

Department of Economic and Social Affairs
United Nations Forum on Forests Secretariat

Foreword

After more than fifteen years of discussions at various levels, this year the United Nations General Assembly adopted the first ever Non-Legally Binding Instrument on All Types of Forests. It is a historic milestone in international policy and provides the first internationally agreed articulation of sustainable forest management and sets clear priorities for government action at both the national and international levels. Most notably, governments agreed on four Global Objectives on Forests: to reverse the loss of forest cover, improve the contribution of forests to local livelihoods, increase the area of sustainably managed and protected forests, and enhance financial support for sustainable forest management.

Forests continue to disappear at an alarming rate around the world. This rich source of food, shelter, environmental and human health and spirituality is caught in a battle between short term needs and long term well-being. It is not that we lack the skills or the knowledge to conserve our forests in a

Table of Contents

Table of Contents	i
List of Acronyms	iv
EXECUTIVE SUMMARY	1
SCOPE OF THE REPORT	1
METHODOLOGY	1
KEY FINDINGS	2
<i>Gaps, Overlaps and Conflicts by SFM Thematic Area</i>	2
Part I Introduction	20
Overview of the structure of the report	21
Research to date on global forest governance	21
A brief historical summary of the instruments assessed	22
<i>Global instruments</i>	22
<i>Regional instruments and C&I processes</i>	24
<i>Non-governmental approaches</i>	26
Part II Methodology	28
The comparative framework of seven SFM themes	28
Classification and assessment of multi-lateral decisions	28
Selection and overview of forest-related instruments	29
Part III Thematic Analysis	43
Introduction—Global forestry challenges	43
Thematic Element I: Extent of Forest Resources	45
Criteria	45
Legally Binding Forest-Related Global Instruments	45
Non Legally Binding Global Forest Instruments	48
Regional and C&I Approaches	49
<i>Non-European Temperate and Boreal Forests</i>	49
<i>Europe</i>	49
<i>The Amazon</i>	49
<i>Central America</i>	49
<i>Southeast Asia</i>	50
<i>Africa</i>	50
<i>International Tropical Timber Organization C&I</i>	50
Non-governmental Approaches	51
Thematic Element II: Biological Diversity	52
Criteria	52
Legally binding global instruments	53
<i>Biodiversity - General</i>	53
<i>Ecosystem Biodiversity</i>	55
<i>Species Biodiversity</i>	56
<i>Genetic Biodiversity</i>	57
<i>Protected Areas</i>	58
Non-legally binding global processes	59
Regional Approaches	60
<i>Non-European Temperate and Boreal Forests</i>	60
<i>Europe</i>	60
<i>The Amazon</i>	61
<i>Central America</i>	62
<i>Southeast Asia</i>	62
<i>Africa</i>	62
<i>International Tropical Timber Organization C&I</i>	63
Non-governmental Approaches	63

<i>Resource rights</i>	95
<i>Traditional knowledge and use</i>	96
<i>Public participation</i>	97
<i>Non-consumptive/recreational use</i>	98
<i>Health and well-being</i>	98
Non Legally Binding Global Forest Instruments.....	100
Regional and C&I Approaches.....	101
<i>Non-European Temperate and Boreal Forests</i>	101
<i>Europe</i>	101
<i>The Amazon</i>	102
<i>Central America</i>	103
<i>Southeas</i>	

ITTO	International Tropical Timber Organization
IUCN	International Union for the Conservation of Nature and Natural Resources
IUFRO	International Union of Forest Research Organizations
LBI	Legally binding instrument
LMO	Living Modified Organisms
LFCC	Low Forest Cover Countries
LULUCF	Land Use, Land Use Change and Forestry
MEA	Multi-lateral Environmental Agreement
MCPFE	Ministerial Conference for the Protection of Forests in Europe
MDG	Millennium Development Goal
NAAEC	North American Agreement on Environmental Cooperation
NAFTA	North American Free Trade Agreement
NAP	National Action Programme
NFP	National Forest Programme
NGO	Non-governmental Organization
NLBI	Non-legally Binding Instrument
NTFP	Non-timber Forest Product
ODA	Overseas Development Aid
OECD	Organisation for Economic Cooperation and Development
PAS	Protected Areas Strategy
PEFC	Programme for the Endorsement of Forest Certification schemes
PEOLG	Pan-European Operational Level Guidelines for Sustainable Forest Management
PfA	Proposals for Action
POW	Programme of Work
Ramsar	The Ramsar Convention on Wetlands
RFI	Resource Futures International and Associates
SADC	South African Development Corporation
SBI	Subsidiary Body on Implementation
SBSTTA	Subsidiary Body on Scientific Technical and Technological Advice
SFM	Sustainable forest management
SIDS	Small Island Developing States
SPS	Sanitary and Phytosanitary Measures
TKU	Traditional Knowledge and Use
TRIPS	Agreement on Trade-related Aspects of Intellectual Property Rights
UN	United Nations
UNCCD	UN Convention to Combat Desertification
UNCED	UN Conference on Environment and Development
UNCSD	UN Committee on Sustainable Development
UNCTAD	UN Conference on Trade and Development
UNDESA	UN Department of Ec

EXECUTIVE SUMMARY

This report, commissioned by the Secretariat of the United Nations Forum on Forests (UNFF), seeks to provide a systematic assessment of how the world's multi-lateral instruments, processes and agreements address the major environmental, social and economic benefits that forests provide. In so doing, it aims to improve transparency and promote better coordination among existing international forest-related efforts.

This research builds upon a wealth of literature on international forest governance, including other comparative studies of forest-related multi-lateral environmental agreements. The unique contribution of this work is its detailed, systematic and comprehensive identification of specific substantive areas of overlap, duplication, contradictions and/or policy gaps, using a framework based on commonly accepted themes and associated criteria of sustainable forest management.

SCOPE OF THE REPORT

Seven thematic elements of forest management were used to frame this analysis:

1. Extent of forest resources
2. Biological diversity
3. Forest health and vitality
4. Productive functions of forest resources
5. Protective functions of forest resources
6. Socio-economic functions
7. Legal, policy and institutional framework

These themes were selected due to their widespread use within various international processes, and due to UNFF's recommendation that national governments adopt these themes as a framework for sustainable forest management (SFM) policy-making (UNFF 2004b). Hence they provide a useful overarching framework with which to assess the comprehensiveness and cohesion of existing multi-lateral forest-related international instruments.

Within this broad thematic framework, we have identified sub-themes or "criteria" that serve to further define the themes and enable detailed substantive analysis. The criteria were selected iteratively based on their common usage in Criteria and Indicator (C&I) processes and in the international instruments themselves.

The instruments that were selected for examination in this report fall within the following categories:

- Ø Global, legally binding forest-related instruments (the major multi-lateral environmental agreements and trade agreements)
- Ø Global, non legally binding forest instruments
- Ø Regional approaches (criteria and indicator processes, regional agreements)
- Ø Non governmental approaches (forest certification)

The global instruments were selected according to their direct relevance to the seven thematic elements, and the level of participation, particularly amongst nations with high levels of forest cover and/or trade in forest products. The sampling of regional instruments was aimed at representing all of the major forested regions, despite significant variation in the level of participation and productivity among regions. The analysis of forest certification systems was limited to those sharing common substantive forest management standards at the global level. Appendix B provides a complete list of the instruments, agreements and processes thus selected for systematic analysis in this report.

METHODOLOGY

The report's core methodology was the creation of a database that systematically categorizes international decisions of the selected instruments by forest theme and substantive criteria. The decisions addressed include those in the original agreements, as well as key guiding policy documents that have emerged in formal sessions and meetings of the parties after each instrument's entry into force, including those held prior to January 2007.

All of the agreements reviewed were given a criterion-by-criterion analysis, noting text relevant to each criterion. In the case of the global, legally binding instruments, all of the binding, or "directory" decisions that mandated a particular course of action, as well as general principles, guidelines and programs of work, were catalogued in the policy database. These decisions, principles, guidelines and programs were categorized by the jurisdictional level at which the requirement was aimed (i.e. international, regional, national, sub-national), and the nature of the policy tool (for example, action plan, information collection, behavioral targets, procedural approaches, etc.). Importantly, other non-binding decisions, such as those "encouraging", "recommending", or "urging"-- but not committing-- parties to action, were excluded from our analysis.

Due to the searchable nature of the database, we were able to quickly identify how each forest theme was, or was not addressed by each of the instruments. This allowed us to also identify areas of "benign" overlap, as well as areas where overlap posed the risk of policy conflict. Finally, we were able to identify forest-related issues that have yet to be addressed within these instruments.

The legally binding global-scale agreements were subjected to the most detailed analysis due both to their legal complexity and limitations in time and resources. Given the time and opportunity, a similar in-depth analysis could be applied to all global and regional agreements, both binding and non-binding.

KEY FINDINGS

Gaps, Overlaps and Conflicts by SFM Thematic Area

The number and diversity of forest-related international instruments, agreements, and processes is staggering and indicative of a tremendous degree of shared global concern. It is equally indicative of a lack of global consensus and coordination regarding who should shape the future of our forests, what our goals for those forests ought to be, and how those goals can best be achieved.

In the absence of a coordinated forest regime, numerous forest-related instruments have filled the void, each with a unique focus, such as climate change, biodiversity, or global trade. In some cases forest-related issues are embodied in founding agreements and policy documents. In others, forest-related content has emerged later in the instrument's development, whether through decisions made at successive Conferences of the Parties or work programs or guidelines. Overall, the focus on forests has continued to spread and disperse as part of a general broadening of mandates and growing preference for holistic approaches to sustainable development.

The majority of forest-related legally binding global instruments include very little directory language¹ addressing sustainable forest management. The most notable exceptions are the trade agreements under the World Trade Organization (WTO) and the commitments made under the International Tropical Timber Agreement (ITTA) for the sustainable trade of tropical timber. Of e.7(ge)-8g.(c)-4271.1(dtS.6(c)-5.7(h

Theme 1 – Extent of Forest Resources

This theme addresses the management of the extent of forests. An important first step in addressing forest extent is to monitor and report changes in forest cover. Several global, legally binding instruments (LBIs) have instituted requirements for national-level inventory and reporting (UNFF 2004c: 7). The recently effective Kyoto Protocol requires the inventorying of land use-related deforestation, afforestation, and reforestation in developed country Parties. Two voluntary measures that overlap with

Of the three categories of biodiversity addressed as policy “criteria” in this report, i.e. ecosystem, species and genetic diversity, the conservation of genetic diversity has received the least direct attention. The attention that CBD has placed on genetics has largely been focused on the issue of access to genetic resources (i.e. addressing the issue of sustainable and equitable use).

The issue of Protected Areas is well covered in the CBD, Ramsar and WHC. However, this coverage is generally voluntary, and lacks provisions to ensure that protected areas are environmentally representative, and that they address the issues of connectivity, roadless areas, primary forests and other forests of high conservation value (with the exception of mangrove forests as highlighted under the Ramsar Convention).

The IPF/IFF PfA and UNFF have not provided any further clarification with regards to the potential conflict between MEA measures seeking to conserve biodiversity and those seeking to maintain unencumbered trade. The topic of the risks associated with biotechnology, specifically genetically modified trees, has not been formally addressed either, although it was the focus of debate at a side event held during UNFF 4. Gaps identified with regards to protected areas (ecological representativeness and connectivity) and maintenance of genetic diversity, are mentioned in the IPF and IFF Proposals for Action (PfAs), although these remain poorly addressed.

Not surprisingly, most of the C&I processes contain language that is much more detailed regarding the conservation of forest biodiversity. The Montreal and MCPFE C&I processes contain provisions addressing the maintenance of genetic diversity of tree seed sources and natural regeneration. The MCPFE C&I address gaps identified with regards to ecological representativeness, with an emphasis on protecting rare or vulnerable ecosystems, including primary forests. The African Timber Organization/ International Tropical Timber Organization (ATO/ ITTO) C&I take the strongest stance with regards to “risks associated with biotechnology” by banning the use of genetically modified organisms altogether.

Overall, the Northern regional instruments put a greater emphasis on the use of protected areas for in-situ conservation, while those of the South express a greater concern for development priorities.

In regards to forest certification, FSC standards contain substantially more detail regarding forest biodiversity conservation than many of the other processes and agreements examined here. However their focus on individual forest management units limits their ability to address landscape-level biodiversity concerns such as migratory corridors. The FSC’s requirement of identifying high conservation value forests (and requiring that these values are protected) represents a unique approach to preventing

Several of the regional agreements (such as the Central American Forest Convention) reflect regional strategies to address threats to forest health in the context of preventing transboundary harm, a widely accepted obligation within international environmental law.

Although limited by their voluntary nature, FSC standards provide relatively detailed guidance for the maintenance of ecological function and prevention of forest degradation during harvesting and road building. The standards also restrict the use of forest chemicals, and favor their elimination. PEFC endorsed schemes incorporate regional C&I processes, but the schemes vary in the specific content of their performance standards.

Theme 4 – Productive Functions

This theme addresses forest ecosystem productivity and productive capacity. Only two legally binding global instruments address this issue directly, and only through voluntary guidance. The ITTA

The Association of Southeast Asian Nations Agreement on the Conservation of Nature and Natural Resources (ASEAN Agreement) is the only agreement or process to acknowledge the pollution mitigation capacity of forests.

The C&I processes examined here are primarily concerned with the measurement of variables associated with protective functions, and do not contain specific requirements for on-the-ground action. They do, however, provide some innovative approaches to monitoring forest protective functions, such as using the historic range of water flow as a baseline with which to compare current water flow (Tarapoto and Montreal Processes).

FSC's requirements address many of the same gaps that the regional processes do with regards to the protection of water, soil and ecological functions. PEFC endorsed schemes incorporate regional C&I processes, but the schemes vary in the specific content of their performance standards.

Theme 6 – Socio-economic Benefits

This theme addresses the socio-economic benefits of forests. The WTO has instituted the most cohesive and forceful directory provisions related to socio-economic benefits, and these are focused on the reduction of barriers to global trade. The environmental conventions, in contrast, place emphasis on the protection of local benefits, support of indigenous knowledge, and the public participation of local peoples including women, although largely through advisory text. There are no provisions addressing the broader question of the impacts of WTO decisions on local welfare. However, the CBD has made efforts to collaborate with the WTO regarding intellectual property rights and genetic resources. None of the conventions address the broader issue of local and indigenous legal rights to land and resources.

In regards to forestry-specific concerns, the ITTA is the only LBI that directly addresses the economic viability of natural resource management and production. The emphasis of the ITTA is on industrial production. None of the global LBIs address forest management for subsistence uses, despite the fact that fuelwood accounts for the majority of wood harvest for many developing country parties. In terms of other non-timber uses, the approach is advisory at most, with the CBD providing voluntary guidance on sustainable tourism and several of the environmental conventions mentioning the importance of non-timber forest products.

Labor issues are not raised in these conventions. While it could be argued that labor concerns are the purview of the International Labor Organization (ILO), a holistic approach would require greater communication and recognition of the importance of forest-related labor to the welfare of rural communities.

Finally, the UNCCD is the only instrument that pays focused and consistent attention to the broader issue of rural poverty. The UNCCD, however, is limited to addressing drought and desertification, and thereby applies to only a limited segment of the world's forested areas. Considerable research has been done on the symbiotic link between rural poverty and forest degradation, suggesting that any international arrangement on forests must address either directly, or through linkages with other multilateral instruments, the issue of rural welfare as a whole. This undoubtedly would include greater attention to macro-economic forces, as well as economic incentives for sustainable forestry practices.

The IPF/IFF Proposals for Action provide guidance that, if followed, could help address some of the

impacts of industrial activities and global trade. The developed countries, in contrast, place a stronger emphasis on reporting requirements and pay relatively less attention to the distribution of benefits.

The FSC's international and regional forest certification standards have produced some very directive language addressing socio-economic issues, such as labor rights, the promotion of locally-based trade, and indigenous peoples' rights. PEFC endorsed schemes incorporate regional C&I processes, but

Deforestation	Global, LBIs	UNCCD is the only legally binding forest-related instrument directly focused upon deforestation. However, many of the conservation-oriented provisions of other global LBIs indirectly address deforestation.
	Global NLBIs	PfA discourage deforestation.
	Regional Agreements	Almost universal coverage addressing deforestation. Some instruments focus only on tracking it, others discourage deforestation, but none forbid it. Prevention of deforestation is a primary objective of the CAFC.
	Regional C&I	Almost universal coverage addressing deforestation. Some C&I focus only on tracking it, others discourage deforestation, but none forbid it.
	Non-governmental	FSC standards prohibit deforestation. PEFC endorsed standards incorporate regional C&I.
	Global LBIs	The legally binding global forest-related instruments do not impose obligations for reforestation. However the Kyoto protocol does create an incentive to reforest.
	Global NLBIs	PfA support reforestation.
	Regional Agreements	CAFC addresses reforestation and rehabilitation of degraded forests.

	Non-governmental	While FSC requires the protection of the habitat of rare, threatened and endangered species, this does not necessarily result in legal designation of a protected area, per se. PEFC endorsed standards incorporate regional C&I.
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Table 3 SFM 3 - Forest Health: Summary of Gaps, Overlaps, and Conflicts in Global Legally Binding Instruments

Alien species	Global LBIs	Mostly covered by the CBD, although language is largely advisory. May conflict with WTO requirements that place the burden of proof on the party that wishes to restrict the importation of a good based on concerns regarding alien invasive species.
	Global NLBIs	The PfAs do little to cover the gaps associated with identified threats to forest health.
	Regional Agreements	Several regional agreements (such as the Central American Forest Convention) address threats to forest health in the context of preventing transboundary harm.
	Regional C&I	Regional C&I mention monitoring and/or controlling exotic species.
	Non-governmental	FSC standards limit the use of exotic species. PEFC endorsed standards incorporate regional C&I.
	Global LBIs	Very little coverage. CBD delegates this to SBSTTA; fire is part of complicated LULUCF calculations for UNFCCC; ITTA provides funding and expertise for tropical producers; if a “natural risk” threatens a WHC site, funding for mitigation is provided.
	Global NLBIs	Very little coverage; UNFF resolution encourages countries to develop forest fire management strategies
	Regional Agreements	Not well covered.
	Regional C&I	Most of the Criteria and Indicator processes contain much more specific language than the LBIs regarding fire. Notably, some (such as the Montreal Process) address this with reference to the “range of historic variation”, acknowledging that natural disturba

	Regional C&I	Strong coverage within C&I processes
	Non-governmental	FSC standards provide relatively detailed guidance for the maintenance of ecological function and prevention of forest degradation during harvesting and road building. PEFC endorsed standards incorporate regional C&I.
	Global LBIs	Very little mention in any of the LBIs, except as identified as a "major threat" to biodiversity in the CBD Strategic Plan, and the FBDPOW (non-binding goals/objectives associated with each). No mention of fertilizers as pollutants.
	Global NLBIs	PfA's address mitigating pollution.

0 2 Regional e Agreements e Mentioned in ASEAN

	Global LBIs	Potential conflict between the Cartagena Biosafety Protocol and WTO requirements, particularly the Sanitary and Phytosanitary Measures Agreement. Use of GMO trees under the UNFCCC and UNCCD may also raise issues (use of modified trees for carbon-sequestering through the CDM, drought resistance, respectively).
	Global NLBIs	Topic of biotechnology risks, and specifically genetic modification, not formally addressed. Debated in side event of UNFF4.
	Regional Agreements	Not addressed.
	Regional C&I	ATO/ ITTO C&I prohibit the use of genetically modified organisms.

		values, including not only timber production but also the management of non-timber forest products, recreation, and other forest uses.
	Regional Agreements	Covered in some agreements but capacity gaps in regional reporting efforts.
	Regional C&I	C&I processes generally encourage accounting of productive forest functions.
	Non-governmental	Principle 5 of the FSC standards addresses accounting. PEFC endorsed standards incorporate regional C&I.

Table 5 SFM 5 – Protective Functions Forest: Summary of Gaps, Overlaps, and Conflicts in Global Legally Binding Instruments

Carbon cycle/ climate change	Global LBIs	Primarily addressed through UNFCCC, Kyoto Protocol and the LULUCF guidance document; emphasis on forests as carbon sinks may (but will not necessarily) conflict with CBD and conservation of biodiversity and obtaining multiple benefits.
	Global NLBIs	IPF and IFF reports mention the role of forests within the carbon cycle and climate regulation, but there are no related PfAs
	Regional Agreements	Mentioned in some agreements.
	Regional C&I	Addressed well within C&I processes, including well developed methods of evaluating the contribution of forests to climate regulation.
	Non-governmental	Not covered by FSC international standards. PEFC endorsed standards incorporate regional C&I.

	Non-governmental	FSC's requirements address many of the same gaps that the regional processes and agreements in regards to the protection of soil. As such, they provide an alternative non-governmental framework that could complement regional inter-governmental efforts and/or foster redundancies depending on the level of implementation and coordination. PEFC endorsed standards incorporate regional C&I.
Water	Global LBIs	Mostly covered by discretionary language within CBD (Inland Waters POW), overlap with UNCCD, UNFCCC, ITTO (watershed protection in tropical forests), WHC (limited to outstanding sites) and Ramsar (limited to mangroves).
	Global NLBIs	PfA on protection of water supplies in drought-prone areas, UNFF resolution on forests and safe drinking water.
	Regional Agreements	The regional instruments help to fill gaps in global LBI in regards to the protection of water resources.
	Regional C&I	The Tarapoto and Montreal Processes call for monitoring water flow using the historic range of water flow as a baseline.
	Non-governmental	FSC's requirements address many of the same gaps that the regional processes and agreements do in regards to the protection of water. This could complement regional inter-governmental efforts and/or foster redundancies depending on the level of implementation and coordination. PEFC endorsed standards incorporate regional C&I.
	Global LBIs	Gap: while pollution is mentioned as a threat to forests, the maintenance of forests as providers of air/water remediation services is not considered.
	Global NLBIs	Not mentioned.
	Regional Agreements	

	<p>Global LBIs</p>	<p>The ITTA is the only global legally binding instrument that directly addresses forest products production, trade and forest-related employment.</p> <p>The ITTA's geographic focus is limited to the industrial trade of tropical timber. Forest trade from temperate and boreal forests, trade in non-timber forest products and services, and non-industrial forestry receive little attention.</p> <p>Little coordination between the WTO and the Rio Conventions or other environmental instruments to ensure a harmony of objectives.</p> <p>Lack of decisions addressing the socio-economic impacts of global trade.</p>
	<p>Global NLBIs</p>	<p>The PfA address the environmental and social impacts of</p>

International Forest Policy – the instruments, agreements and processes that shape it

	Global NLBIs	The PfA address resource rights issues beyond the particular concern of intellectual property rights covered by the CBD.
	Regional Agreements	Instruments in developing regions address a number of issues relating to social welfare that are largely overlooked in global LBIs, including resource rights (beyond intellectual property rights).
	Regional C&I	Covered.
	Non-governmental	FSC standards include directive language addressing local

	Regional Agreements	All regional processes help to fill gaps in global LBIs by addressing worker safety as well as poverty alleviation and/or general community welfare.
	Regional C&I	Covered.
	Non-governmental	FSC Principle 4 requires that forest management “maintain or enhance the long-term social and economic well-being of forest workers and local communities.” PEFC endorsed standards incorporate regional C&I.

Table 7 SFM 7- Legal, Policy and Institutional Frameworks: Summary of Gaps, Overlaps, and Conflicts in Global Legally Binding Instruments

Global LBIs	<p>There is no overarching legal framework for forests. The CBD could assume such a responsibility but it lacks full support and participation by parties key to global forest biodiversity, production and trade.</p> <p>There is some evidence that the WTA's trade liberalizing objectives conflict with other global legally binding forest-related instruments; however, the extent of the conflict is not fully apparent nor are there mechanisms in place for addressing such conflicts.</p> <p>Lack of coordination of national-level plans and programmes as required by different LBIs for strengthening country-level legal frameworks.</p>
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Part I Introduction

This report was commissioned by the Secretariat of the United Nations Forum on Forests (UNFF) to assess current progress in international forest-related policy.⁴ Considerable literature already exists on the development of international forest governance⁵, including analyses of global political dynamics (Cashore 1999; Esty and Ivanova 2002; Humphreys 1999; Porter and Brown 2000; etc.), as well as comparative assessments of forest-related institutions and processes (Chaytor 2001; Tarasofsky 1999a; UNCSD 1998; UNFF 2004b). This report adds to this existing work through its use of seven thematic elements of sustainable forest management as a framework to assess gaps, overlaps and conflicts within key global and regional-level instruments and processes.

There is considerable debate surrounding the appropriate instrument type(s) and decision-making scale(s) for addressing global forestry challenges. This study is driven, however, by two relative points of agreement: 1) that effective global forest governance requires a holistic approach to the environmental, social and economic factors shaping the world's forests, and 2) that greater transparency and coordination are needed to address gaps and avoid conflicting efforts. Hence the primary objective of this study is to increase the transparency of international forest-related policy by assessing the degree to which existing forest-related instruments address a holistic set of thematic elements for sustainable

A background document prepared for the IFF in 1998 also provides a useful analysis of existing gaps and overlaps in global forest-related governance (E/CN.17/IFF/1998). The instruments covered in this report include ten global and seven regional legally binding instruments, as well as the Forest Principles, Agenda 21 and the IPF PFA. The report observes that most of the “functions and roles of forests have been regulated to some extent” but that there is an overall lack of coordination and fragmentation of instruments addressing forest-related issues. It concludes that forest conservation issues are generally covered, but that the instruments lack a coordinated and holistic approach to SFM. The document also includes a table indicating the degree to which 16 elements of forest management are addressed by the major instruments under analysis.

The International Union for the Conservation of Nature (IUCN) has conducted a detailed analysis entitled “Assessing the Forest Regime” (Tarasofsky 1999b). This study assesses a number of legally binding and non-legally binding global instruments regarding their progress towards addressing key IPF Proposals for Action under each of the IPF PFA's four major Programme Elements.⁶ Major gaps identified include the lack of coverage of the underlying causes of deforestation, agrarian land reform for landless peasants, indigenous entitlements, environmental aspects of mining, activities of Transnational Corporations, the lack of international mechanisms for addressing illegal trade in forest products, and inadequate developed country financing for developing country efforts. The report suggests that overlapping efforts is not a major problem, given the different emphasis of each instrument. Nevertheless, instruments could benefit from increased harmonization. In particular, the report's authors emphasize the potential for conflict between international trade law and sustainable development.

The International Institute for Environment and Development (IIED) commissioned a report that summarizes existing legal and institutional frameworks for global forest policy (Chaytor 2001). This report identifies several issues as of key importance in the multilateral regulation of forests. These are attention to the causes of deforestation, a focus on SFM not just timber production, the equitable treatment of forest dwellers and local communities, inter-governmental support, and the implementation of existing legal instruments. The report focused its

Once the term of the IPF was completed in 1997, a new expert body, the **Intergovernmental Forum on Forests (IFF)** was established under the auspices of the CSD to deal with many critical issues left un-addressed by the IPF. After three years of negotiations, agreement was reached on additional PfAs, bringing the total number of PfAs to 270. The IFF also proposed the terms of reference for a new international arrangement on forests through the CSD to the UN Economic and Social Council (ECOSOC). In October 2000, ECOSOC created the **United Nations Forum on Forests (UNFF)**, thereby providing a more permanent home for the international dialogue on forests with a substantially higher level of political authority.

address SFM. Instead, Ministerial processes have become increasingly common. These processes generally involve the participation of ministers in collaborative goal setting and monitoring initiatives, aimed at the development of a regionally coordinated approach to SFM.

Criteria and Indicator (C&I) processes have also gained considerable momentum since the 1992 Rio Summit. There are currently nine major intergovernmental C&I processes that cover virtually all of the world's major forest eco-regions. These processes involve multilateral collaboration and negotiation to identify and implement a set of Criteria defining

The **EU Action Plan for Forest Law Enforcement, Governance and Trade (FLEGT)** is a European regional process geared at addressing global problems of illegal logging and trade in illegal timber. FLEGT provides a framework for the development of partnership agreements between the EU and developing country partners, aimed at stemming the flow of illegal timber into the EU. Thus far, several EU member states have been involved in bi-lateral partnership negotiations. Similarly the **Europe and North Asia Forest Law Enforcement and Governance (ENAFLEG)** process provides a forum for addressing illegal logging in northern Eurasia.

There are no legally binding forest conventions in Asia. However, the Associ

Part II Methodology

Due to the searchable nature of the database, we were able to quickly identify how each forest theme was, or was not addressed by each of the instruments. This allowed us to also identify areas of “benign” overlap, as well as areas where overlap posed the risk of policy conflict. Finally, we were able to identify forest-related issues that have yet to be addressed within these instruments.

Non-legal global mechanisms, regional approaches, and non-governmental processes were subject to more abbreviated analyses. These additional assessments focus on the role of non-legally binding and/or sub-global mechanisms in addressing the gaps, overlaps and conflicts identified in the legally binding global instruments.

The more detailed analysis of global, legally binding instruments is due both to their legal complexity and limitations in time and resources. Given the time and opportunity, our policy database could be expanded to facilitate more detailed study of non-binding and regional decisions.

Selection and overview of forest-related instruments

The seven thematic chapters of this report are each organized into four subsections, consisting of: 1) legally binding global instruments, 2) global-scale, voluntary arrangements on forests, 3) regional approaches, and 4) non-governmental approaches. The report’s most detailed analyses are covered in the first subsections, which address the eight key legally binding forest instruments.

The following sections present the criteria used for the selection of instruments and processes addressed in the thematic analyses. This methodological description is followed by a brief synopsis of the history, purpose, composition and structure of each instrument and process under analysis.

Legally Binding Forest-related Global Instruments

Eight key legally binding global forest-related instruments were selected for detailed thematic analysis. The criteria used to select these instruments are: 1) their centrality to the seven SFM thematic elements of sustainable forest management, and 2) the membership of at least fifty country Parties, including a majority of the world’s top ten countries in terms of forest cover and value of forest products trade.

The instruments selected include the “three Rio conventions” - the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention to Combat Desertification (UNCCD). Three older conventions were also selected, consisting of the Convention on the International Trade in Endangered Species (CITES), the World Heritage Convention (WHC), and the Ramsar Convention on wetlands. In addition to these environmental agreements, two key global trade-oriented instruments were selected, consisting of the World Trade Agreement (WTA) and the International Tropical Timber Agreement (ITTA).

A survey of the literature confirms that the chosen instruments are central to the global forestry dialogue (FAO 2003b; Hunter, Salz

Convention to Combat Desertification (UNCCD)

Table 3 Parties to the UNCCD and Primary SFM Themes Covered

MEA	# of
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Convention on International Trade in Endangered Species

Table 4 Parties to CITES and SFM Themes Covered

MEA	# of Parties	Top 10 countries in forest cover *	Top 10 countries in forest trade**	Primary SFM Thematic elements
CITES	167	Parties: 9/10 Russian Federation, Brazil, Canada, US, China, Australia, DRC, Indonesia, Peru Not Parties: 1/10 Angola	Parties: 10/10 US, Canada, Germany, China, Finland, France, Japan, Sweden, UK, Italy	SFM 2 Biodiversity

Source: CITES. Member Countries. (Web page; cited February 8, 2005). Available from <http://www.cites.org/eng/disc/parties/index.shtml>

* This column lists which of the world's top 10 countries in area under forest cover are parties to the MEA/Protocol and which are not (FAO 2003c).

** This column lists which of the world's top 10 countries in terms of their dollar value of import/export forest trade in 2002 (FAOSTAT 2004) are parties to the MEA/Protocol and which are not.

The 1975 Convention on the International Trade in Endangered Species (CITES) strives to ensure that international trade does not threaten certain listed species. Forest-related flora and fauna are listed under the convention and CITES has recently extended its jurisdiction to Big-Leaf Mahogany (*Swietenia*

World Heritage Convention

Table 5 Parties to WHC and primary SFM Themes Covered

MEA	# of Parties	Top 10 countries in
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International Tropical Timber Agreement (ITTA)

Table 7 Parties to ITTA and Primary SFM Themes covered

Trade Agreement	# of Parties	Top 10 countries in forest cover *	Top 10 countries in forest trade**	Primary SFM Themes
ITTA	59	Members: 8/10 Brazil, Canada, US, China, Australia, DRC, Indonesia, Peru Not Members: 2/10 Russian Federation, Angola	Members: 10/10 US, Canada, Germany, China, Finland, France, Japan, Sweden, UK, Italy	SFM 4 Productive SFM 6 Socio-economic

Source: ITTO. ITTO Members. (Web page; cited September 3, 2005). Available from <http://www.itto.or.jp/live/PageDisplayHandler?pageId=233&id=224>

* This column lists which of the world's top 10 countries in area under forest

Non Legally Binding Global Forest Instruments

This report's thematic analyses address primarily two key non-legally binding global mechanisms, the IPF/IFF Proposals for Action (PfA) and decisions of the United Nations Forum on Forests (UNFF). The IPF/IFF and UNFF processes were selected as the only existing global-scale, intergovernmental instruments expressly designed to address SFM²⁸. Their role is to provide guidance and support to legal initiatives and other relevant global efforts.

The FAO, a UN agency, and CPF, a collaborative partnership, are also mentioned in some instances due to the important roles they play in facilitation, assessment, and the generation and provision of forest-related information. The primary focus of this report is on inter-governmental instruments and C&I processes, however. Time and resources do not allow a full assessment of the activities of UN agencies, international NGOs and other forms of institutionalized international cooperation.

The definition of "region" varies between instruments and processes. A region may cover contiguous countries within a commonly recognized socio-economic boundary, such as "Southeast Asia", or it may encompass countries sharing biogeoclimatic features, such as "temperate and boreal forests". In some cases (for example, the "Treaty for Amazonian Cooperation") the boundaries of the agreement are primarily biological rather than political and do not encompass the entirety of the participating nation states.

Tarapoto Proposal of Criteria and Indicators for Sustainability of the Amazon Forest.

The Tarapoto Proposal C&I, initiated in 1995, aim to address forestry issues at the global, national and management unit levels. Currently, the initiative is in its second phase, "Tarapoto II". As yet there

Africa

SADC Forestry Protocol

The roots of the **Southern African Development Community (SADC)** trace back to the establishment of the Southern African Development Coordination Conference in 1980. As the name implies, the original objective of this organization was to coordinate regional economic development. The original Coordination Conference took its current shape as the SADC in 1992. The SADC currently includes thirteen member countries, consisting of Angola, Botswana, the Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe.²⁹

Criteria and Indicators of the FSC standards as an international non-state system that has arguably played an important role in shaping the evolution of global forestry governance as a whole (Bernstein and Cashore 2000).

The FSC international Principles and Criteria form the baseline for certification under the FSC system. These international standards cover the wide

Part III Thematic Analysis

Introduction—Global forestry challenges

The focus of this report is on gaps, overlaps and conflicts as embodied in the written decisions enacted by multilateral forest-related institutions and processes. The ultimate test of effective governance, however, is its impact on the ground. It is hoped this report will help inform future field-based studies that link multilateral decisions with environmental, social and economic impacts.

Existing evidence is sufficient, however, to conclude that forest-related governance has not been adequate in addressing global forest-related problems. Deforestation, forest degradation and rural poverty continue to plague many world regions. Between 1990 and 2000, forests disappeared at an

While awareness of these broad and seemingly intractable barriers is important, it is equally necessary to develop a more nuanced and in-depth understanding of precisely where progress has, or has not, been achieved if we are to find our way forward. The following chapters, therefore, will present a detailed and systematic analysis of global dialogue regarding the seven thematic elements central to the achievement of sustainable forestry.

Each thematic chapter begins by identifying substantive "criteria" that further define the given SFM theme. The legally binding global forest-related instruments are then assessed for their coverage of the identified criteria. This criterion-by-criterion assessment is followed by a table, summarizing major gaps, overlaps and conflicts between instruments. The next sections then analyze non-legally binding global forest instruments and their role in addressing the gaps, overlaps and conflicts identified among the legal

Thematic Element I: Extent of Forest Resources

The extent of the world's forest resources constitutes a central concern — as well as a key point of contention -- within global forest policy dialogue. While there is general agreement on the importance of maintaining adequate global forest cover to regulate climate, conserve biodiversity, and generally maintain valued forest products and functions, much debate still exists regarding the sovereign right of nations to clear forests for the purpose of economic development. This debate is further complicated by the fact that many developed countries have historically exploited their frontier forests without impediment, leading to arguments that developing countries should be allowed to do the same to fulfill their own priorities for economic development (Porter and Brown 2000).

Criteria

This chapter organizes its assessment of multilateral decisions related to forest extent according to four sub-themes or "criteria", consisting of: "inventory", "afforestation", "deforestation" and "reforestation". A worldwide assessment of standards for sustainable forest management captured a similar set of indicators under the heading "forest estate statistics" (Holvoet and Muys 2004).

The criterion of "forest inventory" is intended to capture the various requirements that arise from legally binding forest related global instruments to measure and monitor the extent of forest resources. The development of accurate and comprehensive forest inventories is clearly crucial to any long-term monitoring and assessment of forest extent.

The criterion of "afforestation" addresses the conversion of non-forested lands to forested lands. Afforestation may be promoted for diverse reasons, including the rehabilitation of historically forested areas and/or the mitigation of climate change via the use of forests as sinks or reservoirs of carbon.

"Deforestation", or the conversion of forests to non-forested land cover, is an issue that has been a primary driving force of the global forest debate (Sands 2003-547) (UNCED 1993) (Chapter 11 – "Deforestation"). While there is a conspicuous lack of global consensus regarding where and how much deforestation may be justified by national priorities, there is widespread recognition for the need to mitigate undesirable losses in forest cover.

Finally, the criterion "reforestation" addresses the need for proactive forest management that ensures that forests continue to adequately regenerate. Reforestation policies may encourage human planting and/or natural regeneration.

Legally Binding Forest-Related Global Instruments

Inventory

The legally binding, forest-related global instruments that address forest-extent-related inventory requirements include: CBD, UNFCCC, UNCCD, WHC, Ramsar and the ITTA.

The CBD establishes obligations for the inventorying of forest-related resources. The convention imposes a blanket direction on parties to "as far as possible and appropriate" identify and monitor biological diversity (arts. 7(a) and (b) and Annex 1) and periodically report on implementation of the CBD (art. 26). In the conference work of the CBD, it

UNCCD has a Committee on Science and Technology that is tasked with overseeing the UNCCD's participation in inventory work (COP-6/CST/7). In 2005, emphasis was placed on monitoring and assessment of biophysical aspects of desertification, including benchmarks and indicators, as "the most

afforestation for the purposes of mitigating climate change, which coincides with programme work being undertaken by the CBD and UNCCD.

Deforestation

The UNCCD text does not provide any direct encouragement for reforestation. However the Secretariat has recognized reforestation as a strategy to combat desertification and is therefore leading efforts to coordinate global reforestation initiatives with the CBD and UNFCCC (UNCCD 2004)(Downes, 1999: 91-93).

The ITTA has an objective of encouraging parties to “support and develop industrial tropical timber reforestation” (art. 1(j)). To that end, the ITTO has established a Committee on Reforestation and Forest Management tasked with, amongst other things, encouraging technical assistance for reforestation.

Major Gaps, Overlaps, Conflicts:

The legally binding, forest-related global instruments do not establish an obligation to reforest after a human-induced forest disturbance. The Kyoto Protoc

The IPF (paras. 27(a)-(c), 29(a) and (b) and 30(a)), IFF (paras. 64(a) and (e), 67, 115(c) and (e), 122(c), and 142(a)) and UNFF (UNFF-2, res. 2(A)) PfAs encourage countries to take a broad array of actions to combat deforestation, including studying the role of tenure in deforestation, creating awareness, studying underlying causes and developing national-level policies and strategies. The IPF (para. 58) and IFF (paras. 30(b) and 129(c)) both urge countries with low forest cover to take positive action on afforestation and reforestation.

Major Gaps, Overlaps, Conflicts:

The IPF, IFF PFA and UNFF resolutions provide normative guidance supporting forest inventory, afforestation, and reforestation, and discourage deforestation.

Regional and C&I Approaches

Non-European Temperate and Boreal Forests

The voluntary Montreal Process Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests has developed a set of indicators for a suite of criteria that roughly tracks the consensus SFM themes that form the basis for the seven thematic chapters of this report. This includes indicators addressing issues of forest inventory, including extent of various forest resources (crit. 1(a)-(d)), extent of allocated timber productive forests (crit. 2(a)), extent of forest-related carbon resources (crit. 5(a)), and a range of indicators related to monitoring and measuring these issues (crit. 7).

Europe

The non-legally binding high-level European political initiative known as the Ministerial Conference on the Protection of Forests in Europe (MCPFE) has established a pan-European network of permanent sample plots to improve forest-related inventories (res. S1) and has encouraged further work to improve the tracking of the extent of forest resources (res. V4, para. 13). The parties to the MCPFE have committed to collaborate on afforestation and reforestation efforts to combat deforestation (res. H1, para. 14) and have additionally pledged to “prevent and mitigate” biodiversity loss due to the conversion of forestlands to non-forest uses (res. V4, para. 11).

The MCPFE’s Pan-European Criteria and Indicators for Sustainable Forest Management address the inventory-related matters of the extent of forest cover, growing stock, age distribution, and forest-related carbon (ind. 1.1-1.4). Additionally, there are indicators for forest extent-related issues such as the tracking of reforestation and forest damage (ind. 4.2 and 2.4).

The Amazon

The Treaty for Amazonian Cooperation does not address matters regarding the extent of forest resources. The Amazon Cooperation Treaty Organization (ACTO) has developed a strategic plan (2004-2010) however, which acknowledges the problem of deforestation and calls for the monitoring of forest land use to assist in tracking the problem (ACTO 2004) (19-20).

ACTO has also developed criteria and indicators for sustainability of the Amazon forest under a process known as the “Tarapoto Proposal”. These C&I include a suite of indicators at the global, national and FMU-level. The inventory related indicators measure the extent of timber productive forests (ind. 3.1), the extent of protected forests (inds. 4.1 and 10.1) and the extent of natural disturbance processes (inds. 4.4 and 10.3). Additionally the Tarapoto Proposal has indicators of the rate of regeneration (inds. 4.5 and 10.4) and forest conversion (ind. 4.6).

Central America

The Regional Convention for the Management and Conservation of Natural Forest Ecosystems and the Development of Forest Plantations (the “Central American Forest Convention”) has a main objective

³⁴ The UNFF has summarized all the related IPF and IFF proposals for action related to monitoring and reporting (UNFF 2004c).

³⁵ It would be remiss not to observe that there are a num

discouraging deforestation. To that end it establishes a directory provision requiring the establishment of regional-level dynamic inventories of forests resour

as directory language requiring that “The conditions for natural regeneration are fulfilled and regeneration processes are maintained (Indicator 3.4.1).”

The regional instruments and C&I processes almost universally address deforestation, but some focus only on tracking of deforestation, while others expressly discourage deforestation and none call for ceasing deforestation.

Non-governmental Approaches³⁶

Similar to other C&I processes, the FSC provides for inventories of the extent of forest resources (e.g. prin. 7 and 8). Additionally, the FSC includes strong language requiring forest regeneration (crit. 6.3) and prohibits deforestation by conversion (crit. 6.10).

Major Gaps, Overlaps, Conflicts:

The FSC standards require forest inventory and forest regeneration. This could serve to reinforce or fragment MEA goals in those areas, depending on the level of consistency and coordination with international efforts. The FSC standards do not expressly address afforestation. The FSC is the only instrument assessed in this report that prohibits deforestation.

³⁶ As discussed in the methodology section of this report, this report's thematic chapters compare approaches to substantive themes of sustainable forestry. The FSC is the only forest certification system that has developed global standards addressing substantive issues and hence is the only system with decisions amenable to analysis in this chapter.

Thematic Element II: Biological Diversity

Biodiversity is a broad term used to describe “the variability within and among living organisms and the systems they inhabit” (SCBD, 2005). The earth is currently experiencing rates of biodiversity loss matching or exceeding those of the five prehistoric mass extinctions. Much of this has been from forests, and this is largely attributable to anthropogenic causes, such as resource over-exploitation, the introduction of alien species, pollution, and climate change. Despite this, forests continue to house the greatest number of species of any terrestrial biome; in fact, over half of all terrestrial biodiversity can be found within forest canopies alone (Global Canopy Programme Steering Committee 2002).

Biodiversity is crucial to the maintenance of basic ecosystem functions, ensuring their resilience to disturbance, and enabling adaptation to changing abiotic conditions. All of these factors underlie the forest's ability to provide benefits, goods and ecolog

Legally binding global instruments

state sovereignty takes precedence over that of conserving biodiversity. It is notable that this is not the case with WTO provisions and their application, which do not allow for such flexibility and discretion.

Overall, the CBD conveys a preoccupation with the sustainable use of biodiversity and maintaining access to it as a “resource”; there is much less emphasis of conserving biodiversity for its own sake. A major gap exists regarding “directive” provisions that extend similar protection to less visible and aesthetically pleasing (yet ecologically pivotal) species. In a similar manner, certain “high-profile”

As outlined under the criterion "Biodiversity - General", WTO free trade requirements and the principle of non-discrimination may interfere with the ability of individual country Parties to enact import restrictions on products sourced from endangered ecosystems. While exceptions to this are allowed under Article XX, these only allow for measures necessary to protect human, animal or plant life or health, and this may not necessarily extend to the protection of whole ecosystems. It is much easier to prove that a particular action causes harm to a particular species, as opposed to the health of an ecosystem, which is a poorly defined and not well understood. Similarly, the clause under Article XX allowing for measures necessary to conserve **exhaustible** natural resources may be more difficult to apply, as it is more difficult to prove that an ecosystem is at risk of "extinction" as opposed to a particular species.

Major Gaps, Overlaps, Conflicts:

While this criterion is addressed primarily by the CBD, this is largely done in discretionary language and through voluntary programmes. Although CITES requirements are more directive, they are almost entirely directed at the species level, and further limited to those species that have been designated as being threatened. In a similar manner, WHC affords a high level of protection, but only for a select list of outstanding sites. Ramsar overlaps with the CBD in that it contains limited provisions for the protection of coastal and mangrove7113 -tin diu

former, this restricts the trade of logs, sawn wood, veneer sheets and plywood made from this species (CITES Appendix II, Parts and Derivatives #6).

At its 13th

International Forest Policy – the instruments, agreements and processes that shape it

consistent with national, subnational and local policies and international agreements; a more biocentric approach would require the elimination or alteration of policies known to contribute to biodiversity loss.

Conservation of genetic biodiversity is to be given a "special emphasis" within ecosystem based management and planning (IFF PfAs, para 85b). However, most proposals addressing this level of biodiversity are centred around the sharing of benefits derived from this resource.

The topic of protected areas is well covered under the IFF PfA's, as one of eight "issues that need further clarification" (IFF Programme Element I, D.3). Several identified gaps associated with connectivity and representativeness are addressed, including using an ecosystem approach to assess the adequacy, consistency and effectiveness, with consideration for corridors, buffer zones, and transboundary management (IFF PfA, para 85e, 86, 88, 89). Additional PfAs encourage the protection of forests and their water supplies in areas affected by drought (IPF PfA, para. 46c), as well as those with low forest cover (IPF PfA, para 58b(v)). One of the PfA's suggests that protected forests be developed as a source of revenue, both in terms of entrance fees and carbon sequestration services (IFF PfA, para. 85e).

The UNFF has addressed several of these PfA's through its multi-year program of work, primarily at its second and third sessions. UNFF-2 discussed forest conservation and protection of unique types of forests and fragile ecosystems, rehabilitation and conservation strategies for countries with low forest cover, and rehabilitation and restoration of degraded lands. Associated resolutions that emerged from this session are written in characteristically soft terms, "urging" and "inviting" member countries, CPF members and major groups to undertake activities such as exchanging information and building capacity in order to address these issues (UNFF2, Resolution 2). Both forest health and forest cover were discussed at UNFF3 and produced several resolutions relevant to biodiversity; these are discussed in further detail under Theme 3 and 4, respectively.

MCPFE was one of the first of the institutions mentioned here to address the conservation of genetic biodiversity specifically (1990), recognizing the importance of “total genotypic variability” and emphasizing that complete scientific certainty is not required in order to take immediate action in the interest of future generations (Resolution S2, Principles 1,3). The latter embodies an early conceptualization of the precautionary principle. This same resolution recognizes the importance of silvicultural practices, something which is not well considered by the LBIs. MCPFE also addresses the issue of fragmentation (Resolution V4, para. 11) and regeneration with native tree species and provenances (Resolution V4, para. 12).

The MCPFE’s Pan-European Criteria and Indicators for Sustainable Forest Management

consideration of the maintenance of the forest's natural regenerative capacity (Criterion 3.4), poorly or not considered in all other regional agreements. Also notable are strict controls over the use of biocides, and an absolute prohibition of the use of genetically modified organisms (Sub-Indicator 3.3.4.3).

The ATO/ITTO C&I also contain an indicator requiring the “non-fragmentation of tree populations...ensured by the maintenance of a continuous canopy” (Sub-Indicator 3.3.3.5, emphasis added), unique amongst the regional instruments considered here. It also contains indicators at both the National (Indicator 1.1.12) and FMU level (Indicator 3.3.1) favouring the maintenance of high conservation value forests, and invokes the use of the precautionary principle with regards to their management (Sub-Indicator 1.1.12.3). As for protected areas, these C&I set themselves apart by requiring these areas to be visibly delineated “on-the-ground”, and verifying that the associated management rules are known by stakeholders (Sub-Indicator 1.1.12.4). A similar indicator requests the marking of certain trees with high conservation value prior to harvesting (2.3.1.2).

International Tropical Timber Organization C&I

Criterion 5 of the ITTO C&I deals specifically with biodiversity. Interestingly, it notes that “the conservation of ecosystem diversity is best accomplished by...protected areas”, adding specific emphasis to maintaining connectivity between these areas. A separate criterion acknowledges the role that production forests play in biodiversity conservation, and refers to a separate ITTO guidance document on the subject.

Major Gaps, Overlaps, Conflicts:

Not surprisingly, most of the C&I processes contain language that is much more detailed regarding the conservation of forest biodiversity. The Montreal and MCPFE C&I processes contain provisions addressing the maintenance of genetic diversity of tree seed sources and natural regeneration not present in the legally binding instruments. The MCPFE C&I address gaps identified with regards to ecological representativeness, with an emphasis on

The requirement of identifying high conservation value forests (and requiring that these values are protected) represents a unique approach to preventing their loss and fragmentation, currently not well addressed by the legally binding instruments.

Thematic Element III: Forest Health

Ramsar objectives specifically consider “the fundamental ecological functions of wetlands as regulators of water regimes”, and mangrove forests fall within this classification. The WHC is also limited in scope, seeking mainly to protect natural sites of “outstanding universal value”. It includes provisions protecting these sites from “threats” in general.

While ITTA objectives do not make explicit reference to addressing forest threats, it does aim to increase the capacity to conserve and enhance other forest values in timber producing forests, and encourages members to support and develop reforestation and rehabilitation of degraded forest land.

The WTO Agreement on the Application of Sanitary and Phytosanitary Measures states that it aims to clarify inspection and other control measures in order to bring national standards into line with international norms to facilitate trade, while reducing the risks associated with the introduction of alien species, pests and diseases. However, in practice, the burden of proof is placed on the country that wishes to place additional restrictions on imports that may contain invasive alien species.

Major Gaps, Overlaps, Conflicts:

International trade and associated transport pathways are major vectors for the spread of alien species, and so measures to control their introduction have implications for the multilateral trading system. The WTO, primarily through the Agreement on the Application of Sanitary and Phytosanitary Measures (ASPM), sets out binding rules and recognizes sources of international standards that should, where available, be followed in national measures. These standards are largely focussed on animal, plant and human life and health/food safety, and do not specifically take into consideration threats to ecosystem function. If a state wishes to establish a higher level of protection (or if no relevant international standard exists), the State must justify why their measure should be allowed to inhibit international trade, through a scientifically based risk assessment.

Major Gaps, Overlaps, Conflicts:

This issue is addressed well by the CBD, yet is potentially undermined by provisions contained within the WTO, which places the burden-of-proof on the country that wishes to place additional restrictions on imports that may contain invasive alien species. The WTO provisions are more strongly

expertise-sharing with regards to forest fire prevention and management strategies could also be extended to include non-tropical areas that lack capacity. Elements of the CBD's programme of work on forest biodiversity also cover this topic in more general terms, as does the WHC (in the event that a WHC site is threatened by fire); all of these are relevant to the UNFCCC and its provisions addressing land use, land use change and forestry.

Impacts of Pollution

This criterion covers provisions addressing the impacts that air and water pollution have on forests, as well as those concerned with the effects of climate change.

The CBD contains few directory or advisory decisions relating to the impacts of pollution on forest health. The Strategic Plan and the 2010 Biodiversity Target does includes provisions for addressing "major threats to biodiversity", which includes pollution (COP6, Decision 26). A subsequent decision and associated annex provides a framework for related goals and targets; Goal 7 addressing challenges to biodiversity from pollution, and Target 7.2 being to reduce pollution and its impacts on biodiversity. The Forest Biodiversity POW addresses mitigating the impacts of pollution (namely acidification and eutrophication) through Programme 1, Goal 1, Objective 2 (CBD/COP7, Decision 30).

WHC does not contain any provisions related to this criterion within the original document, but the Operational Guidelines do acknowledge pollution as a threat to natural heritage sites. Ramsar requires that parties "arrange to be informed" if the ecological character of any wetland in its territory and included in the List has changed, including due to pollution. (Ramsar, Article 3).

Major Gaps, Overlaps, Conflicts:

Although mentioned in CBD's voluntary Strategic Plan, this criterion is not addressed in binding terms by any of the instruments reviewed here. It should be mentioned, however, that this issue is addressed by the Geneva Convention on Long Range Transboundary Air Pollution (CLRTAP). CLRTAP, mostly applicable in Europe, receives scientific advice from an International Co-operative Programme on Assessment and Monitoring of Air Pollution Effects on Forests, and uses this information to develop legally binding protocols on international air pollution abatement policies (UNECE 2005).

Impacts Of Climate Change

The CBD Strategic Plan and the 2010 Biodiversity Target includes provisions for addressing "major threats to biodiversity", including climate change (COP6, Decision 26). A subsequent decision and associated annex provides a framework for related goals and targets; Goal 7 addressing challenges to biodiversity from climate change. A non-binding objective within the FBDPOW specifically addresses the mitigation of the negative impacts of climate change on forest biodiversity (Decision IV/22, Annex, Programme Element I, Goal 2, Objective 3).

The UNFCCC definition of "adverse effects of climate change" includes consideration of the decreased resilience of natural systems (UNFCCC, Article 1). One of the main stated objectives of the UNFCCC is to stabilize greenhouse gas concentrations within "a time-frame sufficient to allow ecosystems to adapt naturally to climate change...". However, it looks very unlikely that this will be accomplished given the current rate of progress towards meeting emissions reduction commitments. UNFCCC requires that parties cooperate in preparing for adaptation to impacts of climate change, and specifically mentions that this may require the rehabilitation of areas affected by drought and desertification (UNFCCC, Article 4c).

Ramsar encourages Parties to "recognize fully" the role that mangrove ecosystems can play in mitigating climate change and sea-level rise, especially in low-lying areas and Small Island and Developing States (SIDS). In this regard, it encourages them to plan their management, including required adaptation measures, so as to ensure that the mangrove ecosystems may respond to impacts caused by climate change and sea-level rise. However, this is merely an advisory clause rather than a directory requirement.

The WHC has recently established a working group that view the effect climate change on World Heritage properties, and has requested State parties implement a strategy to protect WHC sites

8(L) requires parties to regulate or manage “relevant processes and categories of activities” that are known to pose a significant adverse effect on biodiversity (according to Article 7). Also, the Global Taxonomy Initiative does include goals related to increasing taxonomic information regarding pests and

Major Gaps, Overlaps, Conflicts:

The relationship between the Cartagena Biosafety Protocol and the WTO's trade-related provisions is complicated and remains politically contentious, poorly defined, and yet to be tested. The basic conflict lies in the placement of the burden-of-proof; while the CBP requires that LMO proponents prove that the LMO in question does not pose harm (prior to transboundary movement), the WTO requires opponents to justify the imposition of trade restrictions by proving that harm will occur. With regards to forests, the

Table 11 SFM 3 - Forest Health: Summary of Gaps, Overlaps, and Conflicts in Global Legally Binding Instruments

Alien species	Mostly covered by the CBD, although language is largely advisory. May
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point to assess the area and percentage of the forest affected by “processes or agents”, including insects, disease, exotic species, and fire (Criterion 3, Indicator (a)). Additional threats considered include flooding, salinisation and domestic animals.

Forest degradation is considered in terms of the amount of forest suffering from diminished biological components, ecological components and continuity (with mention of “functionally important species” such as fungi, arboreal epiphytes, and insects). This speaks to the gap associated with giving consideration to the less visible, yet vital, forest inhabitants.

In addition to considering the “usual suspects” of air pollutants associated with acid deposition, the Montreal Process also looks at ultraviolet B radiation (Criterion 3, Indicator (b)), and the amount of forest experiencing high levels of toxicity (Criterion 4, Indicator 4 (h)). However, the impacts of climate change are not considered here.

Risks associated with biotechnology are not mentioned, although it does assess “the extension and use of new and improved technologies” (Criterion 6, Indicator 6.3 (c)).

Europe

The Ministerial Conference on the Protection of Forests in Europe (MCPFE) has adopted a number of resolutions concerning forest health. Pollution is central to the very first resolution (Strasbourg Resolution 1), which includes a call for the evaluation of factors that affect the functioning of forest ecosystems and timber production, including air pollution, stress, climatic fluctuations, storms, fire, human interventions (Principle 2.2).

The Pan-European Criteria and Indicators for Sustainable Forest Management includes many of the same indicators that the Montreal Process C&I do regarding forest health, but goes on to examine the relevant legal and institutional framework as well as its enforcement. With regards to pollution, it requires that permanent plots are established to determine changes in depositions and soil acidification (Indicators 2.1, 2.8), and contains specific guidance on using defoliation classification systems (Indicator 2.2). It also considers damage incurred through grazing, but includes that of game as well as domestic animals. It also addresses damage to forest health caused specifically by forest operations, something which receives little consideration elsewhere (Indicator 2.8).

reference to the “range of historic variation”, acknowledging that these elements form natural components of a healthy forest ecosystem. Many of the C&I processes (including the ATO/ITTO C&I) include provisions to reduce or eliminate the use of pesticides. The ATO/ ITTO C&I takes the strongest stance with regards to “risks associated with biotechnology” by banning the use of GMOs.

Non-governmental Approaches⁴²

Many of the **Forest Stewardship Council (FSC)** Principles and Criteria (P&C) contain provisions relevant to forest health. Central to this is the requirement that ecological functions be maintained, enhanced, or restored (Criterion 6.3). FSC also requires that operations avoid or minimize damaging other forest resources during harvesting and road construction (Criteria 5.3, 6.5), and that chemical use is minimized. Although the use of exotic species is allowed, they are to be carefully controlled and actively monitored (Criterion 6.9). The use of genetically modified organisms is prohibited. These international standards are developed regionally into much greater detail in order to suit the local context.

Major Gaps, Overlaps, Conflicts:

FSC standards go a long way in addressing gaps related to the maintenance of ecological function and prevention of forest degradation during harvesting and road building. They also restrict the use of forest chemicals, and favour their elimination. As is the case with the ATO/ ITTO C&I, FSC addresses “risks associated with biotechnology” by prohibiting the use of genetically modified organisms.

⁴² As discussed in the methodology section of this report, this report's thematic chapters compare approaches to substantive themes of sustainable forestry. The FSC is the only forest certification system that has developed global standards addressing substantive issues and hence is the only system with decisions amenable to analysis in this chapter.

The CBD does not have any legally binding provisions regarding accounting for productive functions of forests; however, it has undertaken considerable efforts to encourage the accounting of non-timber values in forest management. The CBD has encouraged parties to revise national-level policy to incorporate market and non-market accounts of the value of biodiversity (COP-3, dec. 18; COP-4, dec. 10) and specifically, via the FBDPOW, to incorporate forest biological diversity and other forest values into national accounting systems (COP-6, dec. 22, ele. 2, goal 2, obj. 1, act. (c)). The conference of the parties has adopted the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity, which encourage, amongst other things, the revision of international-level and national-level policies and strategies regarding accounting for biodiversity to incorporate current and potential values, as well as the intrinsic and non-economic values of biodiversity (COP-7, dec. 12, annex).

The UNFCCC and the Kyoto Protocol effectively alter international accounting of the productive functions of forests by valuing forest-related carbon stocks and sinks. Rules for the precise accounting of the forest-related contributions to climate change mitigation remain unsettled (Rosenbaum, Schoene, and Mekouar 2004) (9-14).

The UNCCD requires parties to be guided by, amongst other things, “a better understanding of the nature and value of land...” in the exercise of its obligations under the Convention (art. 3(c)) and it calls upon parties to adopt “green accounting” to assist in this regard (COP-6/II, annex VI, paras. 22(c) and 23(e)).

The WHC imposes a duty on parties to, amongst others things, identify natural heritage of “outstanding universal value” (arts. 1-4). Effectively, this requires parties in their national-level accounting of forests to acknowledge the intrinsic value of forested areas that are candidates for WHC designation. This indirect accounting measure, while directory in nature, is not sufficiently linked to the

forests to be considered a contributor to the criterion.

Convention does not have a directory requirement regarding accounting for forest-related functions; however, the conference of the parties to the Ramsar Convention has encouraged parties to take into account the cultural value of wetlands, which would include forested areas in national-level policies and strategies (COP-8, res. 19). Additionally, the Ramsar Convention (COP-8) has set as an operational objective the establishment of national-level accounting and valuation policies for implementation of the Convention (COP-8, res. 25,

Conflicts:

based on national-level reporting expectations arising from legally binding, accounting provisions (UNFF 2004c: 7). for in legally binding, forest-related global accounting provisions. er values.

Summary of Gaps, Overlaps, and Conflicts in

that address the management of forests for timber and non-timber forest products. The ITTA provides voluntary guidance on forest management, and the CBD provides guidance on the “biodiversity use” and tourism. Non-timber forest products are well covered.

Accounting

Major Gaps, Overlaps, Conflicts:

The IPF, IFF and UNFF all address the issues of forest productivity and have encouraged a broader accounting of forest-related values in decision-making for sustainable forest management.

Africa

The South American Development Council (SADC) Forestry Protocol addresses forest productivity by supporting the development of legal frameworks for forest planning and encouraging the maintenance of the "existing species composition of natural forests" (art. 11(d)). Particular emphasis is also placed on managing forests for local community benefit (art. 12).

The SADC Forestry Protocol requires parties to employ criteria and indicators to evaluate the productive functions of forests (art. 4(d)). Additionally, the Protocol requires the inclusion of a range of non-timber forest-related values in national forest assessments (art. 9(1)(c)).

The ITTO and ATO Criteria and Indicators address the sustainable production of both timber (crit. 2.3) and non-timber (crit. 2.5), as well as silvicultural practices (crit. 2.4) through a relatively detailed set of Indicators and Sub-indicators. This includes the measurement of timber production, as well as a limited number of accounting measures of non-timber forest products. Provisions are included to both identify the non-timber forest resources currently being used (ind. 2.5.1.1) and note their distribution (ind. 2.5.2.1).

International Tropical Timber Organization C&I

This theme is addressed directly within Criterion 4, Forest Production, and includes provisions for resource assessment, planning and control procedures, and silvicultural and harvesting guidelines. This includes a detailed checklist approach to assessing species composition, consideration of non-wood forest products and fuelwood, by both forest area and harvesting levels.

Major Gaps, Overlaps, Conflicts:

Those legal and non-legal instruments in Europe, Central America and Africa that are specifically focused on forests all include provisions aimed at sustaining forest economic productivity. In contrast to the ITTA, these regional forest instruments place a stronger emphasis on non-timber values. The CAFC is unique in its emphasis on forest management for subsistence purposes.

Some regional instruments, such as the Central American Forest Convention, include directives calling for the accounting of the productive functions of forests. The C&I processes in general encourage the accounting of productive forest functions. However, as the first overview report of the Montreal Process C&I illustrates, there are capacity gaps in regional reporting efforts (MPCI 2003: 20).

Thematic Element V: Protective Functions of Forest Resources

Criteria

In addition to housing vast amounts of species, forests perform a wide variety of protective functions. These range from the prevention of soil erosion and the maintenance of slope stability, to capturing carbon and regulating the earth's climate. Many of these functions have been referred to as "ecosystem services", and are often associated with positive externalities not always taken into account in decision-making. This is reflected in a general lack of recognition of these protective functions by the legally binding agreements.

While there exists a degree of uncertainty regarding the exact amount of carbon dioxide contained and absorbed by forests, there is no doubt that they play an essential role in regulating this greenhouse gas and the world's climate, and that this function may be threatened by rising temperatures and the increased frequency of fire and the outbreak of forest pests and diseases. Forests also provide a protective function with regards to the local micro-climate, as their canopies provide shade and trap water vapour.

The world's soils are currently at risk due to a range of anthropocentric causes, such as agricultural activities (excessive use of fertili

CITES objectives also hold similar promise; while normally associated with the protection of individual species, the CITES preamble recognizes that these are part of (and dependant upon) "natural systems of the earth which must be protected" (CITES).

Ramsar objectives specifically consider "the fundamental ecological functions of wetlands as regulators of water regimes", and mangrove forests fall squarely within this classification. Several related provisions address their protective role within this ecosystem type.

ITTA, 1994 objectives include the goal of "increasing the capacity to conserve and enhance other forest values in timber producing tropical forests" (ITTA, 1994). "Other forest values" could be interpreted to include forest protective functions. ITTA, 2006 gives greater consideration to environmental services, as one of the multiple benefits of forests, and states that one of the agreement's objectives is to promote better understanding regarding their contribution to sustainable forest management (ITTA, 2006 Preamble and Article 1).

The WTO objectives (as expressed in the preamble of the Marrakesh Agreement) include a strong focus on global economic growth, calling for raising standards of living, steadily growing real income and effective demand, and other goals that may lead to an increase in the consumption of forest products. There is an inherent tension between these socio-economic goals and global forest protection. Global economic growth poses a threat to forest health to the extent that ecological services and protective functions provided by forests do not receive adequate protection and/or their value is not recognized in the marketplace. The WTO also states goals of optimizing the use of the world's resources and seeking to protect and preserve the environment. To the extent these latter goals are also pursued, the WTO could support forests and their protective functions.

Major Gaps, Overlaps, Conflicts:

Overall, aside from their ability to sequester carbon, there is very little explicit recognition of the protective functions of forests within the legally binding agreements reviewed here. There is a paucity of binding requirements with regards to maintaining forest or vegetation cover so as to protect the hydrological cycle and water resources, aside from wetlands covered under Ramsar (and this mostly concerns the provision of habitat for migratory birds). There is very little explicit recognition of the role that forests can play in regulating microclimates, protecting soil, and warding off desertification. The UNCCD does contain region-specific appendices that do address the role that forest can play in combating desertification. There is little to no recognition of the "ecosystem service" of pollution absorption and maintenance of air and water quality.

With regards to the role that forest play within the carbon cycle and climate regulation, this is addressed by the UNFCCC; the specific details of how forestry activities will be considered by the Kyoto Protocol, CDM and LULUCF guidelines is still in the process of development. Needless to say, some of the main GHG emitters have not signed the Kyoto Protocol. However, almost all nations are party to the UNFCCC, which itself holds some commitments with regards to reducing emissions and increasing removals by sinks such as forests. Some concerns have been expressed that the lack of institutional capacity to certify carbon-sequestration may prevent some countries from participating in this industry, favoring only a few select Southern countries (Stuart and Costa 1998).

Carbon cycle and Climate change

This criterion reviews provisions pertaining to the role that forests play within the global carbon cycle. It has direct relevance and overlap with most of the SFM themes, most notably that of "Extent of Forest Cover", and provisions regarding afforestation, deforestation, and reforestation have been addressed under Thematic Area 1.

The UNFCCC is obviously the most relevant instrument to this criterion, with forests playing a crucial role in attaining the Convention's ultimate objective of stabilizing atmospheric greenhouse gas concentrations within a timeframe that will allow ecosystems to adapt naturally to this change. However, aside from CITES, WHC and the WTO, all of the other instruments examined also contain provisions regarding climate change.

UNFCCC Parties acknowledge their "common but differentiated responsibilities" in reducing GHG emissions and increasing removals of atmospheric carbon by carbon-absorbing sinks such as forests, peatlands and soils. They also make commitments to promote the development and transfer of technology to relevant sectors, including forestry, in order to promote the sustainable management of these carbon sinks and reservoirs (Article 4).

Kyoto falls short of a "full carbon accounting" approach that would take into consideration all exchanges of carbon between terrestrial and atmospheric realms. Instead, it focuses solely on areas

subject to “direct human-induced” activities since 1990 (Article 3.3), or “human-induced activities” (Article 3.4), leaving out net carbon flows that would have occurred regardless of human intervention (IPCC 2000). The definitions of what constitutes a “forest”, “afforestation”, “reforestation,” and “deforestation” are all crucial in determining what land Annex I countries are able to include under Article 3.3, with direct implications for calculating the changes in carbon stocks (see Theme 1 for discussion of afforestation, reforestation, deforestation and the Kyoto Protocol).

The Kyoto Protocol to the UNFCCC establishes commitments for countries listed in Annex I to reduce their net emissions and provides more specific guidance regarding the use of sinks to meet these commitments. This guidance includes transferring sink credits to, or acquiring credits from other Annex 1 parties, under condition that the resulting benefits would be additional to those that would have

Desertification

The CBD contains numerous provisions related to the conservation and sustainable use of biodiversity in dry and sub-humid lands, as well as

Despite the high degree of awareness regarding the problem of global soil degradation, until recently there has been little discussion of what role existing or new international environmental law could or should play with regards to soil degradation.

The CBD is of particular relevance to soil conservation, as all provisions related to conserving biodiversity or sustainably using biological resources will have repercussions for this ecological element; although not mentioned explicitly, "soil" falls squarely within the two key definitions of "biological diversity" and "biological resources"⁴⁴.

The UNFCCC acknowledges that soil is an important carbon sink, and that conversion of forests to other land uses, such as agriculture, will release this carbon. Although the original ITTO agreement does not specifically mention soil, it encourage members to support and develop industrial tropical timber reforestation and forest management activities as well as the rehabilitation of degraded forest land (Hannam and Boer 2002).

The UNCCD encourages the development of National Action Plans and scientific and technical cooperation that are able to address many of the causes of soil degradation. At its 3rd COP, the UNCCD decided that the priority issue to be addressed at the 4th session of the Committee on Science and Technology would be the application of traditional knowledge, benchmarks and indicators and early warning systems for the monitoring and assessment of sustainable soil and water management in dryland areas for effective implementation of the national action programmes.

CITES, although primarily concerned with protection of species, has recently issued a resolution that Parties should avoid or minimize adverse impacts on ecosystem services, structure and functions as well as other components of ecosystems in their sustainable use management goals and practices (COP13, Resolution 2, Practical Principle 5), presumably this would include soil.

Major Gaps, Overlaps, Conflicts:

The protection of soil remains a significant gap within multilateral environmental agreements. The CBD, despite recognizing the importance of soils, does not include specific binding provisions for its protection (although its many provisions related to maintaining biodiversity in general may provide for this). Similarly, UNCCD requirements for soil protection are written in discretionary language, and the UNFCCC focuses primarily on their carbon-storing capacities.

Water

This criterion encapsulates provisions that address the protective function of forests in regulating water, both in quality (e.g. filtration, siltation) and quantity (e.g. flood control, forest soil moisture content).

CBD adopted "inland waters" as a thematic area at COP-4, and much of the work that has been done on this topic is of direct relevance to forests. Most recently, an expanded POW on Inland Water Biological Diversity was adopted at CBD-COP7; much of this is relevant to the discussion of forests, and recognizes the ecological interconnectedness of aquatic and terrestrial biomes. Although it is purely advisory in nature, the POW does include watershed management goals that make reference to using forests and wetlands to recharge groundwater stocks, maintain the hydrological cycle, protect water supplies and prevent flood damage. The CBD Secretariat (in conjunction with Ramsar) is developing a proposal for consideration by COP8, on streamlining national reporting on inland water ecosystems, taking into account the work of the UNFF's Task Force on Streamlining Forest-related Reporting. The CBD POW on arid and sub-arid lands mentions water management strategies, but does not explicitly acknowledge that forests could play a role here.

The UNFCCC includes obligations that parties cooperate in adopting measures aimed at adapting to the impacts of climate change, with specific reference to integrated plans for water resources and for the protection and rehabilitation of areas particularly in Africa, that are affected by drought and desertification, as well as floods. Although forests are not mentioned explicitly here, they would clearly

⁴⁴ "Biological diversity" is defined as "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems". "Biological resources" includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity (CBD Article 2).

be able to play a critical role in providing these "protective" functions. On the other hand, there are provisions within the UNFCCC and the Kyoto Protocol that may lead to y lean thesw[

Table 13 SFM 5 – Protective Functions Forest: Summary of Gaps, Overlaps, and Conflicts in Global Legally Binding Instruments

Carbon cycle/ climate change	Primarily addressed through UNFCCC, Kyoto Protocol and the LULUCF guidance document; emphasis on forests as carbon sinks may (but will not necessarily) conflict with CBD and conservation of biodiversity and obtaining multiple benefits.
Desertification	Covered mostly by UNCCD, with some overlap with CBD and to a lesser extent, UNFCCC.
Soil	A gap, in terms of specific or directory provisions, although CBD's many provisions seeking to protect biodiversity and biological resources may provide an umbrella under which this criterion is protected. Overlap with UNCCD (addressing

variation in relation to this, suggesting that a “baseline” has been determined to which present-day conditions can be compared. However, there is no direction as to when in “history” this baseline should be anchored.

The contribution of forests to the carbon cycle is given a high profile under its own Criterion; many of the instruments have highlighted this function in an attempt to capture some of the political momentum behind the issue of climate change. The indicators call for the measurement of total forest ecosystem biomass and carbon pool, including a breakdown by forest type, age class, successional stage “as appropriate” and the contribution of forest ecosystems to the net carbon budget (Criterion 5, Indicators (a), (b)). Notably, the C&I specifically mentions the contribution of forest products to the global carbon budget (Criterion 5, Indicators (a)-(c)), presumably to highlight the role that this should play with regards to climate change commitments, even though it is unclear whether forest products will count as “sinks” under Kyoto. There is also general consideration of “non-consumptive-use forest values” under Criterion 6.4 (b) that could encapsulate many of these protective functions and ecological services.

Europe

Ministerial Conference on the Protection of Forests in Europe (MCPFE) considers “Protected and Protective Forests” together, under the same heading (Resolution V4, Annex 2), and forests require explicit designation as such, and long term commitment (>20 years), in order to be officially recognized by the MCPFE. Forests are divided into three “Classes”, one of which is “Protective Functions”; these are forests where management is directed at protecting soil, water quality (or quantity), forest ecosystem functions, as well as infrastructure (not considered in other instruments).

MCPFE member states have committed to mitigating climate change according to the UNFCCC, and to research the links between climate change and forest ecosystems, including feedback processes (Resolution H4, Part 1). They have also passed a resolution to increase the use of wood and other

percentage of the forest that is flooded (Indicator 5.3). However, in both cases this concept remains poorly defined.

Central America

The Lepatrique Process contains several indicators relevant to the protective functions of forest; National Criterion 4 looks expressly at the contribution of forest ecosystems to environmental services, with special regard to watershed management. A similar indicator is present at the regional level (Regional Indicator 2.13). The Lepatrique Process also considers the role of forests in the carbon cycle, and requires reporting on the aggregate value of carbon fixation (Regional Indicators 2.6, 4.5, National Indicators 4.6, 8.6).

Major Gaps, Overlaps, Conflicts:

The regional instruments go a long way to addressing the gaps identified in the legally binding instruments with regards to the protective functions of forests, particularly in terms of soil and water protection. The Pan European Operational Guidelines require that forests providing protective functions be explicitly designated as such on relevant maps, and that machines not be permitted on sensitive soils. ASEAN is the only agreement or process to acknowledge the pollution mitigation capacity of forests.

Although it is a small component of the Central American Convention, the call for environmental parameters to be incorporated into estimations of economic growth (accounting for the value and depreciation of forest resources and soils) is a meaningful step towards acknowledging the value of natural systems and their ecological services.

The C&I processes examined here are primarily concerned with the measurement of variables associated with protective functions, and do not contain specific requirements that must be met. They do, however, contain some interesting ideas, such as using the historic range of water flow as a baseline with which to compare current levels (Tarapoto and Montreal Processes), and explicit recognition of soil carbon storage (ITTO C&I).

Non-governmental Approaches⁴⁶

The **Forest Stewardship Council** (FSC) Principles and Criteria (P&C) contain several provisions that address the protective functions of forests, mostly in terms of water resources. They require that forest management operations recognize, maintain, and/or enhance the value of forest services and resources, mentioning watersheds specifically (Criterion 5.5). Furthermore, guidelines for erosion control and the protection of water resources must be prepared and implemented (Criterion 6.5). FSC also contains detailed monitoring requirements regarding all aspects of forest management (Principle 8), and in addition, is audited by a third-party certifying body accredited by FSC.

Major Gaps, Overlaps, Conflicts:

FSC's requirements address many of the same gaps that the regional processes and agreements do, particularly with regards to the protection of water, soil and ecological functions.

⁴⁶ As discussed in the methodology section of this report, this report's thematic chapters compare approaches to substantive themes of sustainable forestry. The FSC is the only forest certification system that has developed

their own socio-economic priorities through Action Programmes, with active participation of diverse interests from the national to the local level.

CITES includes very few decisions addressing issu

Economic development

This criterion covers decisions relating to economic development in general, including the issue of the economic viability of forest management operations, forest products trade and forest-related employment. Decisions relating specifically to local economic development are discussed under the following section of “local benefit”, reflecting a common distinction made in sustainable forest management Criteria and Indicator processes (Holvoet and Muys 2004).

The CBD makes little mention of the economic viability of natural resource management. In regards to trade, the CBD’s “Addis Ababa Principles of Sustainable Use” call for the removal of trade distortions and perverse incentives and state that international and national policies should take into account “markets and market forces affecting values and use”(COP 7, Decision 12, Annex II).

Similarly, the UNCCD convention text states that “Parties shall...give due attention, within the relevant international and regional bodies, to the situation of affected developing country Parties with regard to international trade, marketing and debt with a view to establishing an enabling international economic environment conducive to sustainable development”. Both the CBD and UNCCD statements leave ample room for interpretation.

The ITTA is the only agreement discussed which directly addresses the issue of the economic viability of natural resource management and production. Broadly speaking, economic objectives listed in Article 1 of the 1994 ITTA are to promote, expand

forest certification is a non-legal, market-based instrument and hence does not involve trade discrimination on the part of WTO member governments.

Major Gaps, Overlaps, Conflicts:

The ITTA is the only agreement that focuses on the economic viability of natural resource management. The ITTA addresses economic viability primarily through information-sharing and project-specific support. Since the ITTA only covers forest management in tropical regions, however, there is a gap in addressing worldwide normative standards for commercial wood products trade. This gap is all the more notable if one considers that economic development remains a major challenge in many temperate and boreal forests.

The ITTO has provided support to the development of forest certification and other source verification initiatives. There is uncertainty under WTO rules whether or not source verification initiatives could be considered a barrier to trade.

Local benefit

The criterion of "local benefit" is here defined as the sharing of benefits derived from forest management with populations and workers living in and/or near the forest and dependent on the forest resource. This criterion is a common element of Criteria and Indicator processes worldwide (Holvoet and Muys 2004).

The central decision of the CBD with respect to local benefit, is Article 8(j) of the original convention. Article 8(j) states that,

"Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices."
(Article 8(j), CBD)

Over the CBD's evolution, with the guidance of the ad hoc group on traditional knowledge, the Convention has further elaborated upon Article 8(j) to encompass a broader agenda, albeit with advisory rather than directory text. Recent CBD guidance documents include text on resource rights, traditional knowledge and use and local participation. The CBD's emphasis remains, however, on protecting "traditional", and generally non-industrial natural resource uses of genetic resources.

The UNCCD places strong emphasis on local economic development, including the development of "alternative livelihoods". This emphasis is embodied in Article 10 of the convention, which specifies that local development needs must be addressed within country party National Action Programmes. The Programmes themselves, as already mentioned, are to be developed in a participatory manner, with

Major Gaps, Overlaps, Conflicts:

There is debatably an inherent tension between global market development and local benefit capture. None of the instruments have focused attention on addressing conflicts between priorities. Instead, the two priorities are established side by side, with trade instruments emphasizing global markets and the CBD and Ramsar stressing local benefit.

Decisions relating to local benefit emphasize traditional uses; little attention is paid to local employment in industrial activities, such as industrial wood production. Given that many rural communities depend on both wage labor (including migratory labor) and traditional livelihoods there is need for better communication and integration between these two economic venues.

There are few decisions that address the management of forests for subsistence needs, including fuelwood. Given that fuelwood accounts for the majority of wood product consumption in a large number of developing countries, this constitutes a major gap among the instruments.

Another major gap, is a lack of attention to worker rights and benefits. While the International Labour Organization carries responsibilities in this regard, sustainable natural resource managep81 (ps, Overlyopm)6.2(e)de Whan. C

There are potential conflicts between CBD efforts at promoting local benefit sharing from genetic resources and TRIPs definitions of intellectual property rights. WTO interpretations of intellectual property rights support the protection of technological innovation for the purposes of genetic manipulation. Traditional knowledge about “naturally” occurring phenomena generally has not been subject to patent or other kinds of protection (CBD 1996a).

Other resource rights issues—such as the definition and distribution of broader forest and land tenure rights-- have received relatively little coverage. Unresolved and/or conflicting forest tenure and land use policies are central obstacles to sustainable forest management worldwide, serving as central drivers of deforestation, forest degradation and rural poverty (Geist and Lambin 2002; Humphreys forthcoming; Hyde, Amacher, and Magrath 1996; Kummer and Turner 1994; Roper and Roberts 1999; Walker 2004; etc.).

Traditional knowledge and use

The CBD, UNCCD, and to a lesser extent the Ramsar Convention, include numerous decisions relating to traditional knowledge and use. Both the CBD and UNCCD frequently reiterate the need for respect of traditional knowledge and its equal status with scientific and technical knowledge and know-how. Both have established ad hoc groups addressing these issues.

Within the CBD, the topic of traditional knowledge and use is often raised in tandem with resource rights issues, and is addressed in the Biodiversity Strategy, Bonn Guidelines, Addis Ababa Principles, and various Programmes of Action. In addition COP 7 in 2004 produced the “Akwé: Kon Voluntary Guidelines on Impact Assessments Affecting Traditional Knowledge”, with a stated purpose to “take into account traditional knowledge, innovations and practices of indigenous and local communities as part of environmental, social and cultural impact-assessment processes, with due regard to the ownership of

attendance by non-governmental organizations at its global meetings, nor has it given direction to Parties to incorporate public participation into the development of trade policies at the national level.

The CBD, the UNCCD and the Ramsar Conventions have addressed this Criterion in unique and complementary ways. The CBD and Ramsar Conventions have collaborated on guidance documents for public participation. The UNCCD has focused on the structural incorporation of participation in the Convention itself as well as in National Programme commitments.

Questions remain regarding the degree to which Conventions have implemented their generalized commitments to public participation. The UNCCD, in particular, has articulated the highest level of commitment for public involvement yet to date has suffered from a serious lack of funding.

Non-consumptive/recreational use

This criterion encompasses non-consumptive and recreational uses of forests other than traditional uses and practices central to cultural survival.

The CBD and Ramsar are the only global LBIs assessed that directly address the issue of tourism and its local impacts. The CBD COP 7 in 2004 adopted a detailed set of "Guidelines on Biodiversity and Tourism" (Decision VII/14, page 231; Annex, page 232). The three "main elements" of the CBD's guidelines are guidance on the preparation of a management framework, a notification process regarding management, and public education, capacity-building and awareness raising on tourism and biodiversity (Ibid, page 233).

The Ramsar principle of wise use includes tourism and recreation in its original convention text, and the principle has been further elaborated in the later wise use guidance documents listed above under the criterion "local benefit".

Table 14 Summary of Gaps, Overlaps, and

Non Legally Binding Global Forest Instruments

The IFF/IPF Proposals for Action (PfA) address some of the gaps in socio-economic coverage in the legally binding instruments summarized above. Key socio-economic criteria covered by the PfA include global economic development, global equity, resource rights, traditional knowledge and use, and public participation.

In terms of issue-specific direction, global economic development is covered in two different ways within the PfAs. One is through the promotion of global trade, and the other is through addressing the impacts of such trade. The former issue is highlighted under "Trade and Environment in Relation to Forest Products and Services" (IPF PfA, Element IV). This Element promotes the removal of trade

Major gaps, overlaps, conflicts:

The IPF/IFF Proposals for Action provide guidance that, if followed, could go a long ways in addressing gaps in regards to the directory decisions of legally binding global instruments.⁴⁷ For example, the PfA address resource rights issues beyond the particular concern of intellectual property rights covered by the CBD and WTA. They also address the environmental and social impacts of global trade, thereby linking global and local development efforts in a way not covered by directory language in the legal instruments. Furthermore, the IPF/IFF PfA support the development of National Forest Programmes (NFPs). The NFPs were conceptualized in the IPF/IFF PfA as tools for integrating both national and global prioritizes into cohesive and holistic strategies for SFM. The NFPs could potentially contribute to a holistic approach to addressing the socio-economic functions of forests in those countries with the political will and capacity to develop effective forest strategies.

Regional and C&I Approaches

There is tremendous variability in socio-economic conditions worldwide. Regional approaches therefore provide an important opportunity to tailor multi-lateral decisions to the social and economic challenges and priorities of a given world regions.

Non-European Temperate and Boreal Forests

The MCPFE national-level C&I address the issue of economic development in a manner similar to the Montreal C&I. The MCPFE standards call for reporting on the volume and value of both wood and non-wood product production, the contribution of the forest sector to the GDP, and forest expenditures. Perhaps reflecting the general complexity and fragmentation of forestlands in Europe, the MCPFE C&I also include an indicator addressing the “number of forest holdings, classified by ownership categories and size classes.”

The MCPFE's national C&I do not include any indicators addressing “local” or rural economic development. They do, however, contain two indicators aimed at workers' issues. These are Indicator 6.5 “Forest sector workforce: Number of persons employed an labour input in the forest sector, classified by gender and age group, education and job characteristics”, and Indicator 6.6. “Occupational safety and health: Frequency of occupational accidents and occupational diseases in forestry.” Both of these indicators address issue areas neglected in global legally binding forest-related instruments.

Public involvement is addressed as a “qualitative indicator” under Criterion 6 (B.10). Recreation is covered in the C&I, in the form of an indicator calling for the measurement of the area of forest open to the public for recreation and an assessment of the intensity of recreational use (6.10). Spiritual values are covered by recording the number of sites designated as having cultural or spiritual value (6.11).

The MCPFE Pan-European Operational-level Guidelines (PEOLG), in contrast to the national-level C&I, go beyond the reporting of information to address the issue of management priorities. In regards to balancing economic growth with local benefit, the operational guidelines state that “forest management planning should aim to respect the multiple functions of forests to society, have due regard to the role of forestry in rural development, and especially consider new opportunities for employment in connection with the socio-economic functions of forests.” There is, however, considerable room for discretion in the interpretation of this indicator. The PEOLG include one reference to traditional knowledge and use, stating that, “Traditional management systems that have created valuable ecosystems, such as coppice, on appropriate sites should be supported, where economically feasible (Sub-indicator 4.2.d).”

In addition to the national and operational-level C&I, two MCPFE Resolutions also address issues of economic development and local benefit. Lisbon Resolution 1, “People, Forests and Forestry—Enhancement of Socio-economic Aspects of Sustainable Forest Management”, emphasizes public participation (framed as an important component of public “education” on the importance of forestry), creating institutional and economic frameworks encouraging forest investment, inter-sectoral collaboration (including agriculture, tourism, environment, energy and industry), diversification of forest employment, gender aspects, and the promotion of sustainably produced wood products. Vienna Resolution 2, “Enhancing Economic Viability of Sustainable Forest Management in Europe”, lists priorities of improving institutional frameworks to “encourage investment in the forest sector”, “promote the use of wood from sustainably managed sources”, create enabling conditions for “market-based provision of a diversified range of non-wood goods and services”, disseminate knowledge, strengthen institutions concerned with workforce safety and education, promote inter-sectoral collaboration, and incorporate the economic viability of forest management into rural development policies.

Finally, the issues of resource rights, traditional knowledge and use, and non-consumptive and/or recreational uses are addressed to some degree in Vienna Resolution 3, “Preserving and Enhancing the Social and Cultural Dimensions of Sustainable Forest Management in Europe”. This resolution calls on Parties to “secure the property rights and land tenure arrangements of forest owners, local and indigenous communities”, preserve traditional elements of the cultural landscape, raise awareness of traditional knowledge and practices of sustainable forest management, and protect significant “historical and cultural objects”. The MCPFE national C&I include two indicators for reporting that could serve to inform progress towards the Vienna Resolution. These are Indicator 6.10 “Accessibility for recreation: Area of forest and other wooded land where public has a right of access for recreational purposes and indication of intensity of use” and Indicator 6.11 “Cultural and spiritual values: Number of sites within forest and other wooded land designated as having cultural or spiritual values.”

In sum, the MCPFE national C&I, like the Montreal Process C&I, make important contributions to forest reporting. The broader institutional mandate of the MCPFE however, has allowed that process to go beyond the scope of the Montreal Process and establish some general management priorities.

The Amazon

The 1978 Treaty for Amazonian Cooperation is another regional instrument with considerable potential for setting priorities on forest-related socio-economic issues. In this Treaty, countries of the Amazon commit to cooperation on a variety of socio-economic issues, including navigation, hydropower, health, socio-economic development, production for local trade and local consumption, transport and communication, ethnological and archeological sites, and tourism.

of the Lepaterique Process indicators leave considerable room for interpretation as to their purpose and means of measurement. Guidelines have since been developed to aid implementers in the interpretation of these C&I (FAO 2001b).

Southeast Asia

The ASEAN Agreement on the Conservation of Nature and Natural Resources endorses the concept of sustainable use. The focus of the Convention text, however, is exclusively on the achievement of environmental conservation and the control of human use to that end.

Africa

The South African Development Community (SADC) Protocol on Forestry includes as its chief objectives, "sustainable management...{and} trade of forest products throughout the region in order to alleviate poverty and generate economic opportunities for the peoples of the Region" (Article 3.1). This is to be achieved through "human resource" development (i.e. capacity-building), promoting trade and investment "including developing and agreeing on common standards for sustainable forest management and forest products", "harmonizing" approaches to sustainable forest management including legislation and law enforcement, "promoting respect for the rights of communities and facilitating their participation...with particular attention to the need to protect traditional forest-related knowledge and to develop adequate mechanisms to ensure the equitable sharing of forest benefits...without prejudice to property rights...promoting the intangible, cultural an

As is true of the other developing country C&I processes discussed in this section, the ATO C&I place strong emphasis on local benefits and resource rights. This includes particularly strong language prioritizing local rights and benefits. For example, Sub-indicator 4.1.1.4 states, “As much as possible, local populations have control over the forestry operations on their forest land and resources, unless they freely delegate this control to a third party.” Likewise Indicator 4.3.2 states that “Local communities living in or near the harvested forest area benefit preferentially from opportunities in employment,

Non-governmental Approaches⁴⁸

Principle 2 of the Forest Stewardship Council's international standard is similar to other C&I processes and certification systems in placing a strong emphasis on the establishment of clear tenure rights. The Principle goes further, however, in emphasizing "customary tenure and use rights", requiring that communities with such rights "maintain control" over protecting those rights "unless they delegate control with free and informed consent" (Criterion 2.2). Principle 3 on indigenous rights parallels this language, as well as the language of ILO Convention 169, including the requirement for "free and informed consent" of indigenous peoples' prior to conducting forest management on traditional lands (Criterion 3.1). Principle 4 echoes components common to developing country C&I by emphasizing the welfare of forest workers and local communities. Principle 5 recognized the importance of the economic viability of forest production and shares an emphasis on local benefit.

Major Gaps, Overlaps, Conflicts:

The FSC standards provide strong normative direction on some socio-economic issues. This includes directive language on indigenous rights, an emphasis on public participation, and the granting of priority to local level economic benefits.

⁴⁸ As discussed in the methodology section of this report, this report's thematic chapters compare approaches to substantive themes of sustainable forestry. The FSC is the only forest certification system that has developed

Thematic Element VII: Legal, Policy and Institutional Frameworks for Forests

When the United Nations Economic and Social Council established the United Nations Forum on Forests (res. 2000/35) it established as a primary but tentative objective the assessment of the prospects for an international arrangement on forests (IFF 2000: para. 3(c),(i)). Of fundamental importance to such an assessment is an analysis of the existing provisions of international forest-related instruments. While this study in its entirety addresses the content of such provisions, Thematic Element VII focuses on the overarching decision-making frameworks currently provided by existing global and regional instruments.

The structure of the international forest-related regime is composed of three inter-related and self-reinforcing frameworks: the legal framework, the policy framework, and, the institutional framework. The legal framework consists of the foundational legal commitments, which provide the skeleton of the regime.⁴⁹ The institutional framework arises out of, and supplements, the legal framework by providing the vehicles for implementation of international forest-related policy objectives. The policy framework fleshes out the content of, and supplements, the legal framework, typically via policy dialogues being carried out by the institutions of the international forest-related regime.

In addition to the internal legal, policy and institutional frameworks of the instruments in question, this chapter will also address the overarching structural issue of global finance, capacity and resource transfer between participating countries. Country parties vary considerably in the resources they have available to implement international agreements, and the effectiveness of such agreements rests in enabling all parties to meet their commitments.

In the discussion of Theme VII, each of the three frameworks - legal, policy and institutional – will

In the absence of an overarching global legal framework, the mandate and scope of the CBD provides the most comprehensive (if still incomplete) coverage of forest-related issues of the global legally binding instruments currently in existence. Having said that, the CBD actually imposes few binding obligations on parties (Khalastchi and Mackenzie 1999; Steiner 2002).

The CBD has an expansive objective to conserve and ensure the sustainable use of biological diversity and the equitable distribution of the benefits of the use of genetic resources (art. 1), which is broadly defined so as to encompass forest-related aspects. The CBD's principal mechanism for achieving these objectives is the requirement for parties at the national-level to regulate or manage in situ biological diversity, including developing national action plans for the conservation and sustainable use of biological diversity, integrating those plans into national-level decision-making, adopting incentive measures in pursuit of these objectives and implementing an environmental assessment process (arts. 6, 8(c), 10(a), 11 and 14).

Since its inception, the CBD has been clarifying its mandate to address forests. Indeed in 1996, at COP3, eventually inconclusive discussions were initiated regarding the CBD assuming, via a legally binding forest protocol (arts. 28-30 and 37), overall responsibility for the international forest legal framework (FAO 2003d: 46). In 1998, at COP-4, however, the CBD withdrew from this initiative and instead adopted a Work Programme for Forest Biological Diversity, which was subsequently expanded in 2002 at COP-6.

Perhaps the most significant recent development regarding the potential structure of a global forest framework was the coming into force of the Kyoto protocol to the UNFCCC in 2005. The Kyoto protocol is the UNFCCC's primary compliance mechanism. The protocol strives to facilitate the UNFCCC's objective of limiting atmospheric greenhouse gas emissions (UNF

In 2002, Ramsar Parties made incremental efforts to encourage the listing of forest-related wetlands - mangrove forests, peatland forests and other underrepresented forest-related wetland types (COP8, res 8.4 and 8.11) (FAO 2005b: 68).

The WHC requires Parties to the Convention to integrate the protection of natural and cultural heritage of outstanding universal value, which may include forests, into its national-level legal framework (arts. 2 and 5(d)). Similar to Ramsar, the WHC also has the potential to have a role in structuring the global legal framework for forests, specifically, national-level forest-related – “natural heritage” - protected areas. However, a gap analysis of the application of the Convention revealed that there are considerable gaps in the representation of global forest types by natural heritage protected areas (Thorsell and Sigarty 1997).

Again similarly to Ramsar, the specific protections afforded by the WHC apply only to forest-related protected areas that have been nominated to the Convention's jurisdiction by the party whose political boundaries encompass the nominated protected area (art. 4). WHC does, however, require that parties to the convention ensure that their national-level legal frameworks provide for conservation planning (arts. 5(d) and 29.1) (Downes 1999: 66-68; Sands 2003: 543-545).

The ITTA engages consumer and producer countries in the promotion of trade in sustainably produced tropical timber (art. 1; COPXXIX, dec. 2) (Sands 2003: 547-548). As such, it is the only global legally binding instrument exclusively focused on forests. Its scope is limited, however, to forests and forest products originating in the tropics. Furthermore, the ITTA's lack of compliance and enforcement measures have led some to question its effectiveness in addressing the acute problems of deforestation and forest degradation faced by many developing countries (Tarasofsky 1999b: 8).

The WTA establishes the WTO and sets as its objective the promotion of global trade liberalization by requiring national-level changes in trade policy. The WTA has two principal forest-related subsidiary instruments: General Agreement on Tariffs and Trade (GATT) and Agreement on Technical Barriers to Trade (ATBT). While there have been claims that the WTA regime “has many serious implications for forests” ((Chalifour 2000: 615) see also, (Downes 1999; Tarasofsky and Pfahl 2001)), assessments of the extent and significance of the role of the WTA and its subsidiary instruments in the legal framework of legally binding, global forest-related instruments remain controversial (Eckersley 2004; Gehring 2004; Neumayer 2004).

The principal basis for the contention that the WTA plays a significant role in the global legal, forest-related framework is the observation that the objectives of the WTA and its subsidiary instrument may conflict with existing and proposed trade-related measures of the global legal framework for forests (see (Gehring 2004: 282-284)). However, both GATT and ATBT provide exceptions for environmental management initiatives.

The GATT is the “central substantive” agreement of the WTA subsidiary instruments (Sands 2003: 948). The GATT requires parties to revise their national-level policies to remove discriminatory rules of trade and import/export quotas and bans (arts. I, III and XI) with an exception for, amongst other things, non-arbitrary and non-trade discriminating measures “relating to the conservation of exhaustible natural resources” (art. XX(g)).

The ATBT requires parties to avoid the use of national-level policy to protect domestic industry from competition and encourages parties to harmonize their trade policy with global standards (art. 2.4) (Sands 2003: 949). The principal influence of the ATBT on the legal framework of legally binding, global forest-related instruments is its potential to interfere with forest products certification and related green procurement initiatives (Downes 1999: 77-78). However, the ATBT, “explicitly recognizes that environmental protection could allow deviation from international standards” (Sands 2003: 950), leading some to argue that the ATBT offers a “clear green light” to forest products certification and green procurement (van Calster 2002: 303).

The WTA, in as much as trade liberalization is related to forests, plays a tangential role in the legal framework of legally binding global forest-related

Major Gaps, Overlaps, Conflicts:

The majority of legally binding, forest-related global instruments have discrete and isolated policy objectives and there remains a lack of an overarching legal framework for forests. This is despite the fact that a more comprehensive approach to international environmental issues has been broadly encouraged (Sands 2003: 616).

The lack of an overarching, legally binding framework has been cited as a factor in the continuing degradation of forests (Chambers 2004: 503; Crossen 2004: 474; Davenport 2005: 105; Goetzl, Flynn,

In the implementation of Ramsar, the secretariat has adopted a five-year strategic plan that calls upon Parties to the Convention to, amongst other things, develop national-level wetland policy regimes (recs. 1.5, 3.3, and 6.9) (Ramsar 2002) which, given the broad definition of “wetlands” (art. 1(1)), could

to provide support to lesser-developed countries, including financing, technology transfer and capacity building.

All three of the Rio Conventions include many resolutions to promote resource, knowledge and technology transfer. The original convention text of each of these agreements includes statements that poverty eradication and economic and social development are the first and overriding priorities of developing country Parties. In other words, national development must take precedence over the objectives of the Conventions themselves.

The Global Environmental Facility, first created in 1991, is a key financial instrument designed to aid Parties in meeting the objectives of global environmental conventions. The stated purpose of the Global Environmental Facility (GEF) is to provide support for “the protection of the global environment and promote thereby environmentally sound and sustainable economic development” (GEF 2004). The GEF currently serves as the financial mechanism for the UNFCCC, UNCCD and the CBD (for the interim).

The CBD addresses issues of global finance in its 2002 Strategic Plan and other guidance documents. COP 3 approved guidance measures to the GEF in its capacity as the CBD’s interim funding mechanism. This guidance includes a request to “provide financial resources to developing countries for country-driven activities and programmes, consistent with national priorities and objectives...” (CBD/COP3, Decision 5, para. 2). The CBD COP 7 in 2004 has also developed a specific program of work on technology transfer, outlining general goal

central issue by default, since the goal of the organization has been the promotion of trade in tropical timber, and the vast majority of tropical timber is produced in developing countries. Hence the ITTA could be viewed as de facto contributing to the more equitable distribution of forest benefits between developed and developing countries. The ITTA also includes specific objectives aimed at ensuring equitable implementation of the Agreement. These objectives, as stated in the 1994 Agreement, include to "g) develop and contribute to new mechanisms for the provision of new and additional financial resources and expertise to enhance the capacity of producing members to achieve the objectives of this Agreement; m) promote access to and transfer of technologies and technical cooperation to achieve the

Major gaps, overlaps, conflicts:

The IPF/IFF Proposals for Action provide a long and complex list of important legal, policy, and institutional issues. However, the PfA lack an institutional framework for implementation. The UNFF

A lack of resources and political commitment has hindered progress on the Lepaterique Criteria and Indicators.

The World Bank and other international agencies have explored the possibility of initiating a FLEG-like ministerial process in Central America (CPF 2006: 4).

Asia

The ASEAN Agreement on the Conservation of Nature and Natural Resources is a directory biodiversity conservation instrument for South East Asia, which has yet to come into force. The agreement proposes to impose a significant regional forest policy regime characterized by substantive management-prescriptions including an obligation to develop forest management plans (art. 6) (Sands 2003: 540-542).

The East Asia Forest Law Enforcement and Governance Initiative (East Asia FLEG), established in 2001, was the first ministerial process aimed expressly at addressing problems of illegal logging. East Asia FLEG is hosted by developed and developing country governments and the World Bank,

Africa

The SADC Forestry Protocol is a

Non-governmental Approaches⁵¹

Forest certification can be viewed as a form of private “governance” in its inclusion of institutionalized procedures for rule-making, civil so

have to enforce significant changes in forest practices. Forest certification also does not supplant the need for the adequate design and enforcement of government policies. For these reasons among others, uptake of forest certification has been modest, and has been concentrated in developed countries. Meanwhile certification standards for forest practice have varied considerably between regions and countries contributing to stakeholder controversy.

There is considerable realized and potential synergy between forest certification and other forestry institutions and processes. Forest certification has influenced international forestry norms and in some cases has been adopted into governmental law as well as inter-governmental processes. At the same time government use of certification as a regulatory tool for forest practices and trade may lead to conflicts with the WTO.

to address the particular challenges both political and substantive, and designed to complement each other (Glück, Rayner, and Cashore 2005).

More research and monitoring are needed to determine which approaches are working and under what conditions. This study was limited to the evaluation of documents supporting the instruments examined, and is unable to comment on their actual implementation. The report has shown, however, that in comparison with other forms of international law, most of these agreements are very weak in terms of commitments required and their ability to be enforced, as they are commonly expressed in highly discretionary language. This highlights the need for research on the implementation of the agreements and their on-the-ground consequences.

Forest Financing

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weakness of existing global forest governance institutions, due in part to increasing fragmentation, a lack of coordination, and inadequate financing.

Appendix B – List of Forest-related Instruments, Agreements and Processes Covered in Thematic Analyses

Global, Legally-binding Forest-related Instruments