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Forest Certification

A Review of Impacts and Assessment Frameworks

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Executive Summary

Introduction

This paper has been commissioned and was written under the guidance of the Steering Committee members and participants in The Forests Dialogue (TFD). Formed in 2000, TFD's mission is to provide an on-going forum for leaders from all sectors to discuss the most pressing issues related to achieving sustainable forest management (SFM) and conservation around the world. In pursuit of this mission, TFD's international dialogues have focused on five key SFM issues: illegal logging, forest and biodiversity conservation, forests and poverty reduction, intensive forestry and forest certification. For more background on TFD visit: www.theforestsdialogue.org.

The issue of forest certification has been a particularly compelling one for TFD since its inception because forest certification has generated significant discussion and controversy over the last decade. Currently, the debate is focused on how to assess which of the existing schemes is 'acceptable' or what are the desirable characteristics of certification schemes. Different groups have begun to develop different methodologies for assessing schemes to see which meet their needs. However, this has not resolved the controversy, but simply shifted the focus onto the frameworks developed to assess schemes, rather than the schemes themselves.

As a result, certification remains complex and confusing for many forest owners and managers and those involved in processing and trade in forest products. Many actors and organisations have difficulties in choosing which scheme to use and they find themselves baffled by the conflicting views on the applicability and market acceptance of alternative schemes. Others are weary of the seemingly endless disagreements and would like to find a way to resolve them, but remain uncertain how to make progress.

Recognizing the urgent need to move the discussion forward in a constructive way, TFD convened its first multi-stakeholder dialogue on forest certification in October 2002 in Geneva, Switzerland. The focus of the meeting was to bring together key leaders for the first time in a neutral, non-confrontational setting to freely discuss how to maximize the future potential of the tool of forest certification. Participants welcomed TFD's efforts and committed themselves to continuing to share lessons learned, build trust and maintain constructive interaction.

Following the Geneva meeting, TFD focused its certification related activities in two ways. The first was to work to create an opportunity for the heads of the active forest certification systems to meet privately. The second was to develop a multi-stakeholder dialogue process that would consider the

impacts of 10+ years of forest certification and the potential ramifications of system proliferation. In the first half of 2004, TFD organized several small preparatory stakeholder discussions. The participants were asked to help advise TFD in the development of a larger international dialogue on forest certification in October 2004. The principle questions posed to the stakeholders at the preparatory dialogues were:

1. Is system proliferation negatively impacting the tool of forest certification and;
2. If so, would an independent forest certification system assessment framework help alleviate some of the negative impacts of system proliferation.

As a direct result of those preparatory stakeholder discussions, this paper was commissioned. TFD asked the authors to reflect on the impacts of forest certification over the last 10+ years and to compare and contrast several prominent certification assessment frameworks that had recently been developed by different stakeholders. The express intent of this two-part paper is to gather information and share it in a comprehensive format for the participants of the certification dialogue in October 2004. This will provide a shared base from which those discussions can proceed and hopefully provide a greater opportunity for understanding and agreement.

The first part of the paper examines the impacts of certification, trying to provide a balanced and objective overview based on available information. As discussed above, there is no doubt that certification has had a range of impacts, many of them positive, but this is often lost in the debate about differences between schemes. A clear understanding of what certification can achieve provides the background needed for any constructive debate about how to move forward.

The second part examines four assessment frameworks, each developed by a different group of stakeholders to assess certification schemes. This analysis has two main aims:

- Firstly, to identify those features of certification schemes which all stakeholder groups consider necessary, helpful or important. Establishing that there are many areas of commonality provides a good foundation for constructive discussion between different groups.

- Secondly, to identify those aspects of schemes where there are differences between the requirements of different stakeholder groups. While some of the current debate may derive from perceptions or politics, there are also genuine differences in the values, needs and priorities of different stakeholder groups which are reflected in differing views of what constitutes an acceptable or desirable certification scheme. If these differences can be clearly identified, it becomes possible for the groups to discuss them individually and, for each one, develop a better understanding of why the difference exists and the potential for finding a compromise or resolution.

Impacts of Forest Certification

The current evidence on the impacts of certification can mainly be derived from individual case studies on certified FMUs and countries where they are found or where national processes to develop certification standards and processes have been active. This evidence, supported by expert opinions, suggests that, by and large, the impacts have been positive and in many cases significant.

However, such assessments, including the one carried out in this paper, are based on secondary information which is not consistent and often compiled for other uses than impact assessment. An attempt to apply a systematic approach using selected indicators was not successful due the fragmentary and anecdotal nature of the available information. There is a need for further studies on certification impacts to advise policy-makers and stakeholders on how to best use certification as a soft policy instrument for achieving intended goals and objectives. More systematic studies would be useful covering both Forest Management Unit (FMU) and national level impacts which are rarely systematically assessed. Future research could therefore have a broader focus than just limiting itself to FMU-level issues. This is important as many impacts are indirect and broader than those observed on the ground.

The analysis did not differentiate impacts of different certification systems as the focus was on the instrument as a whole. It is, however, apparent that:

- Different certification systems seem to address different potential needs of different users.
- Different schemes are almost certainly delivering different impacts, so that any further analysis needs to establish the degree to which any particular impact is generic or scheme-specific.
- There remain concerns about the impacts and equity of forest certification on different groups and particularly Non-Industrial private forest owners (NIPFOs) and other small or community enterprises. However, there is very limited data on what the actual impacts have been to date. Work in this area is needed to inform the equitable further development of certification schemes.

Certification has had most of its direct impacts in large-scale industrial and state-run forestry in the temperate and boreal zones. The direct impact on tropical forests is still limited, though there are a number of reasons for this, while concerns remain about the very slow progress in certification of community forests.

Most of the impacts on the ground have been FMU and stand level measures for conservation of biodiversity. Reduced impact practices have been promoted and habitat conditions have been improved. It is unclear to what extent certification has had an independent effect on the flow of forest produce as in many cases sustained yield was a guiding principle already before certification.

The social impacts of certification are probably positive and likely to be emphasized in the future while until now the emphasis has been mostly on environmental issues. Such impacts can be observed in recognition of land and forest use rights, workers, communities, cultural sites and provision of various social services. Social impacts on non-industrial private forest owners are not adequately known.

The impact on the market is still limited but growing. Potential supply is already significant but it does not appear to meet the demands in the market segments which demand certification. The impact on cost competitiveness of producers is mainly due to costs of compliance which can be significant. However, certified FMUs appear to have been able to cope with these costs but small-scale holdings of all types, community forests and some producers in developing countries may be in a disadvantaged position in this respect.

The impact on buying behaviour is mostly observed in business-to-business trade and it is also emerging in public procurement. Only limited impact on the end consumer has been observed. Impacts on substitution with other materials are probably non-existent.

Policies, institutions and governance are areas where the impacts - even though mostly indirect - have been clearly significant and by and large positive. Impacts on values, beliefs, awareness and perceptions are mostly related to direct stakeholders rather than the public at large. Their measurement is not possible with the present data.

Many of the impacts discussed in this paper could be enhanced by removing prevailing constraints. Therefore, the potential contribution of certification is certainly larger than identified in this paper, which focused on actual impacts. Identification of barriers and how they could be removed was not part of the objectives of this paper.

Analysis of four assessment frameworks

Four frameworks were analysed:

1. Confederation of European Paper Industry (CEPI) Matrix;
2. International Forest Industry Roundtable (IFIR) Framework;
3. World Bank - WWF Alliance Questionnaire for Assessing the Comprehensiveness of Certification Schemes (QACC) and;
4. (FERN) report 'Footprints in the Forest'.

List of attributes

One of the purposes of the analysis of the four assessment frameworks was to establish whether a 'master list' of attributes could be developed which included all the attributes each stakeholder group considers necessary for assessing certification schemes.

A list of attributes was developed from the frameworks and is presented in Part 2, Section 3 which provides a good basis for further discussion. However, it should be recognised that there may be additional attributes which are not included for two reasons.

- Firstly, in some cases the authors may not have identified an attribute which was implied by an indicator or requirement in one of the four frameworks. It is unlikely that any major attributes have been missed, but some minor ones may not have been included. Alternatively, attributes may have been included, but formulated in a way which is unclear or inadequate for a particular stakeholder.

- Secondly, the list of attributes was derived from the four frameworks, so any attribute which was not included in any of the frameworks will not feature in the list. It has already been suggested that attributes relating to endorsement of a scheme by another scheme or expulsion from a group scheme are inadequate. Therefore, an opportunity should be given to the full range of stakeholder groups to add any attributes which they consider absent before the list is considered finalised.

Key commonalities and differences

The analysis of the four frameworks indicated that there are many areas of overlap or commonality between the frameworks as well as a number of areas of difference.

Commonalities

Two types of commonalities between the frameworks were identified: explicit and implicit. The analysis carried out indicated that some of the most important commonalities are:

Standards

1. Standard-setting procedure publicly available: In order to ensure credibility and participation it is widely agreed that the procedure for standard-setting should be public knowledge. Though the International Standards Organization (ISO) Guide 59 (Code of Good Practice for Standardization) is not mentioned explicitly by all the frameworks, it seems likely that there would be broad agreement that the type of guidance it provides should serve as common guidance on the minimum requirements for standard setting.

2. Wide involvement of stakeholders in the standard-setting process : There is general agreement that a range of different stakeholder groups should be involved in the standard-setting process. However, there are significant differences in the requirements for how this should be achieved (see Differences No.1).

3. Stakeholder influence over the standard-setting process: There is a common view that all stakeholders should have the possibility to influence the outcome of the standard-setting process, including the aim to work by consensus. However, there are also some differences in the requirements for how to proceed in the absence of consensus.

4. Standard publicly available: There is agreement that the standard against which certification is carried out should be publicly available.

5. National standards based on international principles or criteria of SFM: There is broad agreement that national standards should be locally defined but based on an accepted set of international principles or criteria defining SFM (sustainable forest management) covering economic, environmental and social aspects. There is less clarity about which international definitions should be used.

6. Performance-based standards: There is broad agreement that standards must contain performance requirements.

7. Legal compliance: There is broad agreement that the standard should include a requirement for legal compliance.

Certification and Accreditation

8. ISO Guides: There is agreement that there should be compliance with the type of guidance set out in the ISO guides as a baseline or minimum by both certification bodies and accreditation bodies - Guides 62, 65 or 66 for certification bodies and Guide 61 for accreditation bodies.

9. Absence of conflict of interest: All certification bodies and accreditation bodies should have measures in place to ensure that they are free of all actual and potential conflicts of interest.

10. Competence of certification and accreditation auditors: While there is little detail about exactly what training or experience should be required, there is agreement that auditors, whether undertaking certification or accreditation audits, should be properly trained and experienced.

11. Dispute resolution: There should be adequate procedures for resolution of disputes relating to accreditation or certification decisions.

12. Procedures of certification and accreditation bodies: Information on the procedures, structure and financing of certification and accreditation bodies should be publicly available.

13. Accreditation: There is a common view that certification bodies should be accredited, though there are differences in view of whether this should be done exclusively by national bodies or can also be undertaken by international bodies (see Differences No. 10).

Chain of custody and claims

14. Chain of custody: There should be requirements for a robust, independently audited chain of custody from certified forest to final product if claims are made linking the product to certified forest. However, there are differences in the type of approach favoured (see Differences No. 15).

15. Control of claims and logos: There should be rules for, and proper control of, claims and use of logos and labels which are consistent with laws, standards and existing guidelines.

Scheme

16. Non-discrimination and cost effectiveness: The scheme should not discriminate between forest types, sizes or ownerships. Certification should be as cost-effective as possible to minimise costs to forest owners.

In summary, it is clear that there are significant areas of agreement relating to the processes, procedures and requirements which a certification scheme should include.

Differences

In addition to the many commonalities discussed above, there are also a number of differences. These fall into two categories. Explicit differences where an attribute is included in one or more frameworks but excluded from others and differences of interpretation where the same issue is being addressed but there are differences in the precise requirements which each framework sets out.

Standards

1. Participation in the standard-setting process: All the frameworks agree that it is important to have wide participation in the standard-setting process (see Commonalities No.2), but there is a significant difference between the precise requirements. Some frameworks require that

the scheme should invite the full range of stakeholders to participate, while others require that there must be involvement of the full range of stakeholders in the process.

2. Decision-making in the standard-setting process: All the frameworks agree that there should be clear rules and procedures, that all parties should be able to influence decision-making and that decision-making should not be dominated by a single stakeholder group. However, some frameworks go beyond this to specify that the process should ensure that no decision can be made in the absence of agreement from a stakeholder group.

3. Performance standards: All the frameworks require standards based on performance requirements. However, FERN and QACC explicitly require defined performance thresholds to be included in national standards.

4. Management system standards: It is unlikely that any interest group would disagree with a requirement for some management systems requirements in forest standards as they are almost always included. However, the CEPI matrix recommends that all certified operations should comply with an environmental management system (EMS) which is compatible with internationally recognised EMS standards (ISO 14001 or EMAS).

5. Specific requirements: Only the QACC has much detail of the performance requirements which must be included in a standard, though the scope of requirements is implied by both the IFIR and CEPI frameworks through reference to international Criteria & Indicator sets. There are a number of specific QACC requirements which may not have broad support among all stakeholders, including the prohibition on the use of GMOs, forest conversion (both of which are also in the FERN requirements), protection of the legal and customary rights of indigenous people and the requirement to apply the precautionary principle. This level of specificity represents a different philosophy from the other two frameworks where these issues are left for stakeholders to decide in national standard-setting processes.

Certification

6. Regional certification: Regional certification is explicitly encouraged by CEPI and IFIR. Both FERN and QACC support group certification but are explicit in excluding certification which allows forests to be certified without the owner or manager actively seeking or agreeing to certification.

7. Field visits: There is broad agreement between the frameworks on the need for assessors to collect information on both forest management systems and procedures and, through field visits, from the forest itself. However, QACC and FERN explicitly require the field element to be adequate to demonstrate that the performance element of the standard is being met.

8. Consultation: An important difference between the frameworks is the explicit requirement for consultation during the assessment process in both the FERN and QACC frameworks, while it is not required by either the CEPI or IFIR frameworks. This, together with public reports (see 9 below), is seen as fundamental to credibility by the FERN and QACC frameworks.

9. Public information on certified operations: Both QACC and FERN require public summaries of the results of certification assessments as an additional element of transparency and thereby credibility, while CEPI and IFIR require only information on the name, location and forest type to be publicly available as required by ISO guidelines.

Accreditation

10. National vs international: The CEPI matrix specifies that accreditation should be undertaken at the national level. In contrast, the Forest Stewardship Council (FSC) system is based on international accreditation.

11. Information: There is agreement that public information should be provided on procedures, systems and certification bodies which are accredited. However, the QACC framework also requires public summaries of the results of accreditation audits which is not specified by other frameworks.

12. Affiliation: CEPI and IFIR both specify that accreditation bodies should be affiliated to the International Accreditation Forum (IAF) or European Accreditation (EA), both of which only accept national accreditation bodies as members. QACC, in addition to IAF, specifies the International Social and Environmental Accreditation and Labeling (ISEAL) Alliance which accepts international accreditation bodies such as the FSC.

Chain of custody and claims

13. Approaches to chain of custody: The IFIR framework makes provision for wood flow accounting as one of the means to establish the chain of custody, while the other three frameworks do not refer to such an option implying tracking of wood and fibre throughout the various phases of the chain of custody.

Schemes

14. Participation in scheme development and governance: Both the QACC and IFIR are explicit in listing the range of stakeholders who should be involved in developing and running a certification scheme including owners, industry, government, environmental NGOs and social NGOs. CEPI is explicit only in requiring the involvement of forest owners.

Conclusions

Despite the continuing controversy which surrounds the different forest certification schemes, there appear to be many areas where there is broad agreement between different stakeholder groups on the way in which certification schemes should be designed and run.

Nevertheless, there remain significant differences which need to be addressed if progress is to be made in resolving some of the current discussion and polarisation. It is possible to identify what some of the most important of these are, providing a rational basis for further discussion between different groups.

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Abreviations and acronyms

AF&PA	American Forest & Paper Association
BMP	Best Management Practices
CARs	Corrective Action Requests
CB	Certification body
CFE	Community forest enterprise
C&I	Criteria and Indicators
CEPI	Confederation of European Paper Industries
DIY	Do-It-Yourself
EA	European Accreditation
EMAS	Eco-Management and Audit Scheme
ENGO	Environmental Non-governmental Organization
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FMU	Forest Management Unit
FSC	Forest Stewardship Council
GMO	Genetically modified organism
GFTN	Global Forest and Trade Network
HCVF	High Conservation Value Forests
IAF	International Accreditation Forum
IFIR	International Forest Industry Roundtable
IIED	International Institute for Environment and Development
IPF	Intergovernmental Panel on Forests
ISEAL	International Social and Environmental Accreditation and Labelling
ISO	International Organisation for Standardisation
ITTO	International Tropical Timber Organization
ICFPA	International Council of Forest and Paper Associations
LTM	Legitimacy Thresholds Model

NIPFO	Non-industrial private forest owners
PEFC	Programme for Endorsement of Forest Certification schemes
RECOFF	Regional Community Forestry Training Centre for Asia and the Pacific
QACC	Questionnaire for Assessing the Comprehensiveness of Certification Schemes
SFI	Sustainable Forestry Initiative
SFM	Sustainable forest management
TFT	Tropical Forest Trust
UNECE	United Nations Economic Commission for Europe
UNFF	United Nations Forum on Forests
WBCSD	World Business Council for Sustainable Development
WTO	World Trade Organization
WWF	Worldwide Fund for Nature

General Introduction

There is no question that certification has had a range of impacts on forests and the forest products sector. Most people working with forestry could easily list a number of areas where certification has had an impact on the management of a particular forest, a group of forest dependent people or a particular forest products market. However, the full range of impacts are not so well known and have rarely been systematically assessed.

At the same time, since its inception more than ten years ago, forest certification has been the cause of considerable debate and controversy. As a result, one of the most direct impacts experienced by many in the forest products sector is the considerable amount of time, energy and resources needed to follow, participate in and influence the 'certification debate'.

In some ways the controversy has been useful. Debate is critical in developing ideas and helping to people to change. But the debate about forest certification has often become polarised and acrimonious and detracted resources from both good forest management and the promotion of wood as a desirable and sustainable product.

The Forests Dialogue was convened to provide a neutral forum for different stakeholders to meet and discuss issues of relevance to forestry. One of the most important dialogues has been that on forest certification.

The early debate focused on whether or not certification was a useful tool for the sector. Relatively quickly there was a realisation among most groups in the sector that certification was so widely used throughout industry that it was unlikely to disappear and so the debate moved on to concerns about the way certification schemes were developed, owned and run. Almost all the main interest groups in the sector had concerns including:

- Governments: Certification, particularly international certification schemes, could undermine national sovereignty and it could become a barrier to market access.
- Industry: Certification could become a trade barrier and be controlled by unaccountable NGOs making business difficult.
- Non-industrial private forest owners: Certification could be inequitable and put small and community owned forests at a disadvantage in the market place.
- Environmental and social NGOs: Certification could be controlled by the industry and used to justify or 'greenwash' inadequate forest management.

There are also other stakeholders who have interests in, or concerns about, certification including certification and accreditation bodies which depend on certification as a source of revenue.

As a result, many of these different groups became involved in developing and running certification schemes so that there are now a number of competing schemes each supported by different groups.

While certification in general is increasingly recognized as a positive market-based tool to promote improved forest management, the main debate about forest certification now revolves around which of these schemes is 'acceptable' or what are the desirable characteristics of certification schemes. Different groups have begun to develop different methodologies for assessing schemes to see which meet their needs. However, this has not resolved the controversy, but simply shifted the focus onto the frameworks developed to assess schemes, rather than the schemes themselves.

As a result, certification remains complex and confusing for many forest owners and managers and those involved in the processing and trade in forest products. Many actors and organisations have difficulties in choosing which scheme to use and they find themselves baffled by the conflicting views on the applicability and market acceptance of alternative schemes. Others are weary of the seemingly endless disagreements and would like to find a way to resolve them, but remain uncertain how to make progress.

Recognizing the urgent need to move the discussion forward in a constructive way, TFD convened its first multi-stakeholder dialogue on forest certification in October 2002 in Geneva, Switzerland. The focus of the meeting was to bring together key leaders for the first time in a neutral, non-confrontational setting to freely discuss how to maximize the future potential of the tool of forest certification. Participants welcomed TFD's efforts and committed themselves to continuing to share lessons learned, build trust and maintain constructive interaction.

Following the Geneva meeting, TFD focused its certification related activities in two ways. The first was to work to create an opportunity for the heads of the active forest certification systems to meet privately. The second was to develop a multi-stakeholder dialogue process that would consider the impacts of 10+ years of forest certification and the potential ramifications of system proliferation. In the first half of 2004, TFD organized several small preparatory stakeholder discussions. The participants were asked to help advise TFD in the development of a larger international dialogue on forest certification in October 2004. The principle questions posed to the stakeholders at the preparatory dialogues were: 1) Is system proliferation negatively impacting the tool of forest certification and; 2) If so, would an independent forest certification system assessment framework help alleviate some of the negative impacts of system proliferation.

As a direct result of those preparatory stakeholder discussions, this paper was commissioned. TFD asked the authors to reflect on the impacts of forest certification over the last 10+ years and to compare and contrast several prominent certification assessment frameworks that had recently been developed by individual stakeholders. The express intent of this two-part paper is to gather information and share it in a comprehensive format for the participants of the certification dialogue in October 2004. This will provide a shared base from which those discussions can proceed and hopefully provide a greater opportunity for understanding and agreement.

The first part of the paper examines the impacts of certification, trying to provide a balanced and objective overview based on available information. As discussed above, there is no doubt that certification has had a range of impacts, many of them positive, but this is often lost in the debate about differences between schemes. A clear understanding of what certification can and cannot achieve provides the background needed for any constructive debate about how to move forward.

The second part examines four assessment frameworks, each developed by a different group of stakeholders to assess certification schemes. This analysis has two main aims:

- Firstly, to identify those features of certification schemes which all stakeholder groups consider necessary, helpful or important. Establishing that there are many areas of commonality provides a good foundation for constructive discussion between different groups.
- Secondly, to identify those aspects of schemes where there are differences between the requirements of different stakeholder groups. While some of the current debate may derive from perceptions or politics, there are also genuine differences in the values, needs and priorities of different stakeholder groups which are reflected in differing views of what constitutes an acceptable or desirable certification scheme. If these differences can be clearly identified, it becomes possible for the groups to discuss them individually and, for each one, develop a better understanding of why the difference exists and the potential for finding a compromise or resolution.

This paper has been written to provide the basis for a discussion convened by The Forests Dialogue which aims to make real progress in agreeing commonalities and resolving differences. There seems to be a growing will among many of the stakeholder groups involved to move forward, and therefore a commitment to making progress. It is hoped that this paper will contribute to achieving this.

Part 1: Impacts of Forest Certification

1. Introduction

1.1. Background

Certification was originally developed as a voluntary market mechanism to:

- Promote sustainable forest management through the implementation of forest management standards.
- Promote sustainable consumption patterns by shifting the use of forest products towards those coming from certified sources

However, it quickly became the focus of intense debate within the forestry sector. This initially focused on whether or not certification could provide an effective or useful tool to promote sustainable forest management (SFM) and trade in products derived from it. The early statements e.g. by the Intergovernmental Panel on Forests (IPF) in 1996 were not conclusive and positive effects were considered no more than "potential". Since then, more consensus on the overall positive impacts has evolved which can be detected from governmental statements made e.g., in the United Nations Forum on Forests (UNFF) and the International Tropical Timber Council (ITTC).

A similar trend can be traced in the industry itself with a gradual move towards accepting certification and a refocusing of the debate onto how certification schemes should be designed and run.

In spite of this gradual change there is still lack of clarity what the positive impacts of certification are. Such impacts should be identifiable both on the ground as improvements in forest management and in the market place as a shift of consumption towards certified products. Impacts can be positive and negative and they can be different between target groups or stakeholders such a forest owners and managers, industry and trade, forest communities, people living in and around forests, workers, contractors, environmental and social NGOs and other stakeholder groups. Impacts are unlikely to be evenly distributed between these groups as costs and benefits are not equally shared.

Particular areas of concern have been potential impacts on small-scale (non-industrial) private forest owners (NIPFOs) and community forest enterprises (CFEs) as well as producers in general in tropical timber producing countries.

In spite of strong forces pushing certification forward, there is a lack of comprehensive information on the actual impacts of forest certification. The available research and literature can be grouped into (a) more or less detailed FMU-level case studies, (b) general assessments of certification as a trade-related adjustment to promote SFM, and (c) targeted impact assessments drawing on field or country level analysis. Studies are not always clear about how the results or conclusions were achieved and often appear to include an element of judgement. Due to extensive variation in local conditions, conclusions tend to be location-specific and are difficult to generalise.

1.2. Objectives

According to the terms of reference, the purpose of the study is:

To provide an overview and take stock of what real impact forest certification has had on forests, enterprises, markets, other stakeholders, and policy over the last 10 years. The paper will include both positive and negative impacts and will focus primarily where the impacts are clear. The paper should not make direct attribution of the impacts to any particular scheme but rather address the impacts for forest certification as a whole. The paper should include a review of impacts on the following parameters:

i *Forests and Biodiversity Conservation*

ii *Markets*

iii *Policies and institutions*

iv *Governance (pluralism of forest management)*

v *Values and beliefs*

vi *Forest management practices*

vii *Awareness and perceptions*

viii *Stakeholder power relations*

2. Analytical framework and methodology

2.1. Analytical framework

The impacts of certification can be classified into the following groups:

- Direct impacts which are related to the objectives of certification summarised in Section 1.1
- Indirect impacts which can either be intended by various stakeholder groups or be unintended secondary effects

The terms of reference of the study identified eight areas for impact assessment (see section 1.2). The list may not, however, adequately cover potential impacts and therefore a ninth area, social impact, was included in the analysis to cover the direct impacts on forest-related people. The chosen impact areas can be grouped as follows:

- Impacts on forests, biodiversity and forest management (a, f), including impacts on soil and water
- Social impacts (i)
- Markets (b)
- Policies and governance (c, d)

- Values, awareness and stakeholders (e, g, h)

The first three impact areas are directly associated with the main objectives of certification while the last two are more indirect areas of impact. It should be also noted that there are many other areas of potential indirect impacts which may not be captured above.

For each impact area a series of measurement indicators can be identified. Table 2.1 provides an initial set, which has been used in the assessment. Some indicators may be associated with more than one area of impacts. It is obvious that some indicators are relatively easy to measure (e.g. conservation areas set aside within production forest), while others may require major new research to establish reliable evidence on what the impact has been (e.g. change in values).

The terms of reference identified those impacted as *forests, enterprises, markets, other stakeholders, and policy.* This represents a mix of impact areas (forests, markets, policy) and direct or indirect target groups (enterprises, other stakeholders). The latter needs to be differentiated as the other stakeholders represent a broad range of interest groups covering forest owners and managers, consumers, civil society, scientific community, educational institutions, government agencies, etc.

Impact measurement is a challenging task for four main reasons:

(i) seperation of certification impacts from other changes which have taken place in policies, regulations, markets or FMU strategies.

(ii) establishment of the baseline or what is the current or projected evolution of forest management in the absence of forest certification.

(iii) additionality of certification impacts which is closely related to point (ii); in cases where certification standards represent broader and higher requirements that regulation, additionality can be clearly established but in cases where the standard is close to regulation, additionality is less clear; the impact of certification may be mainly measured as an improvement of legal compliance.

(iv) availability of data on indicators which is discussed in section 2.2.

2.2. Methodology and data sources

A tentative list of potential indicators in the chosen areas was first prepared (Table 2.1) with the intention of organizing available field and national level data in a systematic way. A sample is given in Table 3.1. However, during the course of the analysis, it soon became apparent that the available data do not allow a systematic assessment this way in all the areas covered. Reporting was therefore based on the available data and Table 2.1 is an illustration of the types of indicators that could be used for measuring impacts in different areas. Research will be needed to elaborate it further to provide a comprehensive framework which could be used in local contexts when assessing impacts of certification at the level of forest management unit (FMU), landscape, region or nation.

The study is largely based on secondary information drawing on a literature review and available case studies. This represents a major limitation. Much of the earlier research was aimed at other purposes than objective impact assessment (e.g., overall assessments of certification as an instrument, costs and

benefits, etc.). Methodologies used are not well established and therefore the assessments made vary in terms of quality and coverage of analysis. Some studies or reports are based more on subjective assessment or opinions, while others attempt a more rigorous analysis of measurement data.

Individual case studies have applied a wide range of measurement criteria. Most of the research on impacts has been targeted at developing countries and community forests in particular. IIED's report (Bass et al. 2001) is probably the most comprehensive analysis of certification's impacts on forests, stakeholders and supply chains. It drew on an analysis of FMU-level audit results. Molnar (2003) has compiled a useful summary on community forests and certification exploring many of the impacts and constraints related to community forest enterprises. These two reports are probably the most comprehensive reviews of impact assessments even though both are focusing on community forest enterprises. They have been extensively drawn on in this paper.

In addition to existing studies and reports, information on certified forests (number, area, and type) available on home pages of various certification schemes was used to assess market impacts on the supply side and type of forests impacted.

The scope of the analysis is global, attempting to cover the existing operational certification systems in different parts of the world. Many of the national schemes are still in an initial stage and therefore a proper assessment will only be possible later on when practical experience on application has been accumulated. Only a few references are made to individual schemes as the purpose was to assess impacts of certification as a policy instrument, rather than those of individual certification schemes. However, this means that no conclusion is drawn as to whether each of the impacts identified relates equally to all schemes.

2.3. Limitations of analysis

Due to the shortcomings of the data, the results of this paper can be considered no more than indicative by nature. It has been also difficult to make general conclusions based on fragmentary, often location-specific information which may or may not be more broadly representative. The authors have been obliged to use their own assessment and therefore, it has not been possible to fully separate in the presentation what are the facts and what are the opinions of the authors or others who were consulted. For these reasons the conclusions made should be interpreted with extreme care.

Table 2.1 Potential assessment indicators of certification impacts

Impact area	Examples of possible indicators
1. Forests, biodiversity and forest management	
1.1 Forests and biodiversity	
FMU and stand level	- Conservation areas set aside in production forests within FMUs - Species habitat conditions
Landscape level	- Landscape level status of biodiversity in areas with certified forests
1.2 Forest management practices	
Management system	- Area covered by inventories and management plans

Impact area	Examples of possible indicators
Silviculture and harvesting	- Recording and monitoring systems - EIAs carried out - Area under reduced impact harvesting - Silvicultural measures carried out - Soil and water conservation measures carried out
1.3 Forest productivity/flow of forest produce	- Allowable Annual Cut in the long run
2. Social impacts	
2.1 Land and use rights	- Land tenure established - Recognition of multiple use rights - Recognition of rights to traditional knowledge
2.2 Workers	- Occupational safety and health conditions - Workers' living conditions - Nutrition - Workers' organization
2.3 Employment and income	- Employment generated among forest workers and owners - Income generated from forest activities by forest owners, workers, communities and other beneficiaries
2.3 Cultural sites	- Protection of cultural, spiritual sites
2.4 Dispute settlement	- Procedures of dispute settlement on forest use
2.5 Social services	- Social services provided to workers and communities
3. Market impacts	
3.1 Supply Potential supply Actual supply Cost-competitiveness	 - Area certified by forest tye and ownership category - Share of certified forests in all forests - Potential wood production - Actual supply of certified timber from certified forests - Volume of supply sold as certified - Certified share of total supply - Relative cost impacts of certification in FMUs with varying size and ownership category, particularly non-industrial private forest owners and communiity forests - Financial sustainability of certified FMUs
3.2 Demand Consumption Buying behavior	 - Volume of consumption of certified products - Market share of certified products - Buyers' (private and public) policies specifying certified products - Certification as a consumer/buyer purchasing criterion

Impact area	Examples of possible indicators
Substitution effect	- Willingness to pay for certified products/price premium actually paid - Increased consumption of forest products through substitution thanks to certification
4. Policies and governance	
4.1 Policies	- National legislation and policy specifying certification as a policy tool - Adjustment of national regulations for compatibility with certification standards
4.2 Institutions	- Effectiveness of forest owners' organizations - Capacity of forest communities - Change in institutional capacities
4.3 Governance	- Extent of illegal harvesting and trade - Adjustment of enforcement rules in certified forests - Establishment of tracking and CoC verification systems induced by certification
5. Values, beliefs and stakeholders	
5.1 Values and beliefs	- Change in core values and beliefs on forests and sustainability - Change in secondary values and beliefs
5.2 Awareness and perceptions	- Change in awareness and perception by stakeholder group • Forest owners, managers and communities • Forest industries • Civil society • Government agencies - Public perception of environmental and social acceptability of forest products (as a result of availability of certified products)
5.3 Stakeholder power relations	- Change in the decision-making structures related to forest management and forest management standards

3. Impacts on forests, biodiversity and forest management

3.1. Forests and biodiversity

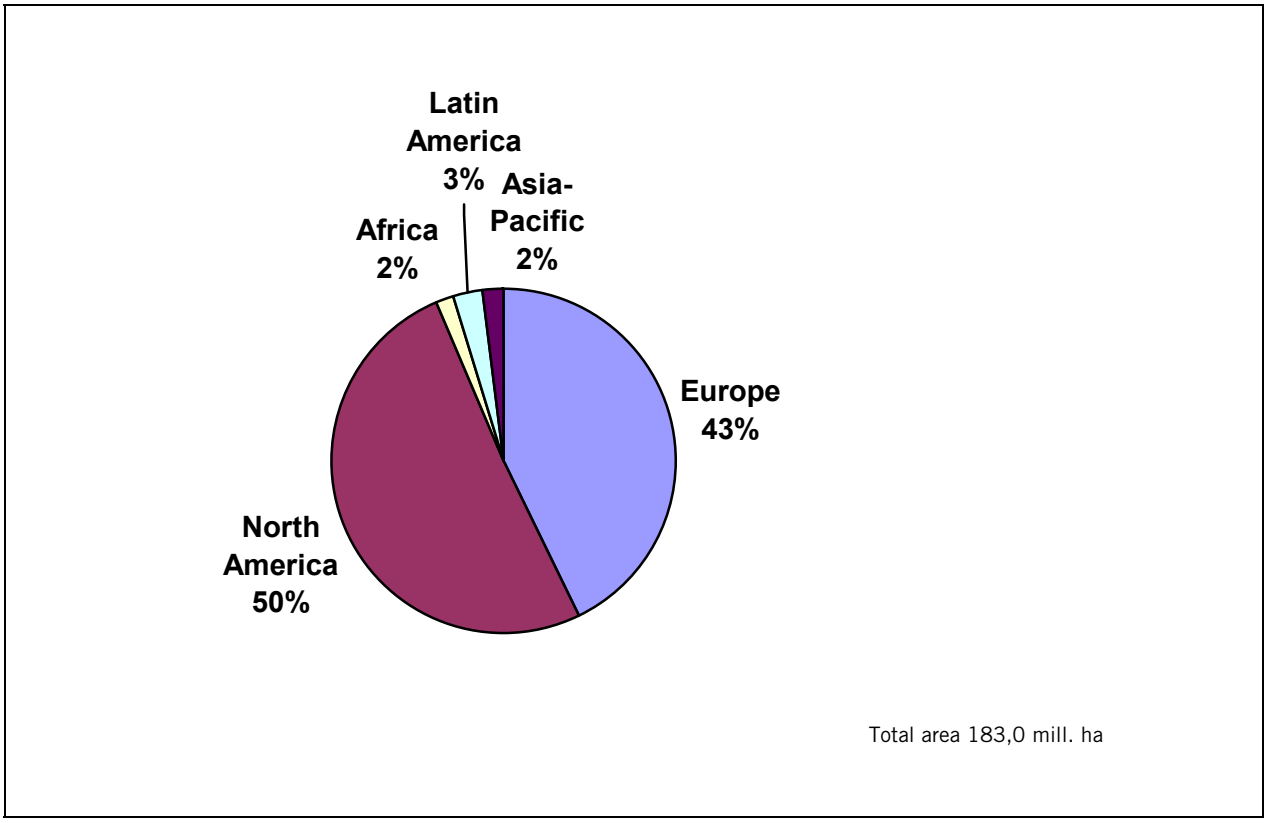
3.1.1 Certified forests

The extent, type and location of certified forests are indications where the direct impacts of certification have occurred. The total area in the world is about 183 million ha (June 2004), which is spread among 62 countries. This represents about 3.5 percent of the total global forest area.

One of the major criticisms of forest certification after a decade of development is that the majority of the certified forest is temperate and boreal with relatively slow progress in tropical forests. Still in June 2004, no more than seven percent of the world's certified area was located in the tropics (Figure 3.1). This share has not significantly changed over the last few years in spite of the general recognition of the difficulties that developing countries have in getting their forests certified (Eba'a & Simula 2002). There are a number of reasons for this.

- Many of the first companies to become certified were those that had to make few changes in their management practices to meet the requirements of certification standards (Rametsteiner 1999) which tended to be those in temperate and boreal regions.

Figure 3.1 Certified Forests by Region in 2004 (June)



- Certification was developed as a market-driven tool and the huge majority of wood and fibre traded internationally is from temperate and boreal forests so it is logical that the initial impacts should be predominantly in these forests (Nussbaum & Simula, 2004, forthcoming).
- Finally, apart from FSC, the other early certification schemes were only applicable to temperate and boreal forest. This has changed as national schemes in tropical countries have become operational and, more recently, when PEFC evolved from a European to a global programme of endorsement for forest certification.

Plantations account for 10.7% of the total certified area while the rest is semi-natural and natural forest. Drawing a line between these latter groups is not easy due to different definitions used in different countries. It can, however, be estimated that about 70% of the total certified area is semi-natural forest and the remaining 20% natural forest.

Based on the discussion above, it is clear that most of the direct impacts of certification on forests have probably taken place in the semi-natural and natural forests in Europe and North America (about 40% of Europe's forests (exc. Russian Federation) are currently certified while in North America the figure is 13%). Malaysia is the only developing country where more than 10% of the forest area is certified (approximately 20%).

3.1.2 Conservation of biodiversity

In Europe, one of the main impacts of certification has been to encourage management which renders forests in a state closer to their potential natural vegetation (Rametsteiner 2000). This is the result of increasing the diversity of trees and mixed stands, improving the protection of rare and threatened species and their habitats, and reducing the use of chemicals in forest management. The expectation is that there will be an increase in biodiversity in certified forests as a result. This needs to be verified by rigorous research and monitoring in certified forests to assess what the actual impacts on biodiversity are.

Examining the impacts of certification more widely, improved conservation of biodiversity appears to be a consistent benefit (Thornber 1999; Rametsteiner 2000). This is also confirmed by the case studies reviewed (Table 3.1). Corrective action requests have frequently required precautionary or mitigation measures for reducing environmental impacts. Typical examples are increased protection of representative ecosystems and rare, threatened or endangered species, and more rigorous assessments of environmental impacts.

The exact extent to which these measures improve ecosystem functions, increase biodiversity or lead to better survival of endangered species is something that continues to be debated, and in the absence of reliable techniques for assessing true ecological sustainability, any definitive answer is unlikely. Being limited to FMU level focus, broader landscape level conservation issues cannot be addressed if certified forests do not form large contiguous areas This can be achieved in large-scale

Table 3.1. Impact on Forests, Biodiversity and Forest Management

Indicator	Examples of Impacts
Biodiversity conservation	
	Bolivia: Conservation management is emphasised, protected areas within FMUs are planned; fire setting and hunting are reduced (Bass et al. 2001)
Environmental impacts	
	The most frequent major CARs have required precaution for reducing environmental impacts

Landscape level impacts	
	Spillover or demonstration effects of certification beyond FMU limits appear to be limited to date (Bass et al 2001). The focus of assessing an FMU prevents certification assessments from addressing broader landscape issues (Molnar 2003). Evaluation of many social and environmental issues falls outside the scope of audit. In regional certification landscape level issues can, however, be effectively addressed if expressed in the national standard.
Conservation areas set aside within FMUs	
	Some national standards define minimum percentages of FMU area for protection (e.g. Sweden (FSC) 10% but the impact and effectiveness on conservation status is unclear.
Species habitat condition	
	Habitat conservation tends to be a common element in many standards. Finland: Controlled burning is reintroduced/promoted by the certification standard specifically to provide habitat for species depending on burned wood (cf. Lindhe 2004).
High conservation value forest	
	Assessment of conservation values and their maintenance is one of the FSC principles. Similar concepts are being introduced in other schemes such as SFI's forests of exceptional conservation value.
Soil and water conservation	
	Best Management Practices (BMPs) are implied by the SFI standard. Road construction standards with regard to mitigating environmental impacts has probably been one of the most significant areas where certification has had a positive impact in tropical forests, both in plantation and natural forests.
Fauna	
	Inventories of fauna (pre- and post-felling) have been induced by certification.
Forest management practices	
	Reduced impact logging is a common feature in certified management units in natural tropical forests. This reduces opening of canopy, residue stand damage and loss of small trees for potential future growth. Regeneration of marginal areas has been induced by certification.

forestry or through group or regional certification in smallholder forestry. In any case, it is clear that certification is having a significant impact on the way that forest managers think about and implement conservation measures within their forest areas.

Certification has probably done little to reduce the incidence of deforestation, or the destruction of ecologically and socially valuable forests in tropical areas. Certification is not an instrument to combat deforestation even though such expectations are frequently attached to it. However, it does appear to be a useful tool for promoting conservation of biodiversity and other environmental values within production forests. Assessments of conservation values and related plans are becoming increasingly important elements of certification standards (ProForest 2003).

3.2. Forest management practices

Detailed case studies made of FSC certifications on a global scale have demonstrated a wide variety of improvements made in certified forests, sometimes minor, but sometimes involving radical departures from the previous management style in a region (Muthoo, 2001). For example, some certified tropical forests in parts of the Amazon Basin and South East Asia are conspicuous examples of management that complies with national and international standards in striking contrast to many neighbouring operations. Some of these FMUs have a long history of systematic efforts to build up adequate forest management practices and systems (Simula et al. 2004).

However, based on a review of corrective action requests summarized in public summary reports of certification, many of the improvements undertaken as a result of certification relate to the management processes of organizations, especially in planning and monitoring (Thornber 1999; Rametsteiner 2000). In almost one in two certification assessments corrective action requests (CARs) were raised which concerned management plans. An interesting question is whether this is because many organizations improved their practice on the ground in preparation for certification, but did not document all the changes made (Nussbaum & Simula 2004).

Several changes in forest management practices are induced by certification. These include measures to ensure future flow of forest produce, reduced impact logging techniques, road construction standards to minimize impacts on soil and water, regeneration of marginal unproductive lands, etc. In the tropics creaming of valuable species has been replaced by a more rational approach including utilization of a broader range of species and ensuring the reconstitution of valuable species stock in the forest.

These are just examples of changes induced by certification. Even more significant, however, may be the impacts on management systems through improved mapping, inventories, planning, monitoring and evaluation, recording and documentation in certified forests. This has been observed particularly in FMUs where such elements were informal or inadequate. On the other hand, changes have brought a rather heavy bureaucracy for small-sized FMUs and other situations where simplified approaches would be sufficient to ensure the quality of forest management.

4. Social impacts

Direct social impacts of certification have been difficult to quantify. Anecdotal evidence from certification bodies indicates that there have been a range of benefits including improvements in health and safety, greater respect for workers' rights and increased capacity for consultation and collaboration with local communities. It is less clear how consistent these impacts are between countries and between schemes. Similarly, there is no consistent information available on how certification has influenced the social situation of non-industrial private forest owners, often family enterprises. Due to lack of data this aspect of social impacts is not covered in this section.

4.1. Land and forest tenure

In many regions, certification has highlighted the problems of land rights (Ozinga 2004), but it has not necessarily contributed to solving them. As with the problems of deforestation, it appears that land rights are an issue, which needs to be addressed at the level of national governance rather than through certification. However, certification can help create a demand that governments and industries respect the land and forest tenure rights of indigenous peoples and local communities (Molnar 2003). Bass et al. (2001) reported that in Bolivia certification is thought to have contributed to the establishment of the indigenous Chiquitano territory and in Honduras to the establishment of usufruct contracts. In Brazil, a certified FMU provided compensation to communities in harvesting areas for forest damage that affected rubber tapping (Molnar 2003) and in another case land tenure conflicts with a community were clarified as part of the process of getting certified. In an Indonesian concession the multiple use rights of the local community were recognized and taken into account (Simula et al. 2004). These examples are valuable but to what extent land and use rights have been improved in practice on a broader scale is still not clear.

4.2. Workers

Impacts on workers have apparently been positive. The main areas where improvements have been recorded include occupational safety and health, employment conditions, workers' living conditions, nutrition, and working time arrangements.

Occupational safety and health (OSH) requirements in certification standards tend to be equal or above those of national legislation and regulations. Reduction in fatal and other accidents (recorded e.g. in Madereira Itacoatiara in Brazil (Molnar 2003)), is a suitable indicator to measure the impact.

Employment conditions, which are still not well documented or measured, are assumed to have improved particularly in larger-scale operations in countries with poor legal and enforcement frameworks (Molnar 2003). Compliance with social security obligations can also be assumed to be an area where improvement has taken place in certified FMUs. Higher than average salaries have also been recorded e.g. in Brazil even though it is not clear whether this can be credited to certification alone (Simula et al. 2004).

In developing countries, an important area of improvement has been workers' living conditions. In certified FMUs on-site accommodation standards and food supply tend to be above those of non-certified FMUs.

Flexible working hours have also been introduced in some Brazilian wood industry companies to e.g. balance seasonal needs of labour minimizing the wage income fluctuations (Molnar 2003)

Much of the forest labour is in practice provided by sub-contractors, not by FMUs. Subcontractors tend in general to have lower social standards than large-scale enterprises, which use them, but certification requires that even contractors meet certification standards. For example, Klabin in Brazil is reported to have a series of indicators to improve the benefits and working conditions of labour employed by subcontractors which correspond to the standards applied for own staff (Molnar 2003).

As a whole, the examples available indicate that certification has contributed to a better understanding among managers of certified enterprises about the importance of workers' health and safety, employment and working conditions and their well-being in general as a productivity factor contributing to the success of their employers.

4.3. Communities

Molnar (2003) and Bass et al (2001) have reviewed the impacts of certification on forest management in community forests. While it is generally expected that community forestry enterprises, being less well linked to high value forest product export markets, have less to gain from the process of certification, nevertheless it appears that there can be some benefits.

About 50 community forests have been certified in developing countries (Molnar 2003) and there are more of them in developed countries. Among the impacts reported for certified communities from countries such as Mexico and Guatemala were the use of certification as a basis to secure land rights for communities, achievement of a higher level of recognition and involvement in political dialogue, and the ability to attract increased amounts of donor support. In Bolivia (Lomerio) incompetent staff were changed when it became transparent that they were unable to run the enterprise effectively (Bass et al. 2001). In Mexico significant capacity building impacts have been observed in communities even though they vary extensively. The government's subsidy programme has been important in providing necessary support to certified communities.

In Laos the certification process in village forest associations helped clarify the roles and responsibilities of stakeholders and it created a dialogue on the legal and institutional aspects of village forestry (Litz 2000). However, certification was not highly participatory being introduced from outside and driven by technical assistance (Markopoulos 2003). Similar cases have also been observed elsewhere (Bass et al. 2001; Molnar 2003) which illustrate constraints of certification when it is mainly driven by donors.

According to Bass et al. (2001) communities that have undergone certification have felt the following impacts:

- More scientifically rigorous forest management techniques, though at the possible expense of local or indigenous management practices.
- More businesslike methods and tighter management of financial resources together with the enhanced professional status of the community enterprise.
- Increased community involvement in management and more equitable sharing of benefits.

- Increased focus on export markets, which have in some cases enabled the exposure of lesser-known timber species on the international stage.

However, certification can only be a complementary tool assisting community forests and community enterprises which process forest products. First they have to produce a product of the right type and quality at a competitive price and only then can they make effective use of certification as a marketing tool for the product. This has frequently not been the case, and therefore some community forests have discontinued certification when external support such as donor funding has ended, because they are unable to benefit from their certified status.

Impacts on community forest enterprises have been in general positive but their sustainability is a key issue. The limited progress in this segment suggests that without modification, forest certification will become a regressive instrument, which bars a majority of communities from participating. It may undermine local dynamics that make it more likely that their forests will become sustainably managed (Molnar 2003).

4.4. Social services

In general, certified FMUs and forest enterprises appear to provide a range of social services to their workers and the surrounding communities such as access to health care, schooling, infrastructure and amenity services (e.g. Simula et al. 2004). The extent to which these are needed depends on the government's capacity to provide the basic services in the communities where FMUs are located. Forest enterprises have been always involved in arranging the basic social services for their workers. Certification has brought these aspects more visible in the management attention and helped understanding about their importance for the successful operation of commercial enterprises.

5. Market impacts

5.1. Supply

5.1.1 Potential and actual supply

In spite of the total area of about 183 million hectares of certified forests, globally, certified products still account for a very limited subset of the international trade. Thus the impacts of certification on the trade could still be described as minor overall, though in some sectors of the trade they are important.

Based on the data on certified forests, their location, forest type and ownership category, the potential supply of certified roundwood can be estimated. In mid-2004, the potential was about 585 million m^3 per year This is a large potential volume corresponding to 17% of the global roundwood production at present. However, only a limited share of the total volume was apparently sold as certified or labelled as such.

About 35% of the global potential supply could come from certified plantations. However, these plantations occupy only 11% of the total certified area.

More than half of the potential volume could be supplied by certified forests in North America, followed by Europe with 35%. The developing countries would account for 11% of the total.

In mid-2004 there were about 5450 Chain-of-Custody (CoC) certificates (FSC and PEFC combined) in 74 countries or 74% more than was reported by UNECE/FAO (2003) a year earlier. More than 80 of the CoC certificates have been issued in developed countries, Europe alone accounting for almost 70%. There are companies that have sought for CoC certification even though they have no, or only marginal volumes of certified products in their product range. Getting a CoC certificate is sometimes a marketing factor on its own right.

In spite of the limited actual supply, it appears that the certified sub-sector of the forestry production has been one of the most dynamic areas of development and the pace appears to be accelerating. It is possible that certification will be mainstreamed in the internationally traded forest products over the next five-year period.

A number of producers in other tropical regions, notably South America, have used the demand for certified products as a mechanism to access high value European and North American markets with considerable success. As a result, certification has made reasonable progress in the natural forests of South America.

5.1.2 Costs and competitiveness

Cost impacts due to certification are mostly due to changes in forest management to achieve compliance with standard requirements. Direct costs of certification assessments represent a smaller share of the total costs varying according to local conditions and the level of management of the FMU (Simula et al. 2004). However, relative costs can be significant in small-scale private or communally owned forests which have simple management systems. In developing countries these systems are weak and therefore meeting the requirements of documentary evidence can be costly. Due to the importance of fixed costs in certification, cost impacts have been particularly a cause of concern among small-scale private forest owners. There has even been a suggestion that subsidies should be made available to support certification of small-scale forest holdings in the US, as their individual certification would be prohibitively costly (Rosenberg & Huff 2001).

However, group or regional certification can address to some extent the issue of cost burden of auditing which can become prohibitive in small FMUs if individually certified. As there are also economies of scale in forest management, the impacts of compliance costs are also likely to be more severe for small-scale forest owners than large FMUs. For private non-industrial forest ownership conditions cost-effective certification arrangements are needed to avoid adverse impacts on these producers. The situation is particularly a cause of concern in some countries in transition where practically all publicly owned forests have been certified enjoying market access benefits while certification in private forests still remains incipient.

In relative terms costs are less significant in well-managed forests already complying with legal requirements. These FMUs tend to be already competitive which can be further enhanced by certification.

Costs appear to be lower in plantation forestry than in natural or semi-natural forest management (Simula et al. 2004). This is due to the fact that their management system tends to be more streamlined and forest management is less complex than in natural forests. In addition, plantations are usually already 'managed' not just 'logged' to ensure the returns on investment whereas for example in natural tropical forests exploitation without other management measures has been common.

Costs are heavier for primary producers (forest owners and managers) than for processing industries and trade. However, the latter tend to reap the immediate market benefits from certification.

There are no records on detrimental cost impacts on certified FMUs in developed countries in large-scale forestry. Also in the tropics, certified concessions have been able to absorb their additional costs due to compliance with the certification standard, sometimes with external funding. The five sampled FMUs subject to detailed case studies in Brazil, Indonesia and Malaysia indicated that in all cases costs were possible to absorb (Simula et al. 2004).

5.2. Demand for forest products

There are no systematic statistics or studies available on the actual or potential demand for certified forest products. The market may be divided into three segments: (i) business to business, (ii) final consumer-level demand and (iii) public sector purchasing. The first component overlaps with the other two.

5.2.1 Business-to-business market

UNECE/FAO (2003) used CoC certificates as indications of the demand for certified forest products. Out of the more than 5 400 certificates, the largest numbers are found in Germany (764), France (531), the United States (497) and the UK (435). In ten other countries (including also Austria, Brazil, Canada, Czech Republic, the Netherlands, Poland, the Republic of South Africa, Sweden, and Switzerland), the number of CoC certificates exceeds 100.

There is no comprehensive information available on the distribution of CoC certificates by product segment. An analysis has been carried out on FSC CoC certificates in 2003 by UNECE/FAO which revealed that companies holding such certificates cover a very wide range of products of all types of forest-based industries. Most of them are in the wood industry and trade sector and pulp and paper accounted for only 5.1% of the total. A significant share appears to be held by joinery and furniture industries (29%). Traders (wood products, DIY) accounted for 14% of the total. There is also latent demand in the market as members down in the supply chain have not necessarily acquired CoC certificates until their supplies of certified products are ensured.

WWF's Global Forest and Trade Network (GFTN) had in mid-2003 about 800 members. Buyers groups operate now in 18 countries and they have been instrumental in promoting direct demand for certified products. As an example, the member companies of the UK WWF 95 + Group (member of the GFTN)has been estimated to account for 20% of the total UK consumption of timber in 2000 (Bass et al. 2001). The Groups have offered a suitable strategy for many members in the initial phase of the efforts but for active buyers working directly to increase their certified supply chain, membership gradually loses its importance.

It may be concluded that manufacturers and retailers may be able to increase market share by offering environmentally labelled products which are priced at prevailing market prices since consumers seem to prefer the presence of label (Anderson & Hansen, 2003)

5.2.2 Final consumer demand

The final consumer demand is still having a limited impact as a driver for certified products in the market place. On-going media coverage on environmental concerns related to forests and, more recently on illegal harvesting and trade, which is often induced by NGO activism, continues to represent a pressure on the productive sector to demonstrate responsible forest management and utilization. On the other hand, Anderson and Hansen (2003) have found that consumers tend to prefer certified products over identical non-certified. Price, quality and design continue to be the main purchasing criteria.

Particularly in some European countries, large retailers and companies that have been the strongest supporters of certification, notably in the DIY and furniture sectors, have offered visible outlets for certified products. These companies have had a major influence in driving forward certification and the marketing of certified timber. On the other hand in sectors such as the construction timber market, where the direct exposure of products to the consumer is more limited and branding is less important, supply chain pressure has not worked so effectively to promote certification.

There are a number of reasons for relatively slow progress in consumer demand for certified products, the most important being that the environmentally sensitive markets which are demanding certified products (certain EU countries and, to a growing extent, the US) account for a relatively small proportion of the timber trade. In major exporting countries domestic demand for certification has generally been slow to emerge.

Imports of further processed products in the major markets (the EU and the US) have been shifting to China and Eastern Europe. Demand for certification is inducing these new suppliers to make progress in getting their raw material sources certified, be they local or external,. In the paper sector demand for certification is probably strongest in copy paper, magazine and other printing grades.

The business-to-business markets will continue to be the driving force for creating demand for certified products which is expected to be enhanced by public procurement policies in the European market. (UNECE/FAO 2003). Final consumer demand is not likely to become the main driver for certification apart from some market niches.

5.2.3 Public procurement

Some national and many sub-national government bodies are adopting procurement policies that promote the purchasing of ‘green’ products wherever possible. Public bodies can have a significant effect on the timber trade. In the case of the UK, the public sector accounts for around 15% of the construction timber market so that the policy shift towards requiring verifiably legal and sustainable timber can have a significant influence on the market.

In addition to the United Kingdom, which launched its Timber Procurement Policy, Green Guide for Buyers in 2004, other European countries are working along the same lines. The Danish Ministry of Environment

issued its Environmental Guidelines for Purchasing Tropical Timber in 2003. Germany, Netherlands and France are also working on public procurement guidelines for timber purchasing.

This demand driver is a more complex one than private sector purchasing because governments are wary of supporting individual certification schemes and have to be careful about the way they specify the buying of certified timber, to avoid contravening WTO regulations. Specific rules for tropical timber are likely to prove to be particularly problematic in this respect so most importing countries apply their requirements to all timber and timber products.

As public procurement policies make reference to legality of purchased timber and sustainability of forest management, the on-going debate on illegal harvesting and associated trade is going to give a boost to their importance. As certification can contribute to verification of the legality of timber the two instruments are mutually supportive. For public policies specifying certification as a procurement criterion, there will be a need to define which minimum requirements acceptable/eligible certification schemes would have to meet.

5.2.4 Price premium and market access

The main economic benefit of certification is perceived to be facilitated market access. The recent ITTO cost-benefit analysis of certification suggests that other indirect benefits can be even more important, particularly cost reductions (Simula et al. 2004).

The debate on price premiums is still inconclusive. On one hand, there is anecdotal or company-level evidence on price premiums obtained by certified suppliers. They can vary extensively up to 65 percent in certain cases in niche markets where certified demand grossly exceeds supply, e.g., some producers of tropical sawn timber and plywood have obtained high premiums for part of the production markets where supply is very limited as reported by Eba'a & Simula (2002). The premiums have been an important benefit for some of the pioneers of certification who were at least able to recoup their costs. However, there is a general view among industry and traders that such premiums will be short-lived as soon as supply starts to match demand. In particular, if certification is mainstreamed in the supply side, no price premium can be expected and even at present buyers are resistant in opposing any additional increases in their purchase prices due to certification.

On the other hand, it is foreseen that companies which do not have certification and have publicity problems in their wood supply (e.g. natural forest converted into industrial plantations, harvesting of old-growth forests, etc.) may have to be prepared to accept lower than market prices in situations where supply exceeds demand.

Market benefits, mainly associated with sensitive markets, have often been reaped by the retailers that have promoted certified products to protect their corporate reputation and market share. Any premiums that have materialized have been driven more by a shortage of certified products at the retail end, rather than a conscious willingness on the part of the purchasers to pay a price for sustainability (Rametsteiner 2002). In general, producers have not benefited to the expected degree. In a survey undertaken as part of the development of its percentage claims rules by the FSC, respondents were asked whether they had ever received a price premium for their certified products. None of the responding forest managers reported a

premium, whereas almost half of processors and two-thirds of retailers at least sometimes receive a premium (FSC, 2002). There are, however, exceptions from this general picture. E.g. Södra in Southern Sweden is currently reported to pay a premium of USD 2 per m^3 for sawlogs and USD 1 per m^3 of pulpwood to FSC certified forest owners (Södra, 2004).

Market access has been a more obvious benefit for some suppliers than price premiums. A good example is the South African paper sector which sought certification early and successfully captured a share of the market for certified paper in Europe (particularly the UK, Netherlands and Germany). Several South American companies have had similar experiences with production of certified plywood, doors and garden furniture where the ability to supply certified products provided access to a high value market which provided an economic return on the investment in certification.

For many producers and suppliers of temperate and boreal timbers, certification is becoming a baseline requirement. Buyers are expected to continue to strongly resist any pressure to pay any extra for certified products, even though certification adds value to the product in the sense that it provides information on the environmental quality of the product.

5.2.5 Substitution effects

There is no clear evidence available on possible substitution effects of certification. Positive effects could be expected if certification can strengthen the buyers' perception on environmental friendliness of forest products. On the other hand, certification requirements, being associated with the environmental concerns, are currently demanded mostly on forest products and not their substitutes for which natural resource utilization is not a focal issue. Conflicts around certification systems have been negative in this respect undermining the role of certification as a positive instrument while increasing confusion among consumers and buyers on environmental benefits of forest products.

6. Impacts on policies, institutions and governance

6.1. Policies and regulation

There is a general view that certification has had a positive impact on policy development and institutions. These impacts are found both in the policy process and the substantive contents of the policy. The process improvements are a result of raising awareness of the possibilities for SFM, decentralization and democratization through debates in national working groups on standards, and improved scientific interdisciplinary input in defining SFM (Bass at al. 2001, Elliott 2000). However, certification's biggest role in policy change has probably been indirect through greater awareness and clearer roles of stakeholders (Rametsteiner 2000). The main impact derives from the participatory approach in national-level standard setting and development of locally applicable certification procedures.

This positive view on certification's role is not, however, shared by all stakeholders. In countries where SFM policies have been well established and institutional and governance problems are not major issues, some stakeholders feel that the development of certification may have sometimes unnecessarily contributed to the polarisation of the national debate on how forests should be managed. There have even

been some suggestions that certification may have opened a new avenue of influence for opportunistic parties to seek their own interest which may not necessarily by compatible with the goal of sustainable forest management.

Certification has probably fostered policy development particularly in countries with weak attention to traditional and indigenous tenure rights (Molnar 2003).

A number of countries have specified certification in their forest legislation. The Mexican Forest Law (2003) makes provisions for certification as an instrument for good forest management. In the Russian Federation the current forest law (under revision) specifies mandatory certification as an enforcement instrument. In Brazil, the states of Acre and Amazonas will apply certification as a precondition for concession agreements (Viana, J. pers. comm.; Viana, V. 2004). In Bolivia, independent third-party certification can replace statutory audits in forest concessions (Forest Law 1996). In the Republic of South Africa certification in government leased land is mandatory substituting government monitoring of compliance with lease conditions (Bass et al. 2001). In Guatemala certification within three years is a concession agreement condition in the Mayan Biosphere Reserve (Molnar 2003). In England, certification will become a condition for forest areas of more than 30 ha to access woodland management grants from government from 2005 (Forestry Commission England, 2003). These examples cover a wide range of countries and applications and many other governments are in the process of exploring similar opportunities. There is still limited knowledge and experience on such policy linkages and therefore this issue will merit further study as there may be risks related to creation of unnecessary costs and bureaucracy, particularly for community forests, non-industrial private forest owners and small and medium forest enterprises (SMFEs).

6.2. Institutions

About a quarter of the world's certified forest area is state owned (cf. section 6.3.1). In many countries certification has increased the credibility of public forest agencies as custodians of government-owned lands, or this has been at least a key motivation for embarking on certification (Rametsteiner & Simula 2003). On the other hand, limited or no involvement of forest authorities in certification process in private forests has had no or limited impact on public institutions.

In Europe, certification has in general strengthened the organizations of NIPFOs in countries where these organizations play a key role in the process. They may act as certification applicants, carry out internal audits and their role in promoting certification among forest owners has been important. Certification has become a process where forest owners often depend on their own organizations thereby strengthening their mandates and sometimes also resources. Certification is also influencing industry associations. As an example, in the case of the American Forest & Paper Association (AF&PA) participation in the SFI program is a membership condition. Many other industry associations have been active in promoting certification development in their country, which has strengthened the role of their forest and environmental departments. It can be expected that this may become increasingly common among industry associations making it easy to declare common commitments and monitor achievements.

Certification has been a priority element in the agenda of many civil society organisations. It can be assumed that those NGOs which have been active in the international and national debates on certification have benefited from the process (see also Section 7.3).

6.3. Governance

Perhaps the greatest and least expected impact of forest certification to date has been in the arena of governance. National forest agencies were initially resistant to the concept of market-based regulation through certification, due to its inevitable implication that state regulations are either inadequate or ineffectively enforced. Furthermore, state forestry bodies, just like private companies can be resistant to public scrutiny of their operations, and therefore may not wish to pursue the certification of state forest lands. However, the process of developing national standards, and the involvement of government bodies in these processes, has had beneficial effects on the overall understanding of sustainable forest management and its regulation. This has led some forest agencies to harmonize their own management standards with those of the certification scheme, and to perceive the schemes as less of a threat to their own integrity (cf. section 5.1). Where this has occurred there is potential for governments to differentiate supervision and control intensity between certified and non-certified forests (Vogt et al. 2000, Molnar 2003). This issue still needs careful consideration and only in rare cases would it be justified to replace government control by third-party certification (Nussbaum & Simula forthcoming).

The development of national standards has also provided a forum for the involvement of a far wider range of stakeholders than have traditionally been provided with access to forest policy development. This has served two very important functions: (i) changing the power relations between stakeholders (see section 6.3.2) and (ii) providing a mechanism for learning and engagement where factions which may have disagreed for many years about forest management can come to understand each other's views and, as a result, are finding ways to compromise and move forward.

There is anecdotal evidence which suggests that the process of engagement of a wide range of stakeholders may be fundamental in combating some of the wider problems faced by the forest sector such as corruption, deforestation and illegal logging. However, it is also important to note that the uptake of certification has been slow in areas where corrupt, unsustainable and illegal practices are common (Nussbaum & Simula,2004). There is no doubt that sound existing governance is an important enabling condition for certification (Rametsteiner 2000), but nevertheless, certification can also contribute to the development of sound governance.

7. Values, awareness and stakeholders

7.1. Values and beliefs

Values related to natural resources are reflected in decisions on their use. These decisions are political involving judgement between different values which incorporate a distinction between (i) intrinsic values, the worth some aspects (e.g. natural, species) have in their own right and (ii) instrumental value, the usefulness objects have in fulfilling other ends (e.g. economic welfare) (Norton 1987). The conflicts over

the use of forest resources are due to different emphasis that stakeholders give to intrinsic and instrumental values on one hand and to various instrumental values on the other hand.

Forest-related societal values have experienced major shifts over the last decades. The deeply embedded view emphasizing exploitation of natural resources on the basis of sustained-yield production as a source of economic growth and social well-being has been increasingly challenged. Awareness of the loss of environmental conservation values in the exploitation process was a key reason for the emergence of the broader concept of SFM. Indeed, certification was originally introduced as a tool to address deforestation and environmental destruction. More recently, social aspects of sustainability have been gaining increasing recognition and their role is likely to be further emphasized in the future.

However, the different emphases given to different aspects of forests by stakeholders often relates to deep (core) values (fundamental socio-cultural values). These take time to change and in many societies, as forest related values are formed as part of larger issues than forests alone (nature, natural resources, environment, socio-economic development, etc.). It can be assumed that certification has in some cases contributed to a change of the core values of stakeholders, particularly in the case of private owners and forest industries. However, with the available information, it is not possible to assess what such impacts could have been.

Values form part of belief systems which consist of deep core, policy core (specific to forestry) and secondary aspects. Advocacy coalitions are made up of actors who share the same belief systems. The belief systems change in the policy process, which may also lead to a change in the coalitions even though the line-up of allies and opponents tends to be rather stable over periods of a decade or so. Elliott (1996; 2000) draws on these theoretical concepts which form basic elements for the Advocacy Coalition framework. He observed that in Sweden certification had led to changes in the composition of coalitions as industry had allied with the environmental movement.

Policy orientated learning is needed for change in belief systems. Such learning is most likely when there is an intermediate level of informed conflict between coalitions. Conflicts tend to be about core elements of belief systems rather than on secondary aspects. According to Elliott (1996) certification development in Indonesia, Canada and Sweden have led to such learning and at least in the Swedish case core beliefs of the two coalitions changed which actually led to realignment of coalitions. Even though evidence on change in coalitions may be difficult to observe in other countries without in-depth studies, it can be assumed that certification has been contributing to policy learning offering a platform and mechanism to make conflicts transparent and to address them. This has probably been the main channel for change in values and beliefs as a result of certification.

7.2. Perceptions

Public perceptions on forest management tend to dwell on a few human interventions, which are generally perceived as negative. The list is long and it is continuously evolving. The following is just an example of selected issues of concern:

- Conversion of natural forest to other uses by slash and burn techniques
- Harvesting of old-growth forests

- Clearcutting in natural forests at the end of tree rotation of as a means to convert non-productive stands into productive through effective regeneration
- Monoculture plantations using single species with potential impacts on, for example, groundwater table
- Spreading large-scale industrial plantations to forests areas occupied by communities and farmers
- Road construction in the forest opening the possibility for encroachment or leading to soil erosion
- Illegal harvesting and trade of wood and wood products (more recently)

It is noteworthy that perceptions on other countries' problems tend to be more negative than those of people's home country. (e.g. the public perception on tropical forestry in northern countries.

The presently certified forests include areas with clearcutting, single-species monocultures, large-scale industrial plantations and (controlled) harvesting of old-growth forests, among others. It is unlikely that, due to the specificity and complexity of the issues listed above, certification has had any significant impact on public perception on the acceptability of good forest management. In general, plantation wood is probably considered more environmentally friendly than native (tropical) species and therefore some consumer products are being sold with reference to "plantation wood".

Some of the main concerns about plantations are related to land tenure, water and GMOs. They are however more local than international market concerns for the time being. Acceptability of plantations is, however, challenged by some environmental and social NGOs and certification tends to be seen as a means to legitimize their establishment and utilization.

7.3. Impacts on stakeholders

7.3.1 Forest owners and managers

Based on the data on the ownership of certified forests the following breakdown has been estimated (global figures all schemes)

	Percent
• industry owned or managed lands (incl. concessions)	49.8
• state-owned lands	24.1
• non-industrial private forest owners (NIPFO)	22.7
• community forests	2.1
• other	1.3

Large-scale forest operations owned by the state or industrial enterprise account together for about three-quarters of the total forest area certified in the world. The overall impact in their forest management is

however probably less than the area shares suggest because these forests tend to be anyhow better managed than private and community forests.

The share of certified NIPFO forests is significant and illustrates relatively fast adoption of certification in this group, particularly during the last few years. This may suggest that existing certification schemes complement each other in terms of ownership pattern, as the share of certified NIPFO forests would have been lower, had there not been specific certification schemes focusing on these forests.

Nevertheless, there have been major concerns in this group about the impacts of certification as its costs have a strong element of fixed costs and there remain concerns that small-scale forest owners have been put at a disadvantage in accessing this market instrument (see section 5.1.2). Rosenberger and Huff (2001) studied the economic thresholds of non-industrial private forest owners to certification in Maine, the United States. They found that certification costs for FMUs less than 400 ha seeking certification individually are about USD 5 800 plus an annual cost of USD 1 500 or the total costs of USD 11 800 over the five-year period (validity period of the certificate). This represents from USD 29.50/ha upwards depending on the size of holding.

However, the use of group or regional certification approaches are now widespread in many of the existing certification schemes and have been shown to significantly reduce both the cost and administrative burden of certification for small forest owners. There is no systematic analysis of what the overall impacts of certification on this group have been and such work is needed.

One of the most important impacts of forest certification on forest owners and managers has been through the development and implementation of forest management standards, which incorporate and give equal weight to economic, technical, social and environmental requirements. The broad scope of these standards, addressing issues such as labour relations, occupational safety and health, resource use rights, employment and community participation, in addition to traditional 'forestry' issues such as inventory, silviculture and harvesting, has changed the way many forest owners and managers view their role and responsibilities. This impact has sometimes extended beyond the boundaries of certified forests. Most forest managers in larger organizations, wherever they operate and however good or bad their management is, now have some awareness of this range of issues. (Nussbaum & Simula 2004).

Certification has introduced third-party auditing to forest management. This has brought along improvements in internal auditing and monitoring in forest organizations and it also provides an impartial external view to forest owners on the management status of their forests. This is particularly important for those owners who are not themselves managing their forests whether they are governments leasing out concessions or small forest owners contracting out management to a resource manager (Baharuddin & Simula 2001).

7.3.2 Stakeholder power relations

There is a broad view that the emphasis of certification on broad participation and transparency in forest management has had a positive effect on power relations between stakeholders. This is particularly thanks to the participation of stakeholders in national and regional standard setting processes (or stakeholder consultations when generic standards are used in the absence of national standards). National standard

setting processes have been able to forge consensus or broad common views on the requirements of forest management. About 20 countries have one or more sets of national standards and at least another 20 are undergoing development process.

Having a seat in the negotiation table is one element for stakeholders using their power. The other element is possibility to influence the outcome, i.e., the content of the certification standard. The decision-making rules and procedures of various certification schemes vary and are still evolving. In general, they all have some weaknesses for an effective, broadly supported certification scheme. The key issues appear to be linked to which groups "control" the decision making and whether a consensus is needed. The absence of a key stakeholder group in the standard setting process has been considered problematic for the credibility of a standard. This is a dilemma as participation cannot be imposed and stakeholders can also pull out of the process whenever they so consider. This has led to another issue whether a stakeholder or a group can have an effective veto right on the outcome thereby exercising a higher degree of power than e.g. in a democratic decision making involving voting by a certain degree of majority. The commitment to the participatory process by a stakeholder may only last as long as the result corresponds to her/his expectation. This problem may be addressed if the rules of the standard setting are agreed in advance assuming that parties also respect them up to the very end independently from whether they individually agree with the outcome or not.

Since environmental activists started direct action on individual clearly visible companies buying and selling forest products, procurement policies specifying certification have become a major tool to hedge against such action and associated damage to business interests. Environmental groups, through their networks and direct contacts with foreign buyers, have thereby gained a much stronger power in the negotiation table with the forestry sector in their own countries. Using this "foreign card" with effective communication in mass media has been particularly common in such major exporting countries as e.g., Canada, Finland and Indonesia. Certification has been one tool for companies under attack to protect against such damage. However, the impacts have been reduced by the fact that national schemes have not been adequately supported or they have even been opposed or discredited by some vocal NGOs.

Certification has improved stakeholder relations in many FMUs (examples include Poland, Brazil, South Africa, Brazil, Central America, etc.). Due to competition between schemes and even more so between their supporters, the progress of certification has also sometimes polarized stakeholder relationships in Europe and elsewhere. There are countries where little or no improvement is observed in this field.

In general, it my be concluded that certification has in many cases changed the balance of power, giving more influence to environmental and social interests and reducing the dominance of government and economic interests. However, problems in this field exist as legitimate interests of stakeholder groups are sometimes in conflict with each other.

There is sufficient available guidance to solve the issues related to the problems of power relations between stakeholders. However, due to the political nature of the certification development process, it is unlikely that such power is given up by one group for the benefit of another. The origin of the conflicts is not often on the local level but induced by international networks and structures. This makes it difficult to address them at local or national level as the international stakeholders, through certification, have actually gained also a seat in the table even though it may be invisible. The interplay between importers

and exporters, producers and environmental and social NGOs at international, national and local levels represent a particular complexity for certification as a policy instrument.

8. Conclusions

The current evidence on the impacts of certification can mainly be derived from individual case studies on certified FMUs and countries where they are found or where national processes to develop certification standards and processes have been active. This evidence, supported by expert opinions, suggests that, by and large, the impacts have been positive and in many cases significant.

However, such assessments, including the one carried out in this paper, are based on secondary information which is not consistent and often compiled for other uses than impact assessment. An attempt to apply a systematic approach using selected indicators was not successful due the fragmentary and anecdotal nature of the available information. There is a need for further studies on certification impacts to advise policy-makers and stakeholders on how to best use certification as a soft policy instrument for achieving intended goals and objectives. More systematic studies would be useful covering both FMU and national level impacts which are rarely systematically assessed. Future research could therefore have a broader focus than just limiting itself to FMU-level issues. This is important as many impacts are indirect and broader than those observed on the ground.

The analysis did not differentiate impacts of different certification systems as the focus was on the instrument as a whole. It is, however, apparent that:

- Different certification systems seem to address different potential needs of different users. This is particularly important in the discussion in Part 2 of this paper.
- Different schemes are almost certainly delivering different impacts, so that any further analysis needs to establish the degree to which any particular impact is generic or scheme-specific.
- There remain concerns about the impacts and equity of forest certification on different groups and particularly NIPFOs and other small or community enterprises. However, there is very limited data on what the actual impacts have been to date. Work in this area is needed to inform the equitable further development of certification schemes.

Certification has had most of its direct impacts in large-scale industrial and state-run forestry in the temperate and boreal zones. The direct impact on tropical forests is still limited, though there are a number of reasons for this while concerns remain about the very slow progress in certification of community forests.

Most of the impacts on the ground have been FMU and stand level measures for conservation of biodiversity. Reduced impact practices have been promoted and habitat conditions have been improved. It is unclear to what extent certification has had an independent effect on the flow of forest produce as in many cases sustained yield was a guiding principle already before certification.

The social impacts of certification are probably positive and likely to be emphasized in the future while the emphasis has until now been mostly on environmental issues. Such impacts can be observed in

recognition of land and forest use rights, workers, communities, cultural sites and provision of various social services. Social impacts on non-industrial private forest owners are not adequately known.

The impact on the market is still limited but growing. Potential supply is already significant but it does not appear to meet the demands in the market segments which demand certification. The impact on cost competitiveness of producers is mainly due to costs of compliance which can be significant. However, certified FMUs appear to have been able to cope with these costs but small-scale holdings of all types, community forests and some producers in developing countries are likely to remain in a disadvantaged position in this respect.

The impact on buying behaviour is mostly observed in business-to-business trade and it is also emerging in public procurement. Only limited impact on the end consumer has been observed. Impacts on substitution with other materials are probably non-existent.

Policies, institutions and governance are areas where the impacts – even though mostly indirect – have been clearly significant and by and large positive. Impacts on values, beliefs, awareness and perceptions are mostly related to direct stakeholders rather than the public at large. Their measurement is not possible with the present data.

Many of the impacts discussed in this paper could be enhanced by removing prevailing constraints. Therefore, the potential contribution of certification is certainly larger than identified in this paper, which focused on actual impacts. Identification of barriers and how they could be removed was not part of the objectives of this paper.

Part 2: Analysis of Four Certification System Assessment Frameworks

1. Introduction

1.1. A short history of assessment frameworks

Since forest certification first emerged in the early 1990s, a number of different forest certification schemes have been developed. Therefore, anyone interested in using certification, whether they are forest owners wanting to certify their forests, purchasers wanting to purchase certified products or investors wanting to link their investment to certification, has to decide which certification scheme or schemes they are going to use.

As a result, as certification has developed there has been a parallel discussion process considering what constitute the desirable elements of a forest certification scheme. At the intergovernmental level, IPF reached a consensus view on concepts which should be supported in the application of certification schemes. The list, (contained in Art. 133 (c) of the IPF report, 1996) included:

1. Open access and non-discrimination in respect of all types of forests, forest owners, managers and operators;
2. Credibility,
3. Non-deceptiveness,
4. Cost-effectiveness,
5. Participation that seeks to involve all interested parties, including local communities,
6. Sustainable forest management, and
7. Transparency.

While this provides a useful basis for discussion, in practice the concepts are very general and open to considerable variation in interpretation. Therefore, various initiatives have been undertaken to develop more detailed sets of criteria or **frameworks** for assessing forest certification schemes to establish whether they deliver these or other desired outcomes.

In 1997, the Dutch government produced a set of minimum requirements for timber from "sustainably managed" forests to be eligible for a label on the Dutch market (Dutch Ministry of Agriculture, Management and Fisheries. Department of Nature Management, 1997). These criteria were used as the basis for the Dutch Keurhout timber labelling scheme (which ceased operations in 2003). In 2003 the Dutch government began a revision of the criteria with a new version developed for release in 2004.

Since 2000 a range of different initiatives proposed criteria sets for global use.

- GTZ's Forest Certification Project Working Paper 23 (GTZ, 2000) presents principles, criteria and indicators for assessing the effectiveness of forest certification systems in contributing to sustainable development. The document summarises and groups relevant hard and soft law, internationally accepted guidelines for standardisation, accreditation and certification, and civil society aspirations expressed by representative and non-governmental organisations. The purpose of the document was to inform capacity building efforts in developing countries as part of the GTZ support programme.
- The Confederation of European Paper Industries (CEPI) Comparative Matrix (CEPI, 2000) sets out criteria and indicators for comparing international and national forest certification schemes and presents information collected from the schemes operating in 2000. CEPI will publish a revised version in the summer of 2004.
- A report published by the Australian Department of Agriculture, Fisheries and Forestry (Australian DAFF, 2000) proposes critical elements and potential performance measures for the assessment of forest management certification schemes and provides a preliminary assessment of existing comparability and equivalence initiatives and certification schemes against the proposed critical elements. The report was prepared for the Australian Government to assist their strategic planning and, where appropriate, to inform the ongoing international debate by interested parties about the further development of forest certification.
- The International Forest Industry Round Table (IFIR) proposed criteria and indicators for credible SFM standards and certification systems in the context of its proposal for an international mutual recognition framework (IFIR, 2001).
- The environmental NGO Fern produced a comparative analysis of four certification schemes based on a set of ENGO objectives and criteria (Behind the Logo, 2001). This was followed by a second comparison (Footsteps in the Forest, 2004) looking at eight schemes. The first report used a long list of attributes to assess schemes, whereas in the second this was reduced to 11 key questions.
- In 2000 the World Bank-WWF Alliance for Forest Conservation and Sustainable Use published a Guidance Note for its target for improved forest management and certification setting out eleven criteria for determining credible forest certification systems (World Bank – WWF Alliance, 2000). Based on these, the Alliance has prepared a tool for assessing schemes to see whether they meet their criteria, the Questionnaire for Assessing the Comprehensiveness of Certification Schemes/Systems (World Bank – WWF Alliance, 2003). This will undergo its first pilot use in 2004 and will be used by the Alliance in the identification of schemes which contribute to its certification target of 200 million hectares, and by the World Bank to guide forestry and forest products investments.
- In 2003 the Danish government published a set of criteria for establishing which certification schemes met their requirements for the purchase of tropical timber (Purchasing Tropical Timber: Environmental Guidelines, 2003). In 2004, the UK government undertook a process to assess which forest certification schemes deliver its public procurement objectives of purchasing wood and paper products from legal and sustainable sources. The German and French governments are also engaged in similar processes and the European Union is working on instruments which reference certification of forest products.

- In July 2003 the World Business Council for Sustainable Development (WBCSD) proposed a conceptual framework for the independent assessment of certification systems based on broad stakeholder agreement on 'thresholds' or benchmarks of 'legitimacy', as a way encouraging the credible use of multiple certification systems. The 'Legitimacy Thresholds Model', which remains at a conceptual level, is discussed further in section 4.
- In July 2004 US-based Metafore released its Forest Certification Evaluation Tool for Buyers, providing guidance to buyers deciding which certification schemes to use.

However, none of these initiatives has so far provided the basis for an international consensus on what constitutes 'acceptable' certification schemes. Furthermore, there is no clarity about which forum should be entrusted with such a task. Each framework is supported by some groups and criticised by others.

1.2. Why review the frameworks

The review of the frameworks has been carried out with two purposes:

- Firstly, to provide the basis for discussion about the potential for a single common framework which could be widely used by a range of different interest groups for assessing forest certification schemes.
- Secondly, to allow an analysis of both the commonalities and the differences in the requirements of the four frameworks and, by implication, of the different groups which developed them, in their requirements for a credible scheme.

2. The frameworks being reviewed

As set out in the terms of reference for the study, four assessment frameworks are examined. The four represent the range of different interest groups which have developed frameworks and different purposes for which they have been developed:

- CEPI (2001) *Comparative Matrix of Forest Certification Schemes*,
- IFIR (2001) *Proposing an International Framework for Mutual Recognition* ,
- World Bank/WWF Alliance (2003) *Questionnaire for Assessing the Comprehensiveness of Certification Schemes* (QACC),
- FERN (2004) *Footprints in the Forest*.

For each framework, a summary of the history of its development, objectives or required outcomes, indicators/requirements for assessing schemes, thresholds of acceptability and application are briefly summarised below.

2.1. CEPI Comparative Matrix

The Confederation of European Forest Industries (CEPI) is a Brussels-based non-profit making organisation which is both the forum for and voice of the European pulp and paper industry.

The CEPI matrix was developed to provide a tool to allow comparison of forest certification schemes and standard-setting initiatives against a commonly accepted set of principles and it is designed to allow 'at-a-glance' comparisons of initiatives.

- The primary aim is to provide reliable advice to customers and companies involved in the paper and wood products trade on the status of individual certification schemes and the labels issued under these schemes.
- The secondary aim is to inform the developing international debate on harmonisation and mutual recognition of the wide variety of forest management certification schemes around the world.

2.1.1 Development process

The criteria in the first CEPI matrix (2000) were developed by the CEPI Forestry Committee. Following its initial use, a large range of stakeholders including forest owner and industry groups, environmental organisations retailers, publishers, certification organisations and governments were asked to comment. Some of these comments were reflected in the 2001 version, but others were not. There are plans for further revision in a later version.

2.1.2 Objectives or required outcomes

CEPI has 11 criteria for assessing forest certification schemes:

CEPI-1 Certification should be non-discriminatory between types of forests and forest owners (this includes requirements that certification is cost-effective and affordable).

CEPI-2 Certification bodies should be independent and impartial with no commercial interests in the object to be certified, and adequately staffed with qualified and experienced personnel.

CEPI-3. Certification bodies should be accredited at national level, through internationally accepted methods of assessment and selection.

CEPI-4. Certification should include assessment against performance standards which are compatible with internationally recognised principles and criteria of sustainable forest management.

CEPI-5. Certification should include assessment against internationally recognised management system standards.

CEPI-6. Certification standards should be compatible with national forestry policies and regulations.

CEPI-7. Certification standards and institutional frameworks should be developed through a participatory consensus-building process providing equal opportunities for all interests to become involved. No single interest should be allowed to dominate the process.

CEPI-8. Certification should be transparent so that all interests can identify and comprehend standards and institutional frameworks. There should be clear procedures and documentation.

CEPI-9. Certification should be repeatable, so that assessment by a range of certification bodies would produce the same results.

CEPI-10. Certification standards and procedures should be adaptive and regularly revised, so that they may respond to new knowledge of the forest and changing political, social , economic and environmental demands.

CEPI-11. If the scheme aims to provide a single issue on-product claim of good forest management, this should be based on an independent third party audit of the chain of custody, using transparent and watertight procedures, from a certified forest area or region to the point of sale.

2.1.3 Indicators for assessing certification schemes

Each of the criteria has one or more indicators for assessing whether or not it has been met making a total of 29.

2.1.4 Thresholds of acceptability

Although CEPI does not aim to judge whether or not any particular scheme is acceptable, it has developed a scoring system based on three possible levels:

++ the certification initiative fully conforms with the indicator

+ the certification initiative partially conforms with the indicator

o the certification initiative does not conform with the indicator

2.1.5 Application

The matrix was used to assess 23 international and national certification schemes and standard-setting processes in 2001. These included among others: PEFC international and several national PEFC initiatives; FSC international and two national FSC standards; the Indonesian LEI scheme, the Malaysian MTCC, the US SFI and American Tree Farm systems and the Canadian CSA scheme.

2.2. IFIR International Framework for Mutual Recognition

The International Forest Industry Roundtable (IFIR) is a forum of forest companies and associations from Argentina, Australia, Brazil, Canada, Chile, France, Finland, Malaysia, New Zealand, Norway, South Africa, Sweden, the UK and the USA focused on SFM, including certification. The International Framework for Mutual Recognition was developed to provide a practical tool for pursuing mutual recognition between multiple credible schemes as a way of meeting expanding market demand for certified wood products.

2.2.1 Development process

In 1999 the Roundtable established a working group to explore how to establish international recognition of the various national and regional SFM certification systems and standards. In 2000, the Roundtable endorsed the proposal of the working group to develop an International Framework for Mutual Recognition for credible SFM certification systems. The working group, which was made up of representatives of industry associations and companies, produced a proposal report in February 2001. Subsequent

development was planned, but as mutual recognition proved to be controversial IFIR chose to defer to a broader stakeholder group rather than pursue mutual recognition unilaterally.

2.2.2 Objectives or required outcomes

The IFIR Framework is based on 10 criteria:

IFIR-1. Conformity with SFM standards and legislation: The certification system shall require conformance with a nationally (or regionally/sub nationally) accepted standard for sustainable forest management (SFM) which is consistent with internationally agreed sets of SFM Criteria and Indicators and which complies with applicable legislation, including ratified international agreements (e.g. Convention on Biodiversity).

IFIR-2. Participation: The certification system shall be open and accessible to all interested stakeholders. The influence of all stakeholders shall be balanced and consensus outcomes shall be sought.

IFIR-3. Scientifically supported: The SFM standard shall be scientifically supported.

IFIR-4. Continual improvement: The certification system shall be responsive to new knowledge, amenable to changed public values, and shall contribute to continual improvement in sustainable forest management.

IFIR-5. Non discriminatory: The certification system shall be non-discriminatory, among all forest types, sizes and ownership structures.

IFIR-6. Repeatability, reliability and consistency: The certification system shall ensure the results of independent audits are repeatable and consistent.

IFIR-7. Independence and competence: Audits and certifications shall be carried out by competent, independent third party certification bodies and auditors, who are accredited through internationally accepted procedures. All certification institutions (including those involved in forest assessment, accreditation, standards setting, and dispute resolution) shall be free from conflicts of interest.

IFIR-8. Transparency: The certification system shall be transparent. All interests can identify and comprehend standards and institutional frameworks. Procedures and documentation shall be clear, concise and readily available.

IFIR-9. SFM Claims: Certification procedures shall include guidelines designed to ensure all SFM claims are clear, unambiguous, substantiated, and consistent with relevant national and international laws, standards and guidelines.

IFIR-10. Wood Flow Accounting System (or Chain of Custody): Where used a woodflow accounting system shall reliably record and report materials flow by: wood source; delivery; processing and distribution along the value chain. This information may be used to support the claims and the requirements of many labelling systems.

2.2.3 Indicators for assessing certification schemes

For each of the criteria, a number of 'possible indicators' were developed ranging from 2 to 11 for a single criterion and making a total of 55.

2.2.4 Thresholds of acceptability

Some of the indicators are worded in a way which provides a clear threshold, while others are not. No guidance was developed on how to judge whether a scheme was acceptable.

2.2.5 Application

An assessment body was planned which would have assessed certification schemes according to a set of procedures defined in the Framework. However, the Framework has never been used in practice, though it has served as an important reference in international discussions.

2.3. WB/WWF Alliance QACC

The World Bank/WWF Alliance was formed in 1997 to achieve two targets of global significance by 2005:

- the creation of 50 million hectares of new protected areas while bringing a similar area of existing reserves under effective management,
- the independent certification of 200 million hectares of production forests – 100 million each in tropical and temperate/boreal regions.

The WB/WWF Alliance QACC was developed as an internal management tool to assist the managers of the Alliance to promote and assess progress towards the second of these targets. The Alliance's need for such a tool set out in the QACC arose for two reasons.

- Firstly, in order to allow a common and systematic framework for Alliance managers to evaluate different schemes for their adherence to desirable attributes of good governance across a variety of political and institutional arrangements.
- Secondly, to allow the assessment of emerging schemes so that technical assistance packages could be tailored to whatever attributes were most needed to ensure good governance of the scheme in question.

2.3.1 Development process

The QACC was developed internally by the World Bank and WWF with a peer review by three external peer reviewers, and is being further revised through field tests and consultation with certification schemes, in particular FSC and PEFC.

2.3.2 Objectives or required outcomes

As set out in the introduction to the QACC, for the purpose of the Alliance an acceptable certification scheme should deliver the following three main outcomes:

- Participation of all major stakeholders in the process of defining a standard for forest management that is broadly accepted.

- Compatibility between the standard and globally applicable principles that balance economic, ecological and equity dimensions of forest management,
- Establishment of an independent and credible mechanism for verifying the achievement of these standards and communicating the results to all major stakeholders.

In addition, the Alliance has a set of ten Principles of good forest management which must be delivered by any acceptable scheme. These are very similar to the ten FSC principles.

Underlying these overall goals and principles, are eleven more specific **criteria**:

QACC-1: Institutionally and politically adapted to local conditions.

QACC-2: Goal-oriented and effective in reaching objectives.

QACC-3: Acceptable to all involved parties.

QACC-4: Based on performance standards defined of the national level that are compatible with generally accepted principles of sustainable forest management.

QACC-5: Based on objective and measurable criteria.

QACC-6: Based on reliable and independent assessment.

QACC-7: Credible to major stakeholder groups (including consumers, producers, conservation NGOs etc).

QACC-8: Certification decisions free of conflicts of interest from parties with vested interests.

QACC-9: Cost-effective.

QACC-10: Transparent.

QACC-11: Equitable access to all countries.

2.3.3 Indicators for assessing certification schemes

The 11 criteria have been grouped into four categories and a set of 103 detailed requirements have been developed.

2.3.4 Thresholds of acceptability

Some of the requirements are worded in a way which provide clear thresholds, while others are not. It is planned to develop thresholds of acceptability for forest certification schemes for all requirements following the first pilot test during 2004.

2.3.5 Application

The QACC is aimed at assessing any existing or developing scheme, including national standard-setting processes unaligned to any specific scheme.

The first use of the QACC will be an assessment of the FSC and PEFC schemes in Europe which is planned for the second half of 2004 and which will focus on:

- Any changes or improvements which need to be made to the QACC
- Thresholds which schemes need to meet to be acceptable to the Alliance.
- The extent to which each of the two schemes meets the QACC requirements

2.4. FERN Footprints in the Forest

FERN is an NGO which promotes the conservation and sustainable use of forests, and respect for the rights of forest peoples in the policies and practices of the European Union. It produced its report 'Footprints in the Forest' (2004) to provide an assessment of the key strengths and weaknesses of a number of operational forest certification schemes.

2.4.1 Development process

The report does not present an assessment framework as such, but rather a series of issues and questions which FERN considers essential in judging whether or not a certification scheme is adequate. It is not stated in the report how the list of questions was developed but the report builds on earlier work reported in 2001 which included a longer list of attributes (Fern, 2001).

2.4.2 Objectives or required outcomes

The FERN report uses 11 questions to define the required outcomes for an acceptable scheme:

FERN-1: Is the scheme based on a set of clear minimum performance-based thresholds?

FERN-2: Does the scheme require balanced participation in standard-setting process?

FERN-3: Is the standard-setting dominated by forestry sector?

FERN-4: Does the certification scheme certify at Forest Management Unit or regional level?

FERN-5: Are field visits required?

FERN-6: Is consultation of stakeholders in certification process required?

FERN-7: Is annual monitoring of certified areas required?

FERN-8: Is the scheme transparent (ie are standards and summary reports freely available on websites)?

FERN-9: Is there a label and well-defined chain of custody available?

FERN-10: Does the scheme prohibit the conversion of forests to plantations or other land uses?

FERN-11: Does the scheme prohibit use of genetically modified organism trees?

2.4.3 Indicators for assessing certification schemes

No indicators are specified since the report presents the results of an analysis of key aspects of schemes, rather than a framework for assessment of schemes.

2.4.4 Thresholds of acceptability

No thresholds of acceptability are stated, but as the report presents results these can be identified based on the commentary provided.

2.4.5 Application

The requirements have been used to assess eight forest certification schemes including:

- five national schemes: CERFLOR from Brazil, MTCC from Malaysia, Certfor from Chile, CSA from Canada and AFS from Australia
- one regional scheme: SFI which operates in the US and Canada
- two international schemes: FSC and PEFC

3. Comparative Analysis of Assessment Frameworks

3.1. Methodology

The methodology for the study was very straightforward. Firstly, the main goals or desired outcomes upon which each framework was based were identified and compared to the list of desirable concepts developed by IPF (see Section 1.1). The results of this are presented in Section 3.2.

Secondly, the content of the four framework documents was analysed and the attributes of a certification scheme required by each framework were identified. A summary of the results is presented in Section 3.3, while Annex 1 contains the full text of the four framework documents organised according to the list of attributes. Since the wording and emphasis of each framework was different, the authors had to decide whether differently worded requirements or indicators related to the same attribute or not. Annex 1 allows readers to check this interpretation.

Finally, similarities and key differences were identified based on the analysis made. This is presented in Section 3.4.

Using this information, some recommendations were also made about how these attributes could be used as a basis for the operationalising the Legitimacy Thresholds Model (LTM). This is presented in Section 4.

3.2. Objectives or desired outcomes

As discussed in Section 1.1, the IPF identified seven desirable concepts which should be supported in the design and application of certification schemes. Each of the four frameworks set out very clearly the key outcomes which a scheme or standard should deliver in the form of criteria or questions as outlined in Section 2 above.

As shown in Table 1, each of the assessment frameworks includes objectives which relate to the IPF desirable concepts[1]. This indicates that these general concepts are widely shared. However, it should also be noted that even at this level there are some differences in emphasis between the objectives of different frameworks with relation to a particular IPF concept.

Table 1: A comparison of the objectives or desired outcomes for the four assessment frameworks analysed and the desirable concepts identified by the IPF

IPF desirable concepts for schemes		CEPI	FERN	IFIR	QACC
1	Open access and non-discrimination in respect of all types of forests, forest owners, managers and operators;	C1		C5	C1, C9, C11
2	Credibility (including repeatability),	C2, C3 C10	C1, C5, C7	C6, C7	C5, C6, C7, C8
3	Non-deceptiveness	C11	C9	C9, C10	C7
4	Cost-effectiveness	C1		C5	C9
5	Participation that seeks to involve all interested parties, including local communities	C7	C2, C3	C2	C3
6	Sustainable forest management	C4, C5, C6, C10	C4, C10, C11	C1, C3, C4	C2, C4
7	Transparency	C8	C6, C8	C8	C10

In addition, there are some very specific requirements in some of the frameworks which are not shared by other frameworks. In particular:

- A requirement of the CEPI matrix is for accreditation to be at a national level (Concept 2: Credibility).
- A requirement from FERN that forest conversion and GMOs should not be permitted (Concept 7: Sustainable forest management).

[1] With the exception of the FERN report which does not explicitly refer to open access and non-discrimination. However, as the report focuses on areas where the organisation considers there are current weaknesses in schemes, this may reflect the fact that these areas were not seen as a problem.

- A requirement in the CEPI matrix that all certification must include meeting all requirements of ISO 14001 or EMAS (Concept 2: Credibility).

In conclusion, it is clear that there is considerable agreement about the broad goals and objectives of certification schemes, but that there are some difference in the way different frameworks require that these objectives should be delivered. The degree of similarity and difference therefore needs to be examined in more detail through an analysis of the main attributes of certification scheme which are sought through the indicators or requirements of the four frameworks.

3.3. Key attributes of the assessment frameworks

Having established that there is a considerable degree of overlap, but also some differences in emphasis and priority in the objectives of the four frameworks, this section looks in more detail at the attributes which each framework seeks from a scheme.

There are a number of ways this comparison might be approached, but to facilitate review, this has been done based on the main elements of a certification scheme:

- standards and the standard-setting process (3.3.1)
- certification bodies and certification (3.3.2)
- accreditation bodies and accreditation (3.3.3)
- chain of custody and claims (3.3.4)
- certification schemes (3.3.5)

The tables below summarise the results while Annex 1 contains the full text of the requirement from each framework to facilitate review of the analysis which has been made.

Following the tables in Section 3.4 the main areas of commonality and difference are discussed. As the frameworks differ in their purpose, language and level of detail, this included some interpretation made by the authors based on their experience, but it is recognised that some stakeholders may make different interpretations. The major areas of difference as perceived by the authors have been highlighted in the tables below to aid identification. Stakeholders may have different views on which differences should be considered more significant than others.

3.3.1 Standards

Attribute		CEPI	IFIR	FERN	QACC
Standard Development process					
1	Publicly available procedures setting out the standard development process		2.1, 2.2, 6.1		3.8
2	Mechanisms for regular revision of the standard	10.1	4.1, 4.4		
3	The draft standard publicly available for comment				2.7

Attribute		CEPI	IFIR	FERN	QACC
4	Support for the standard from a range of stakeholders		2.6		3.5
5	Procedures for dispute resolution		7.8		3.9
Who is involved					
6	Standard developed through a process which:				
	is open to all interested parties	7.2	1.1, 2.1	2	3.1.1
	actively encourages balanced participation	7.3			
	requires balanced participation		2.5	2	3.2.2
7	Involvement in the standard-setting process from:				
	• Government	6.2	1.5		3.1.3.1
	• Forest owners	7.3	2.3, 5.2		3.1.3.5
	• ENGOs	7.3	2.6		3.1.3.3
	• Social NGOs and interest groups	7.3	2.6		3.1.3.4
	• Processors, traders and retailers	7.3	2.6		3.1.3.5
	• Scientific community		3.1		
Decision-making					
8	The standard developed through a process where:				
	no single interest dominates	7.2	2.2	3	2.4.2, 3.2.3
	all stakeholders can influence decisions	7.2	2.2	3	
	the aim is to work by consensus	7.4	2.7		2.4.1
	no decision possible in absence of agreement from a stakeholder group				3.2.2
Transparency					
9	A standard which is publicly available	8.3	1.2, 8.1	8	
10	Membership, governance & financial support and of all groups involved in standard-setting process transparent and publicly available.		8.7, 8.6		
Content					
11	The standard includes:				

Attribute		CEPI	IFIR	FERN	QACC
⇩	performance-based requirements	4	1.4	1	4.2.1, 4.1
	locally applicable indicators	4	1.9		
	Specific performance thresholds			1	4.2
12	The standard includes management system requirements				
⇩	for large organisations		1.7		
	for all certified operations	5			
13	National standards based on an internationally recognised set of principles/criteria for sustainable or responsible forest management	4	1.3, 1.4		2.5.2
14	A process for harmonising national standards within an international system		1.3		2.3.2/3, 2.5.1, 2.6
15	Requirements scientifically supported		3.2		4.4.2
16	The standard requires[2]:				
	• Compliance with all legal requirements	6.1[3]	1.6		1.1.1, 2.1.1
	• A management plan		1.8		1.1.8, 1.1.9
	• Monitoring		6.5		1.1.10
	• Continuous improvement		4.4		
	• Protection of soil and water				1.1.5, 1.1.6
	• Conservation of biodiversity				1.1.6, 3.3.2.1

[2] Only the QACC goes into detail about the requirements a standard should contain, whereas CEPI and IFIR both refer to international processes which contain many of the same general requirements in which case the requirement has not been highlighted as a difference.

[3] The requirement is that standards should be consistent with national legislation, rather than requiring compliance.

Attribute		CEPI	IFIR	FERN	QACC
	• Protection of critical conservation areas				1.1.7, 3.3.2.2
	• Responsible control and use of chemicals				3.3.2.6
	• Prohibition of GMOs			11	3.3.2.3
	• Prohibition on conversion of forest to other uses			10	3.3.2.7
	• Clear land tenure/use rights				1.1.2
	• Respect for the legal and customary rights of indigenous people				1.1.3, 3.4
	• Support for the well being of local communities				1.1.4, 3.4
	• Adoption of the precautionary principle				3.3.4/5

3.3.2 Certification

Attribute		CEPI	IFIR	FERN	QACC
Certification bodies' organisation and staff					
1	Certification bodies operate in compliance with ISO Guide 62, 65, 66 or equivalent	1.6, 9.2, 10.2	6.3, 7.2		4.5.4
2	Certification bodies accredited	3	7.11, 4.2		4.5.1
3	Certification bodies independent, impartial and free of conflict of interest	2	7.7, 7.10, 7.11		4.8.1, 4.8.2, 4.8.4
4	Certification procedures clearly defined		7.6, 6.1		
5	Certification auditors:				
⇩	adequately qualified and experienced	2.1, 10.3	6.4, 7.3		4.6.1
⇩	knowledgeable in forest management		5.4, 5.5, 7.1 7.4		4.6.1
Certification process					
6	Certification carried out at the level of:				
⇩	an individual FMU		5.1	4	4.5.6

Attribute		CEPI	IFIR	FERN	QACC
	a group of individual FMUs		5.1	4	4.5
	a region		5.1		
7	Participation is voluntary				4.10
8	Information on compliance collected through:				
	assessment of the management system and documentation		6.5		
	field visits		6.5	5	4.5.7, 4.8.5
	sufficient field visits to confirm compliance with the standard				3.3.3, 3.4.3, 4.5.5
	consultation with interested parties			6	3.1.1.3, 4.5.5
9	The assessment report is peer reviewed				4.5.5
10	Periodic surveillance of certified operations			7	4.7
Dispute resolution and transparency					
11	Procedures for dispute resolution	2.2	7.8		3.9
12	Information on certification body processes and procedures, fees, handing complaints and financial support available.	8.1, 8.2	8.5		3.8
13	Information on certified organisations publicly available comprising:				
	the organisation name, location, date of certification and certifier		8.3		
	a report summarising the findings of the assessment.			8	3.7
14	Support for the certification process from a range of stakeholders		2.6		

Accreditation

	Attribute	CEPI	IFIR	FERN	QACC
Accreditation bodies' organisation and staff					
1	Accreditation bodies operate in conformance with ISO Guide 61 or equivalent to ensure certification is consistent and repeatable	1.5, 3.2, 9.1	6.2		4.5.2
2	Accreditation personnel adequately trained and experienced	10.3	6.4		4.6.1
3	Accreditation bodies free of any conflict of interest		7.7, 7.9		4.8
4	Accreditation developed and implemented at the national level	3.1			
Dispute resolution and transparency					
5	An open and functioning procedure for dispute resolution		7.8		3.9
6	Procedures for accreditation and dispute resolution and information on financial support publicly available.	8.1	8.4		3.8
7	Information on accredited certification bodies publicly available including:				
	a list of accredited CBs and organisations they have certified.		8.2, 8.3		
	a report summarising the findings of the accreditation audit.				3.7
8	Accreditation bodies affiliated to an appropriate body such as				
	• IAF, EA	3.3	7.1		
	• IAF, ISEAL				4.5.3
9	Accreditation bodies have a structure to allow participation in development of system		2.4		

Chain of Custody and Claims

Attribute		CEPI	IFIR	FERN	QACC
1	An adequate CoC system in place including a requirement for independent auditing	11.1	10.1, 10.2	9	3.10.1
2	Procedures and systems publicly available	8.1			3.8
3	Guidelines on claims and labelling developed and used which are consistent with laws, standards and existing guidelines.	11.2	9.1 9.2	9	3.10
4	Procedures developed and implemented to monitor and control use of claims and labels		9.3		3.11
5	CoC based on wood flow accounting		10.1 10.2		

3.3.3 Scheme

	Attribute	CEPI	IFIR	FERN	QACC
1	Scheme development and governance open to				
⇩	all forest owner groups	1.4	2.3		
	all interested parties		2		3.1.1.2, 3.1.2
2	The scheme does not discriminate between forest types and ownerships	1.1, 1.2	5.1, 5.3		2.2.1, 2.3.1
3	The scheme cost effective minimising costs to forest owners	1.3	5.1		2.2.2
4	Separation of standard-setting, certification, accreditation and dispute resolution		7.5		4.8.1

3.4. The list of attributes

One of the purposes of the analysis carried out above was to establish whether a 'master list' of attributes could be developed which included all the attributes each stakeholder group considers necessary.

The list of attributes in the tables above was developed by the authors based on an assessment of the four frameworks. While this provides a good foundation, it should be recognised that there may be additional attributes which are not included for two reasons.

- Firstly, in some cases the authors may not have identified an attribute which was implied by an indicator or requirement in one of the four frameworks. It is unlikely that any major attributes have been missed, but some minor ones may not have been included. Alternatively, attributes may have been included, but formulated in a way which is unclear or inadequate for a particular stakeholder.
- Secondly, the list of attributes was derived from the four frameworks, so any attribute which was not included in any of the frameworks will not feature in the list. It has already been suggested that attributes relating to endorsement of a scheme by another scheme or expulsion from a group scheme are inadequate. Therefore, an opportunity should be given to the full range of stakeholder groups to add any attributes which they consider absent before the list is considered finalised.

3.5. Key commonalities and differences

It is immediately apparent from the analysis in Section 3.3 that there are many areas of overlap or commonality between the frameworks as well as a number of areas of difference.

There are also a some areas where it is less clear whether there are differences or not, mainly as a result in differences in the level of detail between the frameworks. While the QACC, with 103 requirements, provides considerable detail, the Fern report with only 11 questions leaves much more implicit rather than explicit. Therefore, both absolute and implicit commonalities and differences are identified and discussed.

3.5.1 Commonalities

There are two types of commonalities between the frameworks:

Explicit commonalities: As can be seen from the tables in Section 3.3 above, there are many areas of overlap in the requirements of the different frameworks.

Implicit commonalities: In addition to the absolute commonalities, there are a number of areas which are addressed explicitly in some frameworks and not by others, but where it seems likely from the context that there is implicit commonality. For example, the importance of ISO guides as a minimum requirement for certification and accreditation bodies is not addressed specifically in the FERN report, but it is implicit that the type of guidance provided should be followed (and sometimes exceeded).

The analysis carried out indicates that some of the most important commonalities are:

Standards

1. **Standard-setting procedure publicly available (3.1-1):** In order to ensure credibility and participation it is widely agreed that the procedure for standard-setting should be public knowledge. Though the ISO Guide 59 (Code of Good Practice for Standardization) is not mentioned explicitly by all the frameworks, it seems likely that there would be broad agreement that the type of guidance it provides should serve as common guidance on the minimum requirements for standard setting.
2. **Wide involvement of stakeholders in the standard-setting process (3.1-7):** There is general agreement that a range of different stakeholder groups should be involved in the standard-setting process.

However, there are significant differences in the requirements for how this should be achieved (see Differences No.1).

3. **Stakeholder influence over the standard-setting process (3.1-8)**: There is a common view that all stakeholders should have the possibility to influence the outcome of the standard-setting process, including the aim to work by consensus. However, there are also some differences in the requirements for how to proceed in the absence of consensus (see Differences No. 2)
4. **Standard publicly available (3.1-9)**: There is agreement that the standard against which certification is carried out should be publicly available.
5. **National standards based on international principles or criteria of SFM (3.1-13):** There is broad agreement that national standards should be locally defined but based on an accepted set of international principles or criteria defining SFM (sustainable forest management) covering economic, environmental and social aspects. There is less clarity about which international definitions should be used.
6. **Performance-based standards (3.1-11):** There is broad agreement that standards must contain performance requirements.
7. **Legal compliance (3.1-16):** There is broad agreement that the standard should include a requirement for legal compliance.

Certification and Accreditation

8. **ISO Guides (3.2-1, 3.3-1):** There is agreement that there should be compliance with the type of guidance set out in the ISO guides as a baseline or minimum by both certification bodies and accreditation bodies - Guides 62, 65 or 66 for certification bodies and Guide 61 for accreditation bodies.
9. **Absence of conflict of interest (3.2-3, 3.3-3):** All certification bodies and accreditation bodies should have measures in place to ensure that they are free of all actual and potential conflicts of interest.
10. **Competence of certification and accreditation auditors (3.2-5, 3.3-2):** While there is little detail about exactly what training or experience should be required, there is agreement that auditors, whether undertaking certification or accreditation audits, should be properly trained and experienced.
11. **Dispute resolution (3.2-11, 3.3-5):** There should be adequate procedures for resolution of disputes relating to accreditation or certification decisions.
12. **Procedures of certification and accreditation bodies (3.2-12, 3.3-6):** Information on the procedures, structure and financing of certification and accreditation bodies should be publicly available.
13. **Accreditation (3.2-2):** There is a common view that certification bodies should be accredited, though there are differences in view of whether this should be done exclusively by national bodies or can also be undertaken by international bodies (see Differences No. 10).

Chain of custody and claims

14. **Chain of custody (3.4-1)**: There should be requirements for a robust, independently audited chain of custody from certified forest to final product if claims are made linking the product to certified forest. However, there are differences in the type of approach favoured (see Differences 15).
15. **Control of claims and logos (3.4-3):** There should be rules for, and proper control of, claims and use of logos and labels which are consistent with laws, standards and existing guidelines.

Scheme

16. **Non-discrimination and cost effectiveness (3.5-2, 3):** The scheme should not discriminate between forest types, sizes or ownerships. Certification should be as cost-effective as possible to minimise costs to forest owners.

In summary, it is clear that there are significant areas of agreement relating to the processes, procedures and requirements which a certification scheme should include.

3.5.2 Differences

In addition to the many commonalities discussed above, there are also a number of differences. These fall into two categories:

- Explicit differences: these are areas where an attribute is included in one or more frameworks but excluded from others.
- Differences of interpretation: these are areas where the same issue is being addressed but there are differences in the precise requirements which each framework sets out.

Standards

1. **Participation in the standard-setting process (3.1-6)**: All the frameworks agree that it is important to have wide participation in the standard-setting process (see Commonalities No.2), but there is a significant difference between the precise requirements. Some frameworks require that the scheme should *invite* the full range of stakeholders to participate, while others require that there *must be involvement* of the full range of stakeholders in the process.
2. **Decision-making in the standard-setting process (3.1-8)**: All the frameworks agree that there should be clear rules and procedures, that all parties should be able to influence decision-making and that decision-making should not be dominated by a single stakeholder group. However, some frameworks go beyond this to specify that the process should ensure that no decision can be made in the absence of agreement from a stakeholder group.
3. **Performance standards (3.1-11)**: All the frameworks require standards based on performance requirements. However, FERN and QACC explicitly require defined performance *thresholds* to be included in national standards.
4. **Management system standards (3.1-12)**: It is unlikely that any interest group would disagree with a requirement for some management systems requirements in forest standards as they are almost always

included. However, the CEPI matrix recommends that all certified operations should comply with an environmental management system which is compatible with internationally recognised EMS standards (ISO 14001 or EMAS).

5. **Specific requirements (3.1-13):** Only the QACC has much detail of the performance requirements which must be included in a standard, though the scope of requirements is implied by both the IFIR and CEPI frameworks through reference to international C&I sets. There are a number of specific QACC requirements which may not have broad support among all stakeholders, including the prohibition on the use of GMOs, forest conversion (both of which are also in the FERN requirements), protection of the legal *and customary* rights of indigenous people and the requirement to apply the precautionary principle. This level of specificity represents a different philosophy from the other two frameworks where these issues are left for stakeholders to decide in national standard-setting processes.

Certification

6. **Regional certification (3.2-6, 7)**: Regional certification is explicitly encouraged by CEPI and IFIR. Both FERN and QACC support group certification but are explicit in excluding certification which allows forests to be certified without the owner or manager actively seeking or agreeing to certification.

7. **Field visits (3.2-8)**: There is broad agreement between the frameworks on the need for assessors to collect information on both forest management systems and procedures and, through field visits, from the forest itself. However, QACC and FERN explicitly require the field element to be adequate to demonstrate that the performance element of the standard is being met.

8. **Consultation (3.2-8)**: An important difference between the frameworks is the explicit requirement for consultation during the assessment process in both the FERN and QACC frameworks, while it is not required by either the CEPI or IFIR frameworks. This, together with public reports (see 9 below), is seen as fundamental to credibility by the FERN and QACC frameworks.

9. **Public information on certified operations (3.2-13):** Both QACC and FERN require public summaries of the results of certification assessments as an additional element of transparency and thereby credibility, while CEPI and IFIR require only information on the name, location and forest type to be publicly available as required by ISO guidelines.

Accreditation

10. **National vs international (3.3-4):** The CEPI matrix specifies that accreditation should be undertaken at the national level. In contrast, the FSC system is based on international accreditation.

11. **Information (3.3-7):** There is agreement that public information should be provided on procedures, systems and certification bodies which are accredited. However, the QACC framework also requires public summaries of the results of accreditation audits which is not specified by other frameworks.

12. **Affiliation (3.3-8):** CEPI and IFIR both specify that accreditation bodies should be affiliated to the International Accreditation Forum (IAF) or European Accreditation (EA), both of which only accept national accreditation bodies as members. QACC, in addition to IAF, specifies the International Social and Environmental Accreditation and Labelling (ISEAL) Alliance which accepts international accreditation bodies such as the FSC.

Chain of custody and claims

13. **Approaches to chain of custody (3.4-5):** The IFIR framework makes provision for wood flow accounting as one of the means to establish the chain of custody, while the other three frameworks do not refer to such an option implying tracking of wood and fibre throughout the various phases of the chain of custody.

Schemes

14. **Participation in scheme development and governance (3.5-1):** Both the QACC and IFIR are explicit in listing the range of stakeholders who should be involved in developing and running a certification scheme including owners, industry, government, environmental NGOs and social NGOs. CEPI is explicit only in requiring the involvement of forest owners.

In summary, it is clear that a number of differences exist between the attributes which the different frameworks demand from certification schemes. This may be in part that the frameworks were all designed for slightly different uses, and contain different levels of detail. However, the analysis has also been extremely valuable in pinpointing some of the significant differences between the requirements of different stakeholder groups.

3.5.3 Resolving differences

As suggested by the assessment of objectives from each of the frameworks reported in Section 3.2, there are a range of commonalities in the attributes each of the four frameworks requires from an acceptable certification scheme. However, as indicated above, there are also a number of significant differences in the attributes which different frameworks consider necessary to deliver the same overall objective.

This confirms the finding of several earlier studies which have suggested that while there may be broad agreement about the general concepts which are important for forest certification, there are significant differences in the way different groups interpret these concepts in practice.

For example, all four frameworks analysed agreed that 'credibility' was an important attribute of any certification scheme. However, to deliver this in practice the CEPI and IFIR frameworks, which represent predominantly the industry view, rely on the technical competence of certification and accreditation bodies to ensure an adequate certification process. The QACC and FERN frameworks, which represent much more the NGO and international development agency view, also require technical competence but go well beyond this by requiring public information on the results to allow stakeholders to make their own judgement rather than depending on that of the professionals.

The analysis above is not perfect. It is based on four frameworks developed for different purposes and it is not always explicit precisely which stakeholder groups support each approach. Nevertheless, it provides a relatively objective way to establish, as many commentators have suggested, that there are many areas where most stakeholders agree about forest certification, but also a number of areas where there are significant differences.

If the debate on certification is to move forward, then it would be useful for the different stakeholders to engage in a discussion to:

- share and reinforce the areas of agreement, and
- seek to clarify and understand the reasons for the key differences and, based on this understanding, to explore possibilities for finding compromises or reaching common views. Even where such progress is not possible, at the least future discussions will be based on a better understanding of the reasons for differences.

4. Setting thresholds of legitimacy

4.1. Introduction to the Legitimacy Thresholds Model

The Legitimacy Thresholds Model (LTM) approach was developed by the World Business Council for Sustainable Development (WBCSD) in response to discussions convened by The Forests Dialogue.

The model (Griffiths, 2003), which is shown schematically in Figure 4.1, has a vertical axis consisting of attributes of legitimate certification schemes[4]. A range of transparent "thresholds" or benchmarks of legitimacy or credibility have to be agreed by relevant stakeholder groups e.g. customers, governments, NGO's, forest managers, NIPFOs or industry. These are represented by the three lines, T1, T2 and T3.

Schemes (identified in the horizontal axis) can then be assessed against the various thresholds to provide a clear and transparent way of deciding which are legitimate to a particular stakeholder group.

There has been considerable interest in the LTM approach because it seems to offer the potential to provide a transparent way of identifying some thresholds where broad agreement is possible, while recognising that there are others where agreement has still not been reached.

[4] In the first version of the model, the vertical axis addressed SFM, but it quickly became clear that the discussion related to a range of attributes of a certification scheme, including but not limited to its definition of SFM. Therefore, the discussion here focuses on the attributes of a credible certification scheme.

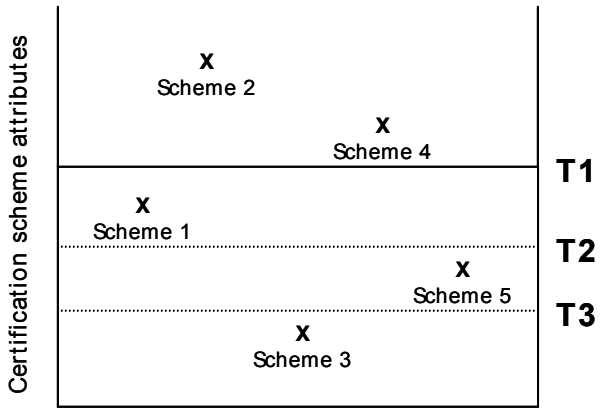


Figure 4.1 The Legitimacy Thresholds Model showing three thresholds and the position of five schemes relative to the thresholds.

For example, several discussions have already taken place about the desirability of finding agreement about the threshold of legitimacy for a certification scheme to deliver 'legality'. There is strong pressure from both government and private sector purchasers to ensure that the wood products they buy are from legal sources, so it would be of considerable practical value to have broad agreement on how to assess whether or not a certification scheme delivers this[5]. On the other hand, it is widely accepted that it may be much more difficult and time-consuming to agree a common legitimacy threshold for 'sustainable management' of forests.

However, to date the LTM approach has been conceptual only, and its continued usefulness will depend on the ability of stakeholders to develop practical definitions of what each threshold means in practice. While it is easy to draw a series of lines on a graph and suggest that they represent 'legality' or 'sustainability' it is much less clear how a scheme should be analysed to see how it performs relative to these thresholds. This is discussed further in the next section where a possible approach is proposed.

4.2. Using the Legitimacy Thresholds Model in practice

For the LTM to be of practical use, it is necessary to develop a mechanism to:

- Agree what the different thresholds should be,
- Provide a methodology for assessing whether or not each threshold is met by a certification scheme in practice.

This section proposes a methodology for undertaking this in practice.

[5] Though it should be noted that there is much debate currently on how ´legality' or 'legal source' should be defined.

4.2.1 Who should be involved

The first question is who should be involved in developing the LTM model. The answer is that it needs to involve every stakeholder group who is important in defining and using the definition of legitimacy. The thresholds will only have legitimacy for those groups who agree to their definition – therefore, if any group is not involved, they may not agree that the threshold is legitimate.

4.2.2 Defining what each threshold is

As discussed above, while it is conceptually straightforward to draw a number of lines on a chart to represent different legitimacy thresholds, it is more difficult to agree in practice what these lines should represent.

One way of doing this is to define what objective each threshold should deliver, and then to identify the attributes a scheme must include in order for this particular objective to be met.

For example, as discussed in the previous section, one threshold might be those schemes which deliver 'legality'. Other possible thresholds might include 'exclusion of unacceptable practices', 'progressing towards sustainable' or 'sustainable'. Alternatively, thresholds might refer to particular issues such as 'secure land tenure', 'workers' rights to organise' or 'adequate protection of water'.

The thresholds required need to be determined by the range of stakeholder groups which choose to work together to further elaborate the LTM.

4.2.3 Identifying the attributes for each threshold

Once the threshold has been defined, it is necessary to identify the attributes which a certification scheme must include in order to deliver that threshold. This is probably best done in the form of a checklist which provides a practical tool for undertaking the assessment of schemes.

To define a threshold which is widely supported by different stakeholder groups, it will be necessary to include ***all*** the attributes which ***each group*** thinks are necessary in the checklist. In other words, the threshold will only have legitimacy for each group if it includes all the attributes that group feels are necessary.

For some of the lower thresholds, there may be considerable agreement between all groups over the necessary attributes since they are likely to reflect the commonalities discussed in Section 3. However, for the higher thresholds, some of the attributes included by one or more stakeholder groups will represent areas of difference. These will then need to be discussed with a view to resolving the issues if there is to be agreement about the threshold. If differences cannot be resolved, then the threshold will not have shared legitimacy.

Examples of such checklists have been provided, one for legality and one for sustainability. In these examples (which are not based on any actual stakeholder discussion or consensus, but provided for illustrative purposes only) broad agreement about the legality threshold may be relatively straightforward to achieve as all the attributes included are ones where there is a commonality between the frameworks

examined. On the other hand in the example provided for sustainability, there are several attributes where differences were identified. Therefore, to get agreement about the sustainability threshold would require negotiation between the different stakeholder groups aiming to share a common threshold to resolve the areas of difference.

Where resolution cannot be reached, then a number of different thresholds will result, each one representing the minimum level of legitimacy for a particular user group.

Example Checklist 1: A Possible 'Legality' Legitimacy Threshold

NB In reality, the attributes to be included must be agreed by all stakeholders and is likely to include more attributes. This list is provided as an example only.

Attribute of certification scheme being assessed	**Commonality (Section 3.4.1)**	**Difference (Section 3.4.2)**
Standard		
Standard-setting process meets ISO Guide 59 as a minimum	No. 1	
Standard publicly available	No. 9	
Standard explicitly requires legal compliance	No. 16	
Certification		
Certification body accredited	No. 11	
Certification body meets ISO Guide 62, 65, 66 or equivalent	No. 6	
Certification body free of conflicts of interest	No. 7	
Certification auditors properly trained and experienced	No. 8	
Adequate procedures for dispute resolution	No. 9	
Accreditation		
Accreditation body meets ISO Guide 61 or equivalent	No. 6	
Accreditation body free of conflicts of interest	No. 7	
Accreditation auditors properly trained and experienced	No. 8	
Adequate procedures for dispute resolution	No. 9	

Chain of custody and claims		
There is a robust, audited chain of custody from forest to final product	No. 12	
There is a mechanism to ensure that all claims and labels are accurate	No. 13	
Scheme		
The scheme does not discriminate between forest types, sizes or ownerships and is cost-effective in particular for small forest owners	No. 14	

Example Checklist 2: 'Sustainability' Legitimacy Threshold

NB In reality, the attributes to be included must be agreed by all stakeholders and will include more attributes. This list is provided as an example only.

Attribute of certification scheme being assessed	**Commonality (Section 3.4.1)**	**Difference (Section 3.4.2)**
Standard		
Standard-setting process meets ISO Guide 59 as a minimum	No. 1	
Standard-setting process involves all stakeholder groups and no decision can be made in absence of agreement from any major group		Nos. 1 and 2
Standard publicly available	No. 9	
Standard based on widely accepted set of international principles or criteria	No. 4	
Standard explicitly requires legal compliance	No. 16	
Certification		
Certification body accredited	No. 11	
Certification body meets ISO Guide 62, 65, 66 or equivalent	No. 6	
Certification body free of conflicts of interest	No. 7	
Auditors properly trained and experienced	No. 8	

Adequate procedures for dispute resolution	No. 9	
Certification process includes consultation with relevant stakeholders		No. 8
A summary of the results of the certification audit is publicly available.		No. 9
Similarly attributes must be identified for accreditation, chain of custody and claims and schemes.		

5. Conclusions

There are three key findings which can be drawn from this work.

Firstly, a set of attributes can be identified which one or more stakeholder groups considers important in defining an acceptable certification scheme. However, in order to produce a definitive list, some further discussion may be needed to identify any additional attributes which were not included in any of the four frameworks analysed but are, nevertheless, important to one or more stakeholder groups.

Secondly, there is a considerable degree of overlap between all the frameworks assessed, and thus implicitly between the different stakeholder groups, in the attributes considered necessary for an acceptable scheme.

Thirdly, there are significant differences between different groups in the attributes sought. However, these can be identified and defined, providing a basis for further discussion and negotiation.

Finally, it may be possible to use the identified attributes as a basis for developing a practical methodology for using the Legitimacy Thresholds Model. The identification of areas of commonality and difference provide a the basis for establishing which thresholds already have shared legitimacy and which require further negotiation.

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The Forests Dialogue (TFD), formed in 1999, is an outgrowth of dialogues and activities that began separately under the auspices of the World Business Council for Sustainable Development, The World Bank, the International Institute for Environment and Development, and the World Resources Institute. These initiatives converged to create TFD when these leaders agreed that there needed to be a unique, civil society driven, on-going, international multi-stakeholder dialogue forum to address important global forestry issues.

TFD's mission and purpose is to bring key leaders together to build relationships based on trust, commitment and understanding and through them, generate substantive discussion on key issues related to achieving sustainable forest management around the world. TFD's dialogues serve as a platform to share aspirations and learning and to new seek ways to take collaborative action on the highest priority forest conservation and management issues.

TFD is developing and conducting international multi-stakeholder dialogues on the following issues:

- *Forest Certification*
- *Illegal Logging and Forest Governance*
- *Intensive Forest Management*
- *Forests and Biodiversity Conservation*
- *Forests and Povery Reduction*
- *A Vision for the World Forests*

There are currently 23 members of the TFD Steering Committee. The Committe is responsible for the governance and oversight of TFD's activities. It includes representatives from tprivate landowners, the forest products industry, ENGOs, retailers, aid organizations, unions, and academics.

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