost for complying with the requirements to be about 10-15% of possible growth. The cost for producing a Green Plan is approximately Euro 11/hectare and there are usually additional costs for the umbrella organisation associated with the introduction of environmental management systems and external revisions. For more information see Lindahl,K.B.(2001). Op cit.

87 Berenger, E (2001). Op cit.

88 Heaton, K (2001). Op cit.

89 Kill, J and Fenner, R (2001). Op cit.

90 Nature League (2001). Op cit. Email correspondence with FFCS secretary general, Auvo Kaivola, 17-4 and 25-4-2001.

91 Lindahl, K. B. (2001). Op cit.

100 'Certification and community forestry' by D. Irvin in 'Forest Trees and People', issue 43 November 2000. See also Hauselmann, P (2000). Op cit.

101 Elliott, C (1999) Forest certification: analysis from a policy network perspective, quoted in Hauselmann, P (2000). Op cit.

102 "It is thanks to them [the forest owners] that forests have been maintained for generations. In accordance with the key role forest owners play in implementing sustainablity in the forest, forest owners of the three types of ownership combined are allocated half of the seats in the German Forest Certification Council." PEFC Germany 2000;www.pefc.de/faq/faq5.htm

103 Quotes from different sources about the state of Europe's forests, taken from an article by Saskia Ozinga in FAO's newsletter Forest Trees and People, issue 43, November 2000:
'The severe loss of old natural and semi-natural woodlands has continued…The concept of sustainable forest management is beginning to be introduced in forest use and management but general effects on biodiversity have yet to be seen'. (European Environmental Agency - EEA)
More than one third of the bird species in Europe are in decline. This is mainly caused by damage to their habitats by land-use changes, particularly through intensification of agriculture and forestry. (EEA)
Despite the large area of forest cover, only around 1% of the forest area in Western Europe is old growth forest. Natural forests are under greater threat here than almost anywhere else in the world. (European Environmental Almanac, IIEP London)
Nearly all original European riverine forest has been destroyed. (EEA)
The interaction between forestry and society in general should be strengthened by raising awareness of the concept of sustainable

forest management (SFM) and the role of forests and forestry in sustainable development…particularly organisations of forest owners should be encouraged in their development and capacity to reinforce SFM practices and to facilitate inter alia production and marketing of products and services, including new and hitherto non-marketed forest products and services (General declaration of the Third Ministerial Conference on the Protection of Forests in Europe)

104 Kill, J and Fenner R (2001). Op cit. and see endnote 90..

105 Heaton, K.(2001). Op cit.

106 Although there have been many recent improvements to increase access for small businesses, more improvements are still welcomed by small businesses. See Lindahl K.B.(2001) Op cit and the report mentioned in footnote 107.

107 This conclusion is supported by the following (not yet published) report: Lindahl, K. & Garforth, M. 2001. The Effectiveness of FSC Group Certification; a study of the accessibility of the Forest Stewardship Council Group Certification Scheme to small forest holdings in Western Europe. A report for the WWF European Policy Office.

108 Kill, J and Fenner R (2001). Op cit.

109 Under the agreement, the two programs recognize each other's standards and procedures as substantially equivalent in terms of outcomes and performance for industrial and private non-industrial forestlands, respectively. The AFTS has almost no specifically measurable performance requirements. There are currently over 10 million hectares of forests certified under the AFTS scheme.

110 Lindahl, K.B (2001). Op cit.

111 Kill, J and Fenner R (2001). Op cit.

112 Kill, J (2001). OP cit.

113 Heaton, K (2001). Op cit.

114 Two problems raised with national accreditation bodies are that 1) they need to develop forest specific standards, rather than using ISO Guide 62, which is too generic. 2) National accreditation bodies, in some countries, tend to lack experience in social and environmental issues. Complex and often highly political standards involving all stakeholder groups are not their speciality because most of their work relates to industry technical standards, which have had much less involvement from social and environmental interests. However they do have well established general auditing procedures and capacity. Similar points have been raised with ISO, when they developed the ISO 9000 and 14000 series, related to environmental management.

115 PEFC Technical document at www.pefc.org. Original with the author.

116 Lindahl, K.B. (2001). Op cit. Nature League (2001). Op cit.

Appendix A
The questionnaire

1. History and current state of play of the certification scheme

When and by whom was the certification initiative created?
What was the motivation to set up the scheme? Who is (are) the target group(s) of the scheme? (quote official sources or documents)
How many ha are certified?
What is the average size of the certified forests in the different schemes? Where possible, give a description of the tenure types of forests being certified.
Is there a label and chain of custody available?
Is the certification scheme relevant to all forest types and all sizes of forests? Are there mechanisms available for certification of small businesses?
Does the scheme certify at FMU level or at regional/ national level?
What are the costs of certification under the different schemes?

2. Quality of the standards

Are the standards performance based?
Are the standards broadly in line with international agreements such as the Rio Principles, ILO 169, the relevant text of IPF proposal for action and the Draft UN Declaration on IP Rights?
Are the standards reflecting national regulations?
Are the standard inclusive of social, spiritual, environmental and economic values?. Provide quotes from the standard to highlight the inclusiveness (or lack thereof) of these issue.
Are the standards set at regional or national level?
Are the standards formulated in a broad or more specific way?. Provide quotes to give comparison.
Highlight any fundamental differences between the different schemes. Look at key issues such as pesticide use, dead-wood, set aside areas and benefits for local people.

3. Standards-setting procedures.

Which groups have been involved in formulating the standards and in what composition? (i.e. environmental NGOs, forestry industry, government, social groups, indigenous peoples etc)?
Have other groups provided input, such as scientists and governments etc?
Who has approved the standards?
Is there evidence or suspicion that the standard setting process has been unduly influenced by vested interests? If so describe.

4. Certification process.

Use documented evidence on procedures etc. where possible. If the reality is (expected to be) different than what is documented, please indicate sources or research carried out.
Which certifiers are qualified to certify the forests?
Which standards does the certifier use for certification?
Which stakeholders are to be consulted in a certification process and how does the consultation process take place? If possible describe theory and practice.
Describe briefly the certification process.
Who chooses a certifier when a forest needs to be certified?
Is the certification process repeatable with similar results?
How often are certificates revisited?
Is there any evidence or suspicion that certifiers are unduly influenced by vested interests? If so describe.
Who accredits the certifier and how are they accredited?
Is a complaints mechanism available if a forest is unjustifiable certified or refused a certificate?

5. Transparency of the organisation. Clear procedures and documentation

Are full certification reports available? If not why not? Describe what is available.

6. Label protection and chain of custody.

Is there a label linked with the certification scheme?
Is there a chain of custody?
If so describe how the chain of custody operates.

7. What is the relationship between the national scheme and the national accreditation body?

8. Concluding chapter

Appendix B
FSC certifiers

Silva Forest Foundation
Ms. Susan Hammond; P.O. Box 9, Slocan Park BC V0G 2EO Canada
Website:http://www.silvafor.org/
Scope of accreditation: Within Canada for Forest Management and Chain of Custody

GFA Terra Systems
Hans-Joachim Droste; Eulenkrugstrasse 82, Hamburg 22359 Germany
Website:http://www.gfa-certification.de/
Scope of accreditation: Worldwide for Forest Management and Chain of Custody

ICILA(Istituto per la Certificazione ed I Servizi per Imprese dell'arrendemento e del legno)
Mr. Matteo Allegretti; Via Braille 5, Lissone (Milano) I-20035 Italy
Website:http://www.icila.org/
Scope of accreditation: Worldwide for Chain of Custody

South African Bureau for Standards (SABS)
Mr. C.F. du Toit;
Private Bag X191, Pretoria 0001, South Africa
Scope of accreditation: Chain of Custody evaluation in South Africa

Institut für Marktökologie IMO
Mr. Thomas Papp-Vary;
Poststrasse 8, Sulgen CH-8583, Switzerland
Website:http://www.imo.ch/
Scope of accreditation: Worldwide for Forest Management and Chain of Custody

BM TRADA Certification
Mr. Alasdair McGregor; Stirling Business Centre,
Wellgreen Place, Stirling FK8 2DZ United Kingdom
Website:http://www.bmtrada.com/
Scope of accreditation:Chain of Custody certification Worldwide

SGS Forestry QUALIFOR Programme
Mr. Neil Judd; 58 St. Aldates, Oxford OX1 1ST, United Kingdom
Scope of accreditation: Worldwide for Forest Management and Chain of Custody

Soil Association
Mr. Matthew Wenban-Smith; Bristol House, 40-56
Victoria Street, Bristol BSI 6BY, United Kingdom
Website:http://www.soilassociation.org/
Scope of accreditation: Worldwide for Forest Management and Chain of Custody

Rainforest Alliance Smart Wood Program
Mr. Richard Donovan; # 61 Millet St. Goodwin Baker Building, Richmond Vermont 05477, United States
Website:http://www.smartwood.org/
Scope of accreditation: Worldwide for Forest Management and Chain of Custody

Scientific Certification Systems
Dr. Robert Hrubes; Park Plaza Building, 1939 Harrison Street, Suite 400, Oakland California 94612-3532, United States
Website:http://www.scs1.com/
Scope of accreditation: Worldwide for Forest Management and Chain of Custody

Appendix C
FSC and PEFC certified forests and national activities (April 2001)

FSC
The FSC has certified 22,165,741 hectares in 40 countries, Austria, Belgium, Belize, Bolivia, Brazil, Canada, Columbia, Costa Rica, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Guatemala, Honduras, Indonesia, Italy, Latvia, Japan, Malaysia, Mexico, Namibia, the Netherlands, New Zealand, Panama, Papua New Guinea, Philippines, Poland, Russia, Solomon Islands, South Africa, Sri Lanka, Swaziland, Sweden, Switzerland, Ukraine, United Kingdom, US, Zimbabwe.

There are six national FSC standards approved by the board in Bolivia, Canada (Maritime region), the UK, Sweden, Germany, and Belgium. There are an additional 17 national FSC working groups or contact people working towards the creation of a national standard, in Brazil, Cameroon, Columbia, Denmark, Estonia, Finland, Ghana, Italy, Ireland, Mexico, the Netherlands, Nicaragua, Papua New Guinea, Poland, Romania and Spain.
NB The FSC's global principles and criteria are binding for the FSC's national and regional standards.

PEFC
The PEFC has certified 32,370,000 hectares in Austria, Norway, Finland, Germany and Sweden. The PEFC has members in Belgium, Czech Republic, Denmark, France, Ireland, Latvia, Spain, Portugal, Switzerland and the UK, who are working towards a national forest certification scheme based on the PEFC guidelines.

Appendix D
Helsinki criteria and indicators; Montreal criteria and FSC principles and criteria

Helsinki criteria and indicators

Descriptive indicators have been left out, as these are exemplary only. For full overview see www.pefc.org

Criterion 1:
MAINTENANCE AND APPROPRIATE ENHANCEMENT OF FOREST RESOURCES AND THEIR CONTRIBUTION TO GLOBAL CARBON CYCLES
Concept area: general capacity
Descriptive indicators (examples):
Existence of a legal / regulatory framework, and the extent to which it: provides an overall policy framework for conservation and sustainable management of forests
Existence and capacity of an institutional framework to: provide guidelines for national plans or programmes
Existence of economic policy framework and financial instruments, and the extent to which it: permits the flow of capital in and out of the forest sector in response to market signals and public policy decisions
Existence of informational means to implement the policy framework, and the capacity to: recognise the full range of forest values and potentials with periodic forest-related planning and assessment of national forest resources
Concept area: land use and forest area
Quantitative indicator:
1.1. Area of forest and other wooded land and changes in area (classified, if appropriate, according to forest and vegetation type, ownership structure, age structure, origin of forest)
Concept area: growing stock
Quantitative indicator:
1.2. Changes in:
total volume of the growing stock
mean volume of the growing stock on forest land (classified, if appropriate, according to different vegetation zones or site classes)
age structure or appropriate diameter distribution classes
Concept area: carbon balance
Quantitative indicator:
1.3. Total carbon storage and, changes in the storage in forest stands

Criterion 2:
MAINTENANCE OF FOREST ECOSYSTEM HEALTH AND VITALITY
Quantitative indicators:
2.1. Total amount of and, changes over the past 5 years in depositions of air pollutants (assessed in permanent plots).
2.2. Changes in serious defoliation of forests using the UN/ECE and EU defoliation classification (classes 2, 3, and 4) over the past 5 years.
2.3. Serious damage caused by biotic or abiotic agents:
severe damage caused by insects and diseases with a measurement of seriousness of the damage as a function of (mortality or) loss of growth
annual area of burnt forest and other wooded land
annual area affected by storm damage and volume harvested from these areas
proportion of regeneration area seriously damaged by game and other animals or by grazing
2.4. Changes in nutrient balance and acidity over the past 10 years (pH and CEC); level of saturation of CEC on the plots of the European network or of an equivalent national network.

Criterion 3:
MAINTENANCE AND ENCOURAGEMENT OF PRODUCTIVE FUNCTIONS OF FORESTS (wood and non-wood)
Concept area: wood production
Quantitative indicators:
3.1. Balance between growth and removals of wood over the past 10 years
3.2. Percentage of forest area managed according to a management plan or management guidelines.
Concept area: non-wood products
Quantitative indicator:
3.3. Total amount of and changes in the value and/or quantity of non-wood forest products (e.g., hunting and game, cork, berries, mushrooms, etc.)

Criterion 4:
MAINTENANCE, CONSERVATION AND APPROPRIATE ENHANCEMENT OF BIOLOGICAL DIVERSITY IN FOREST ECOSYSTEMS
Concept area: general conditions
Concept area: representative, rare and vulnerable forest ecosystems
Quantitative indicator:
4.1. Changes in the area of:
natural and ancient seminatural forest types
strictly protected forest reserves
forests protected by special management regime
Concept area: threatened species
Quantitative indicator:
4.2. Changes in the number and percentage of threatened species in relation to total number of forest species (using reference lists e.g., IUCN, Council of Europe or the EU Habitat Directive)
Concept area: biological diversity in production forests
Quantitative indicators:
4.3. Changes in the proportions of stands managed for the conservation and utilisation of forest genetic resources (gene reserve forests, seed collection stands, etc.); differentiation between indigenous and introduced species
4.4. Changes in the proportions of mixed stands of 2-3 tree species
4.5. In relation to total area regenerated, proportions of annual area of natural regeneration

Criterion 5:
MAINTENANCE AND APPROPRIATE ENHANCEMENT OF PROTECTIVE FUNCTIONS IN FOREST MANAGEMENT (NOTABLY SOIL AND WATER)
Quantitative indicator:
5.1. Proportion of forest area managed primarily for soil protection
Quantitative indicator:
5.2. Proportion of forest area managed primarily for water protection

Criterion 6:
MAINTENANCE OF OTHER SOCIO-ECONOMIC FUNCTIONS AND CONDITIONS
Quantitative indicator:
6.1. Share of the forest sector from the gross national product
Quantitative indicator:
6.2. Provision of recreation: area of forest with access per inhabitant, % of total forest area
Quantitative indicator:
6.3. Changes in the rate of employment in forestry, notably in rural areas (persons employed in forestry, logging, forest industry)

Montreal criteria and indicators

Conservation of biological diversity
Maintenance and enhancement of forest ecosystem condition and productivity
Conservation of soil and water resources
Forest Ecosystem contributions to global ecological cycles
Multiple benefits to society
Accepting society's responsibility for sustainable development

FSC principles and criteria

Principle #1:
COMPLIANCE WITH LAWS AND FSC PRINCIPLES
Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.
1.1 Forest management shall respect all national and local laws and administrative requirements.
1.2 All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid.
1.3 In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.
1.4 Conflicts between laws, regulations and the FSC Principles and Criteria shall be evaluated for the purposes of certification, on a case by case basis, by the certifiers and the involved or affected parties.
1.5 Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.
1.6 Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.

Principle #2:
TENURE AND USE RIGHTS AND RESPONSIBILITIES
Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.
2.1 Clear evidence of long-term forest use rights to the land (e.g. land title, customary rights, or lease agreements) shall be demonstrated.
2.2 Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies.
2.3 Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights. The circumstances and status of any outstanding disputes will be explicitly considered in the certification evaluation. Disputes of substantial magnitude involving a significant number of interests will normally disqualify an operation from being certified.

Principle #3:
INDIGENOUS PEOPLES' RIGHTS
The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.
3.1 Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.
3.2 Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.
3.3 Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.
3.4 Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their free and informed consent before forest operations commence.

Principle #4:
COMMUNITY RELATIONS AND WORKERS' RIGHTS
Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.
4.1 The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.
4.2 Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.
4.3 The rights of workers to organize and voluntarily negotiate with their employers shall be guaranteed as outlined in Conventions 87 and 98 of the International Labour Organisation (ILO).
4.4 Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups directly affected by management operations.
4.5 Appropriate mechanisms shall be employed for resolving grievances and for providing fair compensation in the case of loss or damage affecting the legal or customary rights, property, resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.

Principle #5:
BENEFITS FROM THE FOREST
Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.
5.1 Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest.
5.2 Forest management and marketing operations should encourage the optimal use and local processing of the forest's diversity of products.
5.3 Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.
5.4 Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.
5.5 Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.
5.6 The rate of harvest of forest products shall not exceed levels which can be permanently sustained.

Principle #6:
ENVIRONMENTAL IMPACT
Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.
6.1 Assessment of environmental impacts shall be completed — appropriate to the scale, intensity of forest management and the

uniqueness of the affected resources — and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.
6.2 Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping and collecting shall be controlled.
6.3 Ecological functions and values shall be maintained intact, enhanced, or restored, including:
a) Forest regeneration and succession.
b) Genetic, species, and ecosystem diversity.
c) Natural cycles that affect the productivity of the forest ecosystem.
6.4 Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.
6.5 Written guidelines shall be prepared and implemented to: control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and protect water resources.
6.6 Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.
6.7 Chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off-site locations.
6.8 Use of biological control agents shall be documented, minimized, monitored and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.
6.9 The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.
6.10 Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion:
a) entails a very limited portion of the forest management unit; and
b) does not occur on high conservation value forest areas; and
c) will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit.

Principle #7:
MANAGEMENT PLAN
A management plan — appropriate to the scale and intensity of the operations — shall be written, implemented, and kept up to date. The long term objectives of management, and the means of achieving them, shall be clearly stated.
7.1 The management plan and supporting documents shall provide:
a) Management objectives.
b) Description of the forest resources to be managed, environmental limitations, land use and ownership status, socio-economic conditions, and a profile of adjacent lands.
c) Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories.
d) Rationale for rate of annual harvest and species selection.
e) Provisions for monitoring of forest growth and dynamics.
f) Environmental safeguards based on environmental assessments.
g) Plans for the identification and protection of rare, threatened and endangered species.
h) Maps describing the forest resource base including protected areas, planned management activities and land ownership.
i) Description and justification of harvesting techniques and equipment to be used.
7.2 The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.
7.3 Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plan.
7.4 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the primary elements of the management plan, including those listed in Criterion 7.1.

Principle #8:
MONITORING AND ASSESSMENT
Monitoring shall be conducted – appropriate to the scale and intensity of forest management – to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.

8.1 The frequency and intensity of monitoring should be determined by the scale and intensity of forest management operations as well as the relative complexity and fragility of the affected environment. Monitoring procedures should be consistent and replicable over time to allow comparison of results and assessment of change.
8.2 Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators:
a) Yield of all forest products harvested.
b) Growth rates, regeneration and condition of the forest.
c) Composition and observed changes in the flora and fauna.
d) Environmental and social impacts of harvesting and other operations.
e) Costs, productivity, and efficiency of forest management.
8.3 Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody."
8.4 The results of monitoring shall be incorporated into the implementation and revision of the management plan.
8.5 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the results of monitoring indicators, including those listed in Criterion 8.2.

Principle #9:
MAINTENANCE OF HIGH CONSERVATION VALUE FORESTS
Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.
9.1 Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.
9.2 The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.

9.3 The management plan shall include and implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. These measures shall be specifically included in the publicly available management plan summary.
9.4 Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.

Principle #10:
PLANTATIONS
Plantations shall be planned and managed in accordance with Principles and Criteria 1 - 9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.
10.1 The management objectives of the plantation, including natural forest conservation and restoration objectives, shall be explicitly stated in the management plan, and clearly demonstrated in the implementation of the plan.
10.2 The design and layout of plantations should promote the protection, restoration and conservation of natural forests, and not increase pressures on natural forests. Wildlife corridors, streamside zones and a mosaic of stands of different ages and rotation periods, shall be used in the layout of the plantation, consistent with the scale of the operation. The scale and layout of plantation blocks shall be consistent with the patterns of forest stands found within the natural landscape.
10.3 Diversity in the composition of plantations is preferred, so as to enhance economic, ecological and social stability. Such diversity may include the size and spatial distribution of management units within the landscape, number and genetic composition of species, age classes and structures.
10.4 The selection of species for planting shall be based on their overall suitability for the site and their appropriateness to the management objectives. In order to enhance the conservation of biological diversity, native species are preferred over exotic species in the establishment of plantations and the restoration of degraded ecosystems. Exotic species, which shall be used only when their performance is greater than that of native species, shall be carefully monitored to detect unusual mortality, disease, or insect outbreaks and adverse ecological impacts.
10.5 A proportion of the overall forest management area, appropriate to the scale of the plantation and to be determined in regional standards, shall be managed so as to restore the site to a natural forest cover.
10.6 Measures shall be taken to maintain or improve soil structure, fertility, and biological activity. The techniques and rate of harvesting, road and trail construction and maintenance, and the choice of species shall not result in long term soil degradation or adverse impacts on water quality, quantity or substantial deviation from stream course drainage patterns.
10.7 Measures shall be taken to prevent and minimize outbreaks of pests, diseases, fire and invasive plant introductions. Integrated pest management shall form an essential part of the management plan, with primary reliance on prevention and biological control methods rather than chemical pesticides and fertilizers. Plantation management should make every effort to move away from chemical pesticides and fertilizers, including their use in nurseries. The use of chemicals is also covered in Criteria 6.6 and 6.7.
10.8 Appropriate to the scale and diversity of the operation, monitoring of plantations shall include regular assessment of potential on-site and off-site ecological and social impacts, (e.g. natural regeneration, effects on water resources and soil fertility, and impacts on local welfare and social well-being), in addition to those elements addressed in principles 8, 6 and 4. No species should be planted on a large scale until local trials and/or experience have shown that they are ecologically well-adapted to the site, are not invasive, and do not have significant negative ecological impacts on other ecosystems. Special attention will be paid to social issues of land acquisition for plantations, especially the protection of local rights of ownership, use or access.
10.9 Plantations established in areas converted from natural forests after November 1994 normally shall not qualify for certification. Certification may be allowed in circumstances where sufficient evidence is submitted to the certification body that the manager/owner is not responsible directly or indirectly of such conversion.

List of abbreviations

AF&PA	American Forest and Paper Association
C&I	Criteria and Indicators
CSA	Canadian Standards Association In this report specifically: the Canadian Standards Associaton's Sustainable Forest Management Standard
CFPF	Centre Régional de la Propriété Forestière (for private forests)
FFCS	Finnish Forest Certification Scheme
FSC	Forest Stewardship Council
GMOs	Genetically Modified Organisms
ILO	international Labour Organisation
IPF	Intergovernmental Panel on Forests.
IPOs	Indigenous Peoples Organisations
ISO	International Organisation for Standardisation
NGOs	Non Governmental Organisations
ONF	Office National des Forêts (for public forests)
PEFC	Pan European Forest Certification Scheme
PEOLG	Pan European Operational Level Guidelines
SFI	Sustainable Forestry Initiative
UNCED	United Nations Conference on Sustainable Development This conference took place in Rio the Janeiro, Brazil in 1992

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