FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

MARKET ACCESS OF FOREST GOODS AND SERVICES

A background paper for the Global Project: Impact Assessment of Forest Products Trade in Promotion of Sustainable Forest Management

GCP/INT/775/JPN

Antti Rytkönen

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FOREWORD

This background paper on market access issues is a partial contribution to the global project, Impact Assessment of Forest Products Trade in Promotion of Sustainable Forest Management.

The Forest Products and Economics Division (FOP) of FAO contracted the Consultants services for this study. The Task was specified in the Terms of Reference dated on 22 May, 2003. These Terms of Reference have been included in this report as Annex 1.

ACKNOWLEDGEMENTS

The Consultant gratefully acknowledges the opportunity that the Forest Products and Economics Division (FOP) of FAO has given in the form of the Contract for this background paper.

An earlier work with the International Tropical Timber Trade Organization (ITTO) gave a starting point to the present study. It is gratefully acknowledged that the Secretariat of ITTO allowed the use of the intellectual property of the previous market access work on tropical timber.

FAO secretariat, including the Forestry Department and the FAOSTAT database services gave their support in providing the necessary background material and statististical services for this study.

Finally, but not least, the main study Team, including the group of the International Institute for Environment and Development (IIED) provided for early results and a challenge for technical backstopping.

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EXECUTIVE SUMMARY

**Figure 0.1.1** Interregional Net Trade of Forest Products in 2000

![Interregional Net Trade of Forest Products in 2000](https://example.com/figure011.png)

*Source: UN Comtrade, WFSE/EFI, FAOSTAT*

**Potential gains from improved market access**

Trade is beneficial to development, and to SFM, if governance conditions are in place. Some economies still use protective measures, including barriers to trade. Some of these measures may be a partial remedy to structural problems. The governance conditions will be put to a historical test in a case where trade liberalization is implemented. The danger is that the governance fails to guide a nation through the pressures of an opening international market. This is often the case, especially in developing economies. In the long run, further liberalization of trade with domestic structural changes, can move the global and local economies towards higher welfare, simultaneously with better, sustained forest management.
A large range of potential policies and measures exist to improve the market access of forest products. The quantitative effects of the improved market access efforts are on several fronts:

- Reduced tariffs, and less steep tariff escalation, reduce import prices and thus expand the markets along the consumers’ demand curve
- Trade facilitation reduces the cost of customs procedures and other border transactions. The net effect from these is similar to tariff reductions. The product appears more economical for the importer, who is likely to increase purchases
- The final result from tariff reduction and facilitation potentially enhances the net resource value of the tropical timber resource
- Successful combating of illegal forest practices can bring a larger resource base under legal and effective environmental and forest management. This increases to the volume of supplies, adds to the net resource value, and contributes to a wider fiscal base
- Internalizing the environmental and social externalities increases welfare and the level of local and global environmental services. This does not come without cost, but does increase the overall cost level of resource management
- Evidence of SFM improves the credibility and trust of the importers, opening up some critical markets, and thus increasing demand for tropical timber.

**Development of Forest Products Trade Flows**

As described in this chapter, the long distance trade of raw material is rather limited, especially in value terms as presented here. The key driver is the better transportability of processed products – if the market access is there!

Traditionally, trade in logs has been an important export income source for developing countries. The dominance of tropical logs in the international trade of hardwood logs has diminished over the years. Especially during the 1990s, the share of tropical logs has decreased from about 75% of the trade to clearly less than one half. It is important to note that the overall trend in the hardwood log trade has been almost horizontal, with some growth in past years. The temperate and boreal logs have substituted for the tropical logs, which have become relatively scarce in supply.

Globally, the supply of wood fibre will be increasingly met from managed natural forests or plantations. The role of tropical forests as an excess supply area, is necessarily becoming smaller in relative terms. The global policy issue is, if the tropical forests will be valued for the full range of services they are able to provide. The danger is that policies and investment support in the fast growing plantation forestry may reduce interest and perceived value of the tropical forests, thus speeding up the clearance for other uses.

Most of the value created through international exchange of forest based products comes from value added products. Measured by the value of inter-regional gross trade (as was used in map illustrations of this chapter), pulp and paper create more than ten times the value of wood raw materials.

A number of developing tropical countries have been able to create sizeable export trade by shifting the production to value added products. A range of policies and other measures have been used to facilitate this development. These measures have included instruments that have established market access barriers or impediments (such as log bans). Some other instruments
have been closely related to market access issues (such as subsidized industrial development, fiscal incentive schemes or low concession fees on wood from government owned forests).

Successful industrial wood based export countries in the tropics have become a part of the highly competitive global trade. There are signs that the prices of commodities have become depressed. Increasing liberalization is likely to further enhance the competition. The challenge is to keep the value chain in such shape that the forest resource retains a value high enough to support the SFM of the natural resource.

**Forestry and Improved Market Access**

Policies, which are related to trade are too distant tools to have a straight positive impact on SFM or forest governance in general. What is needed is (i) a set of international legislation, which focuses on environment and resource aspects, (ii) even more crucially, the national environmental and forest policy instruments need to be in place to complement both the global trade regime and the multilateral environmental agreements (MEAs).

Policy failures and weaknesses in institutional capacities can be detrimental to governance and SFM, even if the trade regime and environmental legislation would be perfect. Trade liberalization has a higher likelihood for producing positive effects if policy failures are eliminated. In forestry such policy failures can include bad tenure arrangements i.e. weak concession policies or unsettled or weak forest ownership rights.

The work to improve of market access has not been done as yet. To highlight just on important aspect, the tariff escalation; in the words of UNCTAD (2003): “The practice of tariff escalation biases exports towards unprocessed resource-based commodities, characterized by low value added. This may cause difficulties to commodity-dependant developing countries in their efforts to diversify their export base…the extent of tariff escalation remains significant”.

In words of UNCTAD (2003): “Although Doha WTO Ministerial Conference brought a number of “new” issues onto the WTO agenda (investment, competition, etc.), market access remains one of the most important trading issues between the developing and developed countries. …WTO members acknowledge the importance of enhanced market access for industrial products of interest to developing countries and agreed to start negotiations on the reduction or elimination of tariff peaks, high tariffs and tariff escalation, as well as non-tariff barriers on all industrial products.”

**International Trade Regime**

The trade value, at importers, of all forest products was USD 160 billion in the year 2000. This has been a result from several decades of development, where the trade in forest products has been growing clearly faster than the production. And this has been during a period when the whole industry has gone through a major growth period. At least we can safely conclude that the international trade liberalization process and the trade growth process have proceeded in parallel. At least a part of the growth has been due to lessening of market access barriers, such as tariffs.
Judged by the expansive development of the trade in forest products, one can conclude that the international legislation has been influential enough to support this tendency. One may, as well, conclude that the basic rationale of trade liberalization has been effective enough to reach the objective of welfare increase to a large number of people around the globe. Basically, those who consume most have gained most. Income distribution aspects are a much more difficult area, and one, which is causing friction in the move towards even more of globalization. The distribution aspects include sharing of the fortune between nations, as well as sharing the factor income between capital, labor and the forest resource base.

The international trade regime is very strict on focusing on the product market platform. What takes place below, beyond or beside the market does not get as much attention, or is explicitly excluded from the domain of the legislation. A case in point is the GATT/WTO legislation on production and processing methods (PPM), which is based on the principle of ‘equal’ products having to be treated equally (independently from where they came from or how they were made). Of course, the regime has qualifications on the rule, but they are much less powerful than the rule itself; perfectly designed for the competitive market place, as it is.

The main conclusion on the international trade regime should not concern its effectiveness, which has undoubtedly been great. The main conclusion from the sustainable forest management (SFM) point of view should be what the trade regime leaves undone (because it is outside its domain). The conclusion is that a complementary policy toolbox should exist to complement, enhance and modify the aspects and impacts of free trade, which the international trade regime excludes. The complementary issues and tools are many and quite a few have relevance for forestry.

**Market Access Issues and Forestry**

“The practice of tariff escalation biases exports towards unprocessed resource-based commodities, characterized by low value added. This may cause difficulties to commodity-dependant developing countries in their efforts to diversify their export base…the extent of tariff escalation remains significant” (UNCTAD, 2003).

The environmental concerns of the international community, including those who trade in forest-based products and services, need to be expressed through other instruments, in addition to the MEAs. A large variety of platforms exist to express those concerns. The national instruments are in the form of environmental policies, which again are to a varying degree reflected in the forest policies and national forest sector plans, and forest governance. Stakeholders, such as forest industry, can improve their implementation by following management plans, guides of utilization and codes of practices.

In the end, lots of concerns of the general public, the environmental movement and consumers are left with the “voluntary” measures, which include criteria & indicators as well as certification & labeling. Local governments are reflecting the voters’ attitudes more easily than national governments, and are introducing legislation on procurement from sustainable and legal sources. Some governments are entering into bilateral agreement and formulate pairing arrangements to tackle the environmental concerns. The international Forest Law Enforcement, Governance and Trade (FLEGT) process is taking the promotion of these principles to regional level.
The measures to promote trade liberalization are likely to have positive effects if there is good forest governance in place. In a weak general governance situation, the trade liberalization is likely to have a negative impact on forest governance.

International trade instruments have varying degrees of discriminatory effect towards developing country trade. The international legal regime is quite neutral, in principle. The NTMs can be more severe towards developing country exports. However, the most difficult obstacle may be in the form of the voluntary measures, such as (i) certification and labeling, (ii) local government procurement rules, and (iii) meeting the other “sustainability and legality” requirements.

To summarize: at least three groups of market access measures still have a major negative impact on market access of developing country forest-based trade: a) tariff escalation, b) high rate of NTM occurrence, c) increasing frequency of “voluntary”, “soft” but very sticky barriers.

**Other International Instruments**

The whole range of MEAs gives a wide perspective on the environment. One of the problems from the enforcement point of view is that their memberships do not have an exclusive coverage. Another, very basic one, is that they are often quite distant from the forest based market procedures. The trading partners or consumers do not usually have an easy way of link a particular product and a particular MEA.

The regional agreements are easier to formulate and implement than global ones, but the have a danger of acting as blocks of external market access barriers or impediments. On the other hand they may provide a path of convergence for unilateral and bilateral measures. All of these, however, have a basic problem of creating sub-optimal partial solutions, and thus run a danger of compromising the global objectives.

International policy forums are important from the point of view of keeping the communication process going. However, the results from the point of view of production of legally binding global principles have been disappointing. ITTO, as a commodity agreement, is in an excellent position to work towards elimination of market access barriers. Its strength and its weakness is that it has a partial regional coverage (of timber sources, the forests) as its domain (even if it has a wide membership of consumer countries as well).

**Empirical Assessments of Liberalization**

The empirical studies seem to support the theory, that trade liberalization expands the volume of economic activity, and especially of trade. The studies in general give support to one of the basic assumptions of liberalization, that most of the consumers will face lower prices as a result of liberalization.

The conclusion that consumers get more of commodities at a lower price, and thus gain in welfare, is partly shadowed by the fact that sometimes producer country consumers may not gain. On the other hand, the producer welfare has a tendency of going down instead of increasing. There is no inherent indication of the mechanism of compensation from those who gain to those who suffer, in the simulation assessments in general.
According to the assessments, the regional trade agreements (with tariff reductions) do have similar volume enhancing and price reducing impacts, as the global trade agreements, but to a lesser degree and less consistent manner.

The chosen single country case seems to indicate the basic fact that opening up makes a country vulnerable to the harsh realities of the international competitive market place. This offers great opportunities if the country has rich resources and competitive factors of production. In an opposite case, the trade, production and factor markets (including forestry) will suffer.

**Key Issues in Market Access**

Codes of Practice have a potential of improving the efficiency of local forest operators. Even if there is evidence of increased efficiency and profitability when Reduced Impact Logging (RIL), poor logging practices persist in the tropics, and elsewhere. I may be that trade measures can contribute to the enforcement of good practices, but they can hardly achieve their targets alone.

While the tariff barriers will continue to be lowered further, the role of non-tariff barriers will become increasingly important. Product standards, building codes and other standards and regulations, which influence the use of timber for various end-uses, will continue to be a concern and would need to be continuously monitored.

Most countries have used the international criteria and indicators as the basis or starting point for their certification activities. For example, a number of producing countries who are members of ITTO have used the C&I of ITTO for the Sustainable Management (SFM) of Tropical Forests; other countries have used the Pan-European or the Montreal Process, the Principles, Criteria and Indicators of the African Timber Organization, etc. Almost all have taken note of the Forest Stewardship Council (FSC) Principles and Criteria and made efforts to ensure a degree of compatibility. Thus there has been a considerable degree of cross-fertilization involved.

Certification is seen as a major information based instrument, which could make trade contribute to the sustainability of natural resources. Both consumption patterns and production methods are influenced through voluntary action towards reduced environmental impacts. From the point of view of market access, however, only single process and production method (PPM) issue is concerned, i.e. the quality of forest management. For labeling of products, differentiation has to be established throughout the chain-of-custody (COC) from the forest to the final end user in order to enable communication of correct information.

A legal instrument, Plurilateral Government Procurement Agreement (PGA), exists to control the trade distortions of public procurement. The field is a dynamic one, national and local governments, especially in the EU, the USA and Japan are using public procurement as a means to guarantee “legality and sustainability” of their purchases of tropical timber.

The widespread under-pricing of forest products from illegal or undesirable trade presents a formidable challenge to ‘good forestry’. Trade can be at least a partial driver of illegal logging, if the law enforcement capacity can not meet the challenge. Although no reliable
quantification exists of precisely how much timber in trade is from illegal sources, there is increasing evidence that the amount is considerable and that the problem is substantial. A consensus appears to exist that controlling trade in illegal timber will be an important contribution to halting illegal logging.

An important process currently underway is the Forest Law Enforcement, Governance and Trade (FLEGT). It offers a forum for discussion and co-operation between developed countries and emerging economies, particularly for those, which produce and consume or import wood or wood products. FLEGT covers a wide range of issues relating to reform and application of the law in wood producing countries, governance, management, production capacity, as well as trade related aspects.

There is a concern among tropical timber producers that an international system to ensure that illegally harvested timber does not enter international trade could represent yet another undue hurdle for them. It is apparent that, in spite of being a global phenomenon, the problem of illegality is, in general, more serious and complex in their case than among temperate or boreal countries. The main reasons are weak enforcement institutions and unnecessary bureaucracy together with widespread corruption. High transaction costs of legal operations provide thereby an additional economic incentive for illegal harvesting and trade. A system of notification, coupled with an obligation to verify the “legality of the origin of tropical timber” is feared to add producers’ costs, thereby reducing competitiveness.

**Figure 0.2 Conceptual Framework: Trade and SFM Compass**
### ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACP</td>
<td>African, Caribbean and Pacific Group of States</td>
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<tr>
<td>ATL</td>
<td>Accelerated Tariff Liberalization</td>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>AfDB</td>
<td>African Development Bank</td>
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<tr>
<td>AEC</td>
<td>African Economic Community</td>
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<tr>
<td>AFLEGT</td>
<td>African Forest Law Enforcement, Governance and Trade</td>
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<tr>
<td>AFTA</td>
<td>Asean Free Trade Area</td>
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<tr>
<td>AFTA-CER</td>
<td>Agreement between AFTA and CER countries</td>
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<td>ANCERTA</td>
<td>Australia New Zealand Closer Economic Relations Trade Agreement</td>
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<tr>
<td>APEC</td>
<td>Asia-Pacific Economic Cooperation</td>
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<tr>
<td>ARD</td>
<td>Afforestation, Reforestation and avoided Deforestation</td>
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<td>ASEAN</td>
<td>Association of South East Asian Nations</td>
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<td>ATIBT</td>
<td>Association Technique Internationale des Bois Tropicaux</td>
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<td>ATL</td>
<td>Accelerated Tariff Liberalization</td>
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<td>ATO</td>
<td>African Timber Organization</td>
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<td>BDV</td>
<td>Brussels Definition of Value</td>
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<td>CARICOM</td>
<td>Caribbean Community and Common Market</td>
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<td>C&amp;I</td>
<td>Criteria and Indicators</td>
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<td>C&amp;L</td>
<td>Certification and Labelling</td>
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<td>CBD</td>
<td>Convention on Biological Diversity</td>
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<td>CDM</td>
<td>Clean Development Mechanism</td>
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<td>CEFAC</td>
<td>United Nations Centre for Trade Facilitation and Electronic Business</td>
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<td>CEPT</td>
<td>Common Effective Preferential Tariff</td>
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<td>CRE</td>
<td>Closer Economic Relations</td>
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<td>CERFLOR</td>
<td>Certificate of Origin of Forest Raw Material, Brazil</td>
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<td>CFE</td>
<td>Community Forestry Enterprise</td>
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<td>CGTM</td>
<td>Cintrafor Global Trade Model</td>
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<td>CIF</td>
<td>Cost, insurance, freight</td>
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<td>CIFOR</td>
<td>Centre for International Forestry Research</td>
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<tr>
<td>CITIES</td>
<td>Convention on International Trade in Endangered Species of Wild Fauna and Flora</td>
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<tr>
<td>CO₂</td>
<td>Carbon dioxide</td>
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<td>COC</td>
<td>Chain of custody</td>
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<td>COMESA</td>
<td>Common Market for Eastern and Southern Africa</td>
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<td>COP</td>
<td>Conference of Parties</td>
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<tr>
<td>CPF</td>
<td>Collaborative Partnership on Forests</td>
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<td>CRTA</td>
<td>WTO Committee on Regional Trade Agreements</td>
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<td>CSD</td>
<td>Commission on Sustainable Development (United Nations)</td>
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<td>CTE</td>
<td>Committee on Trade and Environment of WTO</td>
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<td>CACM</td>
<td>Central American Common Market</td>
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<td>CAN</td>
<td>Andean Community (Comunidad Andina de Naciones)</td>
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<td>DESA</td>
<td>United Nations Department of Economic and Social Affairs</td>
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<td>DIY</td>
<td>Do-it-yourself</td>
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<td>DSB</td>
<td>Dispute Settlement Body</td>
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<td>EC</td>
<td>European Commission</td>
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<td>ECA</td>
<td>Export Credit Agency</td>
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<td>ECE</td>
<td>Economic Commission for Europe</td>
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<td>ECOSOC</td>
<td>Economic and Social Council of the United Nations</td>
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<td>EEA</td>
<td>European Economic Area</td>
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<td>EFI</td>
<td>European Forest Institute</td>
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<td>EIA</td>
<td>Environmental Investigation Agency</td>
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<td>EMAS</td>
<td>Eco-Management and Audit Scheme of European Union</td>
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<td>EMS</td>
<td>Environmental Management System</td>
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<td>EN</td>
<td>European harmonized standards</td>
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<td>ENGO</td>
<td>Environmental Non-governmental Organisation</td>
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<td>ERA</td>
<td>Export Restraint Arrangement</td>
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<td>Abbreviation</td>
<td>Description</td>
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<td>NAFTA</td>
<td>North American Free Trade Agreement</td>
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<td>NASA</td>
<td>National Aeronautics and Space Administration</td>
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<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<td>NHLA</td>
<td>National Hardwood Lumber Association</td>
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<td>NIC</td>
<td>Newly Industrialized Countries</td>
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<td>NRRP</td>
<td>Natural Resources and Rights Program</td>
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<td>NT</td>
<td>National Treatment</td>
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<td>Non-Tariff Barrier</td>
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<td>National Timber Certification Council</td>
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<td>NTFP</td>
<td>Non-timber forest product</td>
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<td>NTM</td>
<td>Non-tariff measure</td>
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<td>NWFP</td>
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<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
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<td>OTO</td>
<td>Office of Trade and Investment Ombudsman</td>
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<td>P5</td>
<td>Trade agreement between USA, Chile, Australia, New Zealand and Singapore</td>
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<td>P&amp;C</td>
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<td>Pan-European Forest Certification Framework</td>
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<td>Plurilateral Agreement on Government Procurement</td>
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<td>Production and processing method</td>
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<tr>
<td>PPP</td>
<td>Polluter Pays Principle (other meaning Purchasing Power Parity)</td>
</tr>
<tr>
<td>RIIA</td>
<td>Royal Institute of International Affairs</td>
</tr>
<tr>
<td>RIL</td>
<td>Reduced impact logging</td>
</tr>
<tr>
<td>RTA</td>
<td>Regional Trade Agreement</td>
</tr>
<tr>
<td>RWE</td>
<td>Roundwood equivalent</td>
</tr>
<tr>
<td>RTA</td>
<td>Regional Trade Agreement</td>
</tr>
<tr>
<td>SACU</td>
<td>Southern African Customs Union</td>
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<tr>
<td>SADC</td>
<td>Southern African Development Community</td>
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<tr>
<td>SAP</td>
<td>Structural adjustment programme</td>
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<tr>
<td>SFM</td>
<td>Sustainable forest management</td>
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<tr>
<td>SGS</td>
<td>Société General de Surveillance SA</td>
</tr>
<tr>
<td>SPS</td>
<td>Sanitary and Phytosanitary Measures, WTO Agreement</td>
</tr>
<tr>
<td>SPWP</td>
<td>Secondary Processed Wood Products</td>
</tr>
<tr>
<td>TBT</td>
<td>Technical Barriers to Trade, WTO Agreement</td>
</tr>
<tr>
<td>TFF</td>
<td>Tropical Forest Foundation</td>
</tr>
<tr>
<td>TFRK</td>
<td>Traditional forest-related knowledge</td>
</tr>
<tr>
<td>TNC</td>
<td>Transnational corporation</td>
</tr>
<tr>
<td>TRAINS</td>
<td>Trade Analysis and Information System, of UNCTAD</td>
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<tr>
<td>TREM</td>
<td>Trade-related environmental measures</td>
</tr>
<tr>
<td>TRIM</td>
<td>Trade Related Investment Measures</td>
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<tr>
<td>TRIP</td>
<td>Trade-Related Aspects of Intellectual Property Rights</td>
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<td>UK</td>
<td>United Kingdom</td>
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<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNCCD</td>
<td>United Nations Programme to Combat Desertification</td>
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<td>UNCED</td>
<td>United Nations Conference on Environment and Development</td>
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<tr>
<td>UNCSD</td>
<td>United Nations Committee on Sustainable Development</td>
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<td>United Nations Conference on Trade and Development</td>
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<td>UNESCO</td>
<td>United Nations Economic and Social Council</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>UNECE</td>
<td>United Nations Economic Commission for Europe</td>
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<tr>
<td>UNEP</td>
<td>United Nations Environment Programme</td>
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<tr>
<td>UNFCCC</td>
<td>Framework Convention on Climate Change of United Nations</td>
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<tr>
<td>UNFF</td>
<td>United Nations Forum on Forests</td>
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<tr>
<td>UR</td>
<td>Uruguay Round</td>
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<tr>
<td>USD</td>
<td>United States Dollar</td>
</tr>
<tr>
<td>USTR</td>
<td>Office of US Trade Representative</td>
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<tr>
<td>VER</td>
<td>Voluntary Export Restraint</td>
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<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Name</td>
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<tr>
<td>WCMC</td>
<td>World Conservation Monitoring Centre</td>
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<td>WCO</td>
<td>World Customs Organisation</td>
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<tr>
<td>WSSD</td>
<td>World Summit for Sustainable Development</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
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<tr>
<td>WWF</td>
<td>World Wide Fund for Nature</td>
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1. INTRODUCTION

1.1 Market Access of Forest Products

Market access of forest products is a very complex set of issues, with aspects covering trade, environment, development, welfare and social matters. The issues related to market access tend to be both complicated and highly political. A comprehensive approach is needed to assess the impacts of trade on forestry. The access of such products as tropical timber to the markets, remains a key international issue.

Issues Which Are Specific to Forest Products

Many of the generic market access factors, barriers and impediments, as well as measures have an effect on forest products as well as on other commodities, including the competitors and substitutes for wood. However, some factors have a tendency of having a stronger impact on wood products, or even a discriminating effect.

Some of the factors that are likely to have a specific effect on forest products are the following:

- Concern on deforestation and degradation
- Concern on lack of sustainability of forests
- Concern on inadequate forest management
- Concern on illegal forest operations and corruption
- Product standards written for local conditions
- Building codes and specifications which have a tendency of favoring a small number of local dominant species and grades
- Public procurement rules which require specific positive proofs such as on “sustainability and legality”
- Rules explicitly and specifically excluding products from “rainforests”
- Certification schemes which have been tailored for local environments

Forest Governance

In principle, the international trade can bring with it an improved level of welfare for both trading partners. Fulfillment of this principle often meets, however, some obstacles, hindrances or delays. In any case, real or perceived changes in the conditions of tropical forests are likely to cause trade adjustment processes. And the other way around, changes in trading conditions (including different rules) are likely to be reflected in the forests.

In spite of their socio-economic and ecological importance, the forests, and subsequently the forest product trade, have usually not received enough attention when the international bodies have stipulated their instruments. Both on the side of the trade and on the side of the environment, the international legal instruments have been designed to be generally applicable. The special characteristics of the forests, and trade in products derived from them, may not have been duly addressed. The other problem is that the spectrum of international trade regime and related measures is fragmented, characterized by a large number of instruments, each regulating a particular aspect. A number of legally binding international instruments has a partial bearing on forests, their use, conservation and management. At international level, forests and their utilization are regulated both by legally binding and softer instruments.
Trade Regime and Tropical Timber Trade

The GATT/WTO process has paved the road for a better functioning market driven by international exchange, including the trade in forest products. The process has resulted in decreased tariff barriers to trade. This again has likely increased the volume of the trade. The increase has probably not been very large, as the pre-Uruguay level of effective tariffs was not very high (Bourke 2000). Subsequent steps, such as accession of China into WTO, are further enhancing the forest product trade. But rather than causing a revolution, such individual improvements will likely just remove a part of the remaining tariff burden.

The hard core of the international trade regime is governed by the rules of WTO. The trade aspects of conservation and sustainable utilization of biological resources is regulated under CITES, CBD and ITTA. In principle, these sets of rules are promoting sustainable development, and their implementation should be mutually supportive, while effectively reaching their specific goals. The available experience on how the various instruments work in practice, individually and in relation to each other is still scanty (Tarasofsky 1997). There is therefore a need to explore their potential roles and to suggest where improvements are needed.

Environment and International Trade in Forest Products

International trade has direct and indirect influences on the environment. The indirect influences are commonly perceived to be more important. At the same time, environmental conditions, policies and regulations influence the market access and competitiveness of individual producers of forest products and thus affect trade flows. Trade could become a contributing force in the sustainable management of natural resources. On the other hand, trade liberalization and macroeconomic policy reforms have led to expanding exports by developing countries, particularly in commodities, thereby increasing pressure on the environment.

Forest products are mostly based on plants, and in this way are dependent on their genetic material. Forest products can be divided into: (i) wood-based products such as logs, sawnwood, wood based panels, and pulp and paper as well as further processed products, and (ii) non-wood products which cover a wide range of items (medicinal plants, food, spices, oils and waxes, gums, etc.). (iii) Some tradable services such as eco-tourism can also be locally important. In general, most of the utilization of forest products takes place domestically. This is mainly due to the importance of locally used fuelwood, which accounts for about a half of the total wood output in the world. Main share of non-wood products is also used locally.

The total value of global trade of forest products (evaluated at imports) has been estimated at about 160 billion USD in the year 2000. The value of the trade in basic forest products has increased by about 75% in real terms since 1970 (FAO 1997). The value of global trade in tropical timber is estimated at about 16 billion USD in the year 2000. The value of world trade in non-wood forest products has been estimated at USD 11 billion (Iqbal 1995). The latter figure may, however, underestimate the overall importance of the non-wood products. For instance, trade in medicinal plants is only a fraction of the trade in medicinal products, which are directly or indirectly based on these plants.
In spite of its limited share of production, trade has been seen by some observers as a major factor contributing to deforestation and forest degradation, particularly in developing countries (e.g. Dudley 1992, Dudley et al. 1995). In a number of tropical countries in Africa, Southeast Asia and the Guyana Shield, export oriented production has apparently accounted for a significant share of forest loss and degradation. In addition to direct impacts, indirect effects, such as opening up forest areas for encroachment, can become or trigger underlying causes of deforestation.

Indirect impacts on deforestation are linked to such factors as changing production and consumption patterns (including expanding demand for food), expansion of subsistence agriculture, demand for fuelwood and charcoal, as well as land tenure patterns. Given these other underlying causes of deforestation, some have concluded that deforestation has little to do with international trade (WTO 1997). But this view misses the point that the interrelationship between trade and deforestation is mostly indirect, and that direct, and indirect effects, are difficult to separate from each other.

Trade based on sustainably managed forests brings socio-economic benefits, thereby creating an incentive for the conservation of forest resources. The higher returns on investment, compared with alternative land uses such as agriculture, are an incentive to conserve production forests (Barbier et al. 1993).

One of the general issues in the present international dialogue is the interaction between the international trade regime and multilateral environmental agreements (MEAs). This concerns the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the International Tropical Timber Agreement (ITTA), and the Convention on Biological Diversity (CBD). These treaties have been concluded separately from the WTO rules, which can sometimes make joint application difficult. Not all countries are signatories to (or have ratified) all MEAs. This limits the possibility of using MEAs to define a global regime for conservation and use of resources.

The examination of the relationship between the rules of the WTO and the specific trade obligations of MEAs is an element of the current negotiating agenda under Doha Agreement. The Johannesburg Summit called for enhancing the mutual supportiveness of trade, environment and development, with a view to achieving sustainable development, and promoting mutual supportiveness between the multilateral trading system and environmental agreements.1

Barriers to Trade, Impediments, and Markets of Forest Products

All the various environmental impacts of trade and macro-economic policies on natural resources are difficult to assess, but evidence indicates the presence of both negative and positive impacts.

In a positive case, the reduced tariff rates are guiding the international trade towards a more optimal trading pattern. In addition, the welfare impact is likely to be felt as a lower cost of consumption in consumer countries and as higher return to producer (of trees, wood and timber) in tropical countries. What may emerge is a more efficient, more transparent, more

1 www.johannesburg.org
competitive, better appreciated, wealthier and potentially more sustainable forest plus trade system.

As most of the tariffs are converging to effectively very low levels, the further movement towards optimal trading patterns is mostly conditioned by non-tariff measures (NTM) and other impediments and market failures. An additional issue remains with the tariffs still; the tariff escalation in some cases favors raw material trading and punishes further processed value added products. **Tariff escalation** for imports of processed products partly explains why developing countries heavily depend on the exports of basic commodities.

Importer countries have in the past reduced tariff barriers to trade to economize on their wood raw material. This has improved their local industrial cost competitiveness both against substitute materials. What remains is some tariff escalation, complemented with what can be called non-tariff measures escalation.

Producer countries have introduced export bans, restrictions, quotas and taxes to increase rent capture from forest resource, and to create incentives for domestic further processing. Lately, many producer country policies have gradually de-regulated the trade. Lowering of the producer country barriers, and impediments, causes necessary structural adjustment measures by the industry.

### 1.2 Objectives of this Market Access Background Study

The focus of the study is to compile and analyse information on relevant issues affecting market access for forest products. The purpose of the study is to support the global main study project on “Impact Assessment of Forest Products Trade in Promotion of Sustainable Forest Management”. The objective of this study is to identify linkages, common points, interaction, impacts and overlaps between market access issues and the issues of the main study project.

### 1.3 Methodology of the Market Access Study

Firstly, a conceptual analysis framework will be created. The objective is to understand the values involved in trade, how various market access drivers would affect them, and what is the linkage to the promotion of sustainable forest management.

Secondly, trade statistics will be reviewed and analysed, to describe development of the trade of forest products during the last two decades. The research objective is to identify main development patterns, tendencies and phenomena in the markets. The subsequent task is to assess which features and aspects would be relevant from the point of view of market access of forest products. Further, the most important aspects from the point of view of SFM promotion will be identified.

Thirdly, the most important qualitative issues affecting the market access will be reviewed. The focus is on the barriers, both tariff and non-tariff, which may have an influence on the market access of forest products. Further, various instruments forming the international trade regime are reviewed and evaluated from the point of view of forest product trade. Again, the most important aspects from the point of view of SFM promotion will be identified.

Fourthly, a synthesis is made on the key findings of the quantitative and qualitative analysis. Assumptions are made on the factors and driving forces which are influential, and likely to
remain so in the near future. Conclusions are made on the relative importance of the factors, policies, and legal and other instruments on the market access of forest products. More specifically, aspects of relevance to SFM promotion will be covered. Finally, recommendations are given to the key stakeholders on market access issues in relation with SFM promotion.

Structure of the Report

Chapter 1 introduces the issues related to market access of forest products, including the barriers to trade. Objectives of this sub-study are drawn from the overall objectives of the global impact assessment project.

Chapter 2 describes the study methodology. Issues of forest governance and SFM are introduced together with their linkages to trade.

Chapter 3 is an empirical economic and statistical analysis of the market phenomena. The market and especially the market shares and directions of trade are analysed to identify elements of influence of market access impediments.

Chapter 4 elaborates issues of globalisation and barriers to trade both in producing and in importing countries.

Chapter 5 makes a rather thorough review of the international trade regime in relation to market access of forest products.

Chapter 6 covers multilateral environmental agreements, regional bilateral and unilateral arrangements. In addition, international policy forums and financing agents are covered.

Chapter 7 summarises some of the main results from empirical assessments of impacts of trade liberalisation. The most rigorous model simulation exercises are emphasised and references are chosen to cover global, regional and single country studies.

Chapter 8 is based on the findings of previous chapters and focuses on selected key issues related to market access of forest products. These include codes, standards, certification, legality, forest law enforcement, as well as public procurement.
2. ANALYTICAL FRAMEWORK

2.1 Definitions and Elements of Analytical Framework

Elements of Analytical Framework

Figure 0.2 above illustrates the conceptual view on the trade, sustainable forest management, and the role of market access factors. The purpose of the conceptual framework is to structure the tasks from the background and analysis to available tools, and then to conclusions and recommendations. The end result should serve the main global study in converging towards solid and conclusive findings and recommendations.

Competitiveness, Market Shares and Prices

When investigating the market developments, *ex post*, the trends and fluctuations are a net result from a large number of factors. The most important ones are related to the comparative advantage differences of industrial locations, and competitiveness differences of operators. Market access factors and variation in them are just one group of factors in the matrix.

Various forest products compete in the market place between each other, and against other substitute materials. A position of a sole supplier of a particular species and grade is rare, usually there is a sequence of substitute products. A supplier’s competitive position depends on the characteristics of product, the cost of the domestic value chain and the whole range of international trade determinants. The market access barriers and impediments have a tendency of working through a twin bladed “scissors” effect: The direct effect comes from the hindrance of the barrier or impediment itself, the indirect effect comes from the cost competitiveness handicap. The extra cost is caused by the constraint itself, or an unsuccessful and costly effort to remove it.

Different policies may impact the market access directly or indirectly. Policies and measures can be divided in three types, according to how they influence trade and forestry:

- Trade policies and other measures that have direct impact on forest products trade, and thus indirectly impact the conditions of forestry
- Forest policies and other measures that have a direct impact on forestry, including sustainability of management, and thus indirectly impact the trade of products
- Policies and measures (such as land-use or development policies) which may have indirect impact on forestry, trade or one of these through the other.

The commercial objective of the trade and industry is the net income and sufficient return to the invested capital. Processing generates value by adding further production factors, including labor. Value added means higher income generation from a given volume of wood. As described above, the value chain of forest products is mostly cost competitive and efficient. Unavoidable “dead weight” cost components, such as transportation and energy, cannot be eliminated or scaled down.

Looking at the positive side of the coin, in any market conditions, the savings from elimination of market access barriers or impediments feed directly to the net income. This is
the incentive for the market stakeholders to work together for improved market access. Even the unavoidable cost components, such as logistic costs, which should be minimized, form important service industries in transportation and related functions.

Many policies or other measures have an influence on the relative cost competitiveness position of forest based enterprises. Any forest based enterprise under the influence of such measures will be affected and its competitiveness will be changed in relation to other enterprises in the forest based markets, domestic and foreign. In addition, any such cost competitiveness influence changes the relative position of the impacted forest based enterprises in relation to the competitors in other sectors.

If policy changes impact the relative cost competitiveness position of some of the forest based enterprises, this will be reflected in the trade flows. The pattern of trade flows will adapt to relative changes in the policies impacting their locations. Due to the complex nature of these interactions, it is not easy to describe the overall tendencies or structure of such changes. Figure 2.1 presents a schematic illustration of the wood product markets with policy interventions. Chapter 7 gives some examples of empirical simulation studies of policy changes.

**Figure 2.1  Market of Wood Products with Policy Instruments**

Market Access, Barriers to Trade and Impediments

The various factors, which affect the market access of tropical timber, are in the focus of this study. The past decades have seen an international movement towards elimination of many of the former barriers to trade, especially of tariffs. The positive effects of the overall globalization have been generated, as the friction has been lowered and the mutually
beneficial transactions have increased. However, work remains to be done, especially in such products, which do not easily fit into standard commodity categories. For a number of reasons, tropical timber belongs to this category.

Factors and measures on market access cover a large range of issues and instruments. This is in the very focus of this report and will be discussed in more detail in the following chapters. Both exporter and importer countries may have intentional or unintentional measures, instruments and constraints in place, which in fact form market barriers or impediments.

**International Trade Agreements**

The core of international trade regime is the WTO legislation. The starting point was based on the General Agreement on Tariffs and Trade (GATT). The regime is intended to ensure proper functioning of free trade, while taking into account the protection of the environment. Several other WTO treaties contribute to the total international trade regime. These include the agreements on: Sanitary and Phyto-sanitary measures (SPS); Technical Barriers to Trade (TBT); Trade Related Investment Methods (TRIM); Trade-Related Intellectual Property Rights (TRIPS). A number of other agreements (anti-dumping, customs valuation, pre-shipment inspections, rules of origin, import licensing, subsidies, safeguards) also exist within the WTO framework.

In terms of enforcement, the international trade regime consists of three components: (i) at the very core are the rights and rules, which are supplemented with (ii) procedures, and (iii) compliance mechanisms.

**Multilateral Environmental Agreements**

The Multilateral Environmental Agreements (MEAs) are legally binding international agreements with a global scope. The MEAs have been negotiated between governments to take a joint action to mitigate environmental threats. The basis was laid for the creation of MEAs by the United Nations Conference on Environment and Development (UNCED) in 1992.

A large number of MEAs address issues that have at least partial relevance to forestry. The Convention on Biological Diversity (CBD), United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention to Combat Desertification (UNCCD) are arguably the most important from the forestry point of view. There are several others with specific relevance.

The mutually supportive role of the international trade regime and the other multilateral conventions and agreements, specifically the multilateral environmental agreements, has become of a growing concern. MEA secretariats, WTO and non-governmental organizations (NGOs) have to various degrees participated in a process, which is hopefully leading towards a higher coherence of the two large bodies of legislation.
2.2 Forest Governance and Sustainability

Core of forest governance

The core of forest governance is based on: (i) National forest legislation. (ii) National forest policy. (iii) Government guidelines and instructions for forest management. (iv) National forest, environmental and conservation programs. Most of these elements are in some form in place in most countries. The issue is generally not that the rules would be missing or inadequate, but often there is a lack or insufficient implementation, monitoring and enforcement.

The core of tropical forest governance is enveloped in a number of “softer” or more distant elements, which include: (v) Mechanism of monitoring and evaluation (M&E) (e.g. criteria and indicators for sustainable forest management (SFM). (vi) Voluntary measures (e.g. code of logging practice, forest certification, etc.).(vii) Multilateral environmental agreements (MEAs). For example, use of formal M&E can be very beneficial for controlling the efficiency and effectiveness of the sector, but management and implementation capacity itself becomes easily a bottleneck.

Even if the ecological conditions are different, the challenges of good forest governance are mostly similar in temperate and tropical forests. Key objectives, such as sustainability are the same. Techniques to achieve sustainability naturally differ. The need to render the global forest governance under the same umbrella was recognized by UNCED in its “Forest Principles” in 1992.

Technically, the prerequisites for good forest governance are in place in many areas of the temperate and boreal region. But as is the case with tropical forests, the commitment and success of implementation and enforcement varies. When the key problems in temperate and boreal forests are: forest fires, alien species, atmospheric pollution impacts, orientation and control of small-scale private forest owners, etc., the problems in the tropics include land use changes and deforestation.

Complementary Instruments

As the international environmental conventions and the trade agreements do not cover the whole subject matter of tropical forestry, or do not apply to the specific conditions, a number of complementary measures, often voluntary, have been introduced.

Certification is here given as an example of such “soft” policy instruments (Bass & Simula 1998). Certification has typical characteristics of an instrument, which may complement the range of legal instruments and become a valuable part in the process of convergence towards effective and efficient tropical timber regime. There is a long-standing policy debate over whether governments should be involved in certification.

Policies on Environment and Development

A large number of other policies have a potential impact on the market access of tropical timber. Aggressive development policy, with high growth targets, may liquidate the tropical timber resource base in a manner, which may not be consistent with the sustainability or
conservation goals. The overall issue is the internal consistency of the range of policies in terms of their impacts on tropical forests. Land use policies, regional, national and local development policies, industrial policies, fiscal policies and investment policies are among the components, which should be formulated in a manner not conflicting with the sustainability targets.

2.3 Linkage of Forest Products Trade and Forest Management

Trade can have impacts on forests through two main channels: 1) through physical volume impacts due to increased harvesting demand for net exports, 2) through economic effects in the form of factor income.

1) In general, increased net export of forest products of a country increases (or increased net import decreases) the demand for wood raw material. In principle the effect is similar to the impact of increased domestic demand of similar forest products (product mix, however, is usually different).

The increased trade (net export) effect will usually increase the harvesting intensity of the local forests. The size of the effect depends on exact composition of the trade increase, and respective conversion rates of the industrial processes. In addition, the type of cutting is related to the quality of raw material requirements.

To summarize, the volume effect of the trade is related to the basic question on sustainable quantitative wood supply with wood type quality constraints. As such the trade impact is not intrinsically different from domestic impact. The supply response comes primarily as a short-term reaction (typically higher volume and higher price) and secondarily as a long-term supply response. Especially the latter is very intimately related to the sustainability question, and needs a support from a consistent and effective policy for SFM implementation.

2) The (increased) trade pull effect may be reflected in higher domestic harvesting volumes (and possibly higher log prices). The immediate issue is the maintenance of sustainable levels of harvesting even as short-term gains are possible. The related political issue is if constraints of sustainable land-use and environmental services are maintained.

The extraction of timber or other forest product related for trade can generate important trade income. The income may have positive macro-economic effects: income, employment, balance of payment and multiplier effects.

From the point of view of trade impact on SFM, the key issue is what happens to the factor income of forest: stumpage, royalty, resource rent, or the financial value of the forest products at the level of forest itself. Ownership, tenure and legacy issues are related to the necessary pre-requisites of economic benefit to forests, or their owners as well as dwellers and people in nearby rural areas.

In case that the necessary requirements are in place to generate value from trade, and to channel it to the economy and to the forestry, a part (but not all) of the important objectives towards SFM have been reached. In a functional SFM, the forest owners get fair resource income from trade, including such government which has implemented a system of effective rent capture and revenue collection. Of course there are a number of hurdles on this way. The
opposite case is if the operations are illegal, and the whole value is dissipated, e.g. to foreign or corrupt interests.

3) The trade effects on SFM can usually be improved by a number of measures. On the forestry side, the SFM measures are similar to the measures in a fully domestic operation. As closed economies are more of an exception in an era of open globalized markets, there is a pressure towards harmonization of local national measures. On the trade side, there are a large number of issues and parameters, which can improve the conditions for SFM.

The volume effect is obvious: as long as a dedicated production forest base is under-utilized, any impacts from increased net exports will be positive (assuming that SFM conditions, among others, are met). In such conditions, any restrictions such as local or foreign government interventions, which act as barriers or impediments, cut into the potential welfare.

Elimination of market access constraints can have their impact through allowing a higher utilization of domestic potential supply. In addition, more open market access can improve the total trade income by eliminating unnecessary cost. The elimination of cost in a competitive market place typically lowers the prices for consumers (at least in local and global competitive markets). In so doing, the consumer’s welfare is increasing. But at the same time, elimination of unnecessary cost can increase the producer’s welfare as well.

The final scene in the act is played in the forest sector itself. If the trade liberalization, barrier elimination and trade facilitation increase the potential factor income of forestry, it is the matter of the capacity of the sector to negotiate a fair share and reap the financial harvest through stumpage, concessions, contracts, revenue collection and financial management.

The long-term sustainability is related to the sector’s performance in re-investing a fair share of the (highest potential factor income) in the spirit and practice of SFM.

2.4 Market Access Issues in Trade and Sustainable Forest Management

“Although Doha WTO Ministerial Conference brought a number of “new” issues onto the WTO agenda (investment, competition, etc.), market access remains one of the most important trading issues between the developing and developed countries. …WTO members acknowledge the importance of enhanced market access for industrial products of interest to developing countries and agreed to start negotiations on the reduction or elimination of tariff peaks\(^2\), high tariffs and tariff escalation, as well as non-tariff barriers on all industrial products.” (UNCTAD, 2003)

The markets of tropical timber cover a whole range of products, from logs to primary processed timber (sawnwood, veneer and plywood), and to secondary processed wood products (SPWP). The price levels vary widely, especially in the log markets, where the species and individual log quality have a wide value scale. Still, in primary processed tropical timber products, especially in sawnwood and veneer, there are marked differences by species and grade. The visual, strength and other characteristics are mostly dependent on the log quality, while skillful sawing, peeling, drying, and other processing eliminate most defects. In plywood, the process enhances the qualities even more, with the composite structure and the

\(^2\) A practice has developed to refer to \textit{tariff peaks} as rates that are more than three times the national average.
glue. At the same time, plywood becomes a much more standardized product. Finally, the SPWP category adds even more value by introducing process and design characteristics that bring additional value to the end-user.

The price structure of the whole range of the tropical timber products varies according to the inherent and added qualities described above. As always, the market clearance prices are a net result from the competitive process between a number of consumers and producers. Of course, market access barriers and impediments influence the market and price formation, and bias the otherwise competitive structure of the market. We describe the market structure in a somewhat simplified way. The purpose is to highlight well enough the features that have a bearing on the analysis of market access of tropical timber.

Figure 2.2 illustrates conceptually the value structure of the forest product markets. Specific and detailed features, such as (exact) variation by species, and its implications are missing. However, attempt was made to keep the structural relations as correct as possible. The data for tropical timber in the year 2000 were used as a guideline. Thus, for example, the volume shares of various product categories are approximately true to the actual situation in the year 2000. The total volume of the whole range of tropical wood products was about 41.8 million m$^3$ in 2000. In addition, the price relations between the averages by product category (logs, primary processed, and SPWP) are approximately true to the situation in the year 2000.3

The figure 2.2 summarizes some of the key issues which link the trade with sustainable forest management (SFM). Included are main issues of value creation and trade-related matters. The figure is adapted from a report for ITTC (ITTO, 2003), and modified version in Rytkönen (2003). The figure illustrates the total market value created by the sub-sector. 1) On the left hand side are the log exports, 2) In the middle are the primary processed timber products, 3) On the right hand side are the secondary processed wood products (SPWP).

The most important policy issues are the following:

- The most critical policy issue is combating illegal logging (see left hand side of figure 2.2). These values are completely removed from the tax base if the enforcement cannot recover them through fines.
- The second most important policy issue is related to environment and local communities. This is illustrated in figure 2.2 on the lower left-hand side, and is called “environmental and social externalities”. These are costs that are incurred to as damage to the environment, in case no one is obliged to pay for them. In the same way, these include the lost values caused to the local communities by harvesting practices that destroy some of their traditional values. Compensation for these damages is called “internalizing environmental and social costs” on the lower right hand side of figure 2.2. Internalization only occurs if the payments are actually made.
- The third important issue is the proposal to reach the target “niche” markets, which would possibly be willing to pay a price premium for the Mozambican high quality timber. The crucial term here is “quality” as such niche markets, for example in Europe, tend to consider legal, environmental and social issues as a part of the product quality. In effect these market increasingly require proof of “legality and sustainability”. Such proofs may need to be acquired through a third party verified SFM certification. This issue is illustrated as an expansion potential on the right hand side of the figure 2.2.

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3 This abstraction fails to fully describe the intra-category richness of the products and their values, thus there are exceptions, especially in the very high valued end of each category.
The fourth issue is somewhat outside of forest policy domain, and concerns the increase of value added of production, i.e. movement of the timber volumes from left to right in the schematic picture of figure 2.2. It has often been found that it is ineffective to influence the industrial development from the forest resource side (pushing with a rope). However, competitive wood procurement, including tax incentives, may be a partial tool to promote value-added conversion (such as carpentry). Which process then provides increased employment and wider enterprise tax base.

The fifth group of issues is concerned about market access, and is illustrated on top of the figure 2.2.

**Figure 2.2 Value and Sustainability Issues in Forest Product Trade**

To summarize, figure 2.2 deals with a number of policy issues that are related to value generation in the tropical forest sector. An optimal policy mix, including tax instruments would guarantee that the overall value (area under the curve in figure 2.2) is as high as possible. At the same time, it would attempt to minimize the harmful effects that affect these values negatively. If the policies are successful, this will provide a wide economic base and thus the basis to generate high economic value, including a high government rent capture.

Figure 2.2 represents the total value of tropical timber products at the importers. The topmost curve represents the array of import prices, valued with cost, insurance, freight (CIF) included, at various entry ports in importing countries. The total area below the price (CIF) curve represents the total import value of the tropical timber imports in all markets. The second curve from top represents the corresponding export price array. The export prices are
at exit ports, valued at free on board (FOB) of carrier. The difference between CIF and FOB prices reflects all the cost components, between the two ports, related to the international transaction and logistics.

Figure 2.2 further illustrates decomposition of the export value of tropical timber into three components. The decomposition is not exact but should represent the approximate importance and relative shares of the components. The decomposition has here been made from the point of view of sub-sector value added components. Starting from bottom, the basis for commercial operations is laid in the forest operations. The costs of harvesting and transport are easily linked to any particular log harvest. However, the cost of forest management is already a somewhat more difficult item. The specific difficulties are related to the long time span and geographic distribution of forest management operations. In addition, it is not always clear what items should be included (if e.g. road construction, planning, monitoring, bio-diversity protection, reforestation, etc. should be covered). If a narrow concept of forest management were applied in costing, the sustainability of the resource base would be at risk.

In Figure 2.2 there are two more cost items: net resource value and value added by processing. If the harvesting and transportation costs are high, as a consequence the net resource value accruing to the forest owner remains low.4

The net resource value illustration of includes the effect of further processing. As the illustration is on output volume basis, the price should cover the cost of the whole log input, according to yields of various processes. Consequently, primary and secondary processing need to cover higher resource value per unit of output. The resulting stepped curve between net source value and value added reflects the relative income shares of tropical logs on one hand and other factors of production (capital, labor and energy) on the other. It is important to note that it is often the net resource value, accruing to forest owners, which has the highest pressure to adjust when, for example, the market conditions deteriorate.

The market access of forest products may become threatened from several directions. This situation is illustrated in figure 2.2. The classic case is the import tariffs stipulated by the importing nations. These have commonly been reduced, and logs are often entering without tariffs. But tariffs still prevail for higher value added, i.e. further processed tropical wood products. This tariff escalation functions as a hindrance for producer development effort to add value to production. The local importer in the consumer country now faces a higher price, and is forced to consider alternative sources. The alternative sources may include an exporter with preferential treatment from where the imports have lower tariffs. In the worst case the purchase decision is made in favor of local timber or substitute material.

Market access effects from the supply side of the tropical timber trade are somewhat indirect but are becoming more important. One issue is illegal operations in forest and trade. Firstly, the illegal operations affect negatively the long-term sustainability of forestry. In terms of the market, the illegally harvested timber adds to the cost of overall operations in several ways. The stolen timber volume often enters the legal market and may thus have a negative effect on price formation. On the other hand, it may get smuggled out of the country and thus not be

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4 The most distant operations in difficult conditions, may justify higher costs. Usually then the sales prices reflect this. As explained above, the present illustration can not fully account for variation for species, neither can it cover location specifics.
available for value added processing. Secondly, it does not contribute to the management, rent capture (concession fee or stumpage income) or fiscal base.

Illegal timber enters the non-transparent gray market, and the illegal operations are irresponsible for many of the SFM cost items. As a result, there is a tendency to be offering timber for below the cost of legal operations. This illegal supply is likely to have a leveraged downward pressure on prices, which harms the overall market, from the legal producers’ point of view in the short run, and from the global point of view in the longer run.

The issue of cost internalization is a broad one. The assessment of the environmental and social costs is complicated due to qualitative nature of many effects and the long run and global perspectives to the accrual of the benefits and costs. Without the full cost internalization, the market does not fully reflect the environmental and social costs. In such a situation, the output, which is based on unsustainable practices, may appear too attractive (low cost) than products based on SFM. Figure 2.2 summarizes the economic effect of market access improvement.

Figure 2.2 illustrates some of the main measures to reduce the effects of constraints to open markets, and the types of effects that these measures are likely to have. Further reduction in tariffs, and lowering of the steep tariff escalation, reduce the effective price level at the consumer country importer of tropical timber. Lowered prices increase the probability of a positive purchase decision. Especially if the measure has been discriminatory in relation to key competitors, the elasticity of the purchase response may be very high (i.e. 1% price reduction would result in an increase of more than 1% in volume).

The second group of measures with somewhat similar effects compared to tariff reduction, is related to inefficient in-border procedures. The inefficient border procedures increase the transaction costs unnecessarily. Various studies have estimated the cost of inefficient border procedures to cost anywhere between 2-15% of the value of trade but these estimates are not specific to tropical timber. Kléitz (2002) warns against generalizing the results of such studies, but some studies estimate that the total transaction costs are in the range of 7-10% of trade value.

The benefits of trade facilitation have been found to be at about 1-5% of the total world trade value. Even if the trade of tropical timber would already be one of the most efficient ones compared to the above range of estimates, it is still likely that savings of one percentage point or more of the trade value could be possible from improvement of the efficiency of cross-border transactions. In other words the savings in transaction costs could be around 10%.

The success rate in combating illegal logging relates directly to the resource base, which can be put under SFM and to the use in which it is meant to be according to the land-use plan. This will increase the legal resource base, add to the allowable legal harvesting volume and bring operations to a wider fiscal base. The actual net loss from both economic and environmental point of view is in a successful case converted to a net gain. The consumer countries are increasingly searching sources for “legal and sustainable wood procurement”. By building evidence for such successful action can again have a leveraged effect on a wider resource base (e.g. national level reputation).
Internalization of environmental and social costs increases local welfare as well as local and global environmental services. Internalization of the costs would be a prerequisite, a necessary but not a sufficient condition, for implementing a funding mechanism for sustainable practices. Often measures to implement climatic, bio-diversity and social goals are mutually supportive. Improved performance in terms of SFM is important especially from the point of view of the markets with most critical attitudes towards “sustainability and legality” of the tropical wood sources. Some of these markets have formalized market access criteria of tropical timber. To enter such markets, evidence is required on the performance. Certification of origin and a validated chain-of-custody (COC) contribute towards this goal. SFM certification at a high level of standard could be further contributing to the credibility of the source.

2.5 Conclusions from Conceptual Introduction

- Trade is beneficial to development, and to SFM, if governance conditions are in place. Some economies still use protective measures, including barriers to trade. Some of these measures may be a partial remedy to structural problems. The governance conditions will be put to a historical test in a case where trade liberalization is implemented. The danger is that the governance fails to guide a nation through the pressures of an opening international market. This is often the case, especially in developing economies. In the long run, further liberalization of trade with domestic structural changes, can move the global and local economies towards higher welfare, simultaneously with better, sustained forest management.

- A large range of potential policies and measures exist to improve the market access of forest products. The quantitative effects of the improved market access efforts are on several fronts:
  - Reduced tariffs, and less steep tariff escalation, reduce import prices and thus expand the markets along the consumers’ demand curve
  - Trade facilitation reduces the cost of customs procedures and other border transactions. The net effect from these is similar to tariff reductions. The product appears more economical for the importer, who is likely to increase purchases
  - The final result from tariff reduction and facilitation potentially enhances the net resource value of the tropical timber resource
  - Successful combating of illegal forest practices can bring a larger resource base under legal and effective environmental and forest management. This increases to the volume of supplies, adds to the net resource value, and contributes to a wider fiscal base
  - Internalizing the environmental and social externalities increases welfare and the level of local and global environmental services. This does not come without cost, but does increase the overall cost level of resource management
  - Evidence of SFM improves the credibility and trust of the importers, opening up some critical markets, and thus increasing demand for tropical timber.
3. OVERVIEW OF TRADE FLOWS OF FOREST PRODUCTS

3.1 Structure of Global Trade in Forest Products

3.1.1 Structure of Production and Trade of Forest Products

Figure 3.1 Gross Value of Interregional Trade in Raw Wood in 2000

Figure 3.1 illustrates the global wood raw material trade in terms of gross trade values between main trading regions. The gross value aggregates the flows to both directions. Thus the measure includes cross-haulage (and is different from the logic of figure 0.1, which is used to illustrate the net flow directions globally). The gross values, as in figure 3.1 above, are useful in indicating the overall trading activity. This again is relevant, for example, from the point of view of a tax base of tariffs. The intra-regional flows are here excluded on the purpose of concentrating on main global view.

Figure 3.1 should be compared with similar illustrations of global interregional trade flows of further processed forest products (Figures 3.3, 3.5, 3.17 and 3.18). One can notice that the long distance trade of raw material is rather limited, especially in value terms as presented here. The key driver is the better transportability of processed products – if the market access is there!

Figure 3.2 illustrates the global trade in hardwood logs during the period of 1980-2000. Hardwood logs have been selected as an example here, due to their importance for developing regions, and to indicate the competition between regions. The measure used is gross export...
volume, \textit{i.e.} direct sum of country level exports. The dominance of tropical logs in the international trade of hardwood logs has diminished over the years. Especially during the 1990s, the share of tropical logs has decreased from about 75\% of the trade to clearly less than one half. It is important to note that the overall trend in the hardwood log trade has been almost horizontal, with some growth in past years. The temperate and boreal logs have substituted for the tropical logs, which have become relatively scarce in supply.

\textbf{Figure 3.2 World Trade in Tropical and Total Hardwood Logs in 1980-2000}

Figure 3.3 illustrates the global sawnwood trade in terms of gross trade values between main trading regions, in the year 2000. In comparison with the log trade of figure 3.1, most of the flow values of sawnwood are higher between respective interregional trading partnerships. The exceptions are Russia and Japan, which are large traders in wood raw material. This is just one pair-wise comparison between product groups, and should not be given much more than a descriptive meaning.

Figure 3.4 illustrates the development of the global hardwood sawnwood exports, for tropical and other hardwood sawnwood separately, in the period of 1980-2000. In hardwood sawnwood, non-tropical exports have grown faster than tropical. The development can be related to the annual snapshot of 2000 with the flows in the global trade in Figure 3.3. The global overall view reveals that the tropical regions have still a quite important role to play in the global interregional trade in sawnwood (even if supply and demand investigation reveals that an increasing share is getting consumed locally). One has to bear in mind that most of the interregional trade flows of figure 3.3, coming from outside of the tropical zone, are of coniferous species.
Figure 3.3 Gross Value of Interregional Trade in Sawnwood in 2000

Source: UN Comtrade, WFSE/EFI, FAOSTAT

Figure 3.4 Global Exports of Hardwood Sawnwood in 1980–2000

* Tropical includes ITTO members only
Source: Annual Reviews and Assessments of ITTO, FAOSTAT
Figure 3.5 Gross Value of Interregional Trade in Wood Panels in 2000

![Gross Value of Interregional Trade in Wood Panels in 2000](image)

Source: UN Comtrade, WFSE/EFI, FAOSTAT

Figure 3.6 Global Export of Plywood in 1980-2000

![Global Export of Plywood in 1980-2000](image)

* Tropical includes ITTO members

Source: Annual Reviews and Assessments of ITTO, FAOSTAT
Figure 3.5 illustrates the global wood based panel trade in terms of gross trade values between main trading regions. The economic transportability plays a major role in wood based panel markets. Particle board and fiberboard are mainly local, and almost totally intra-regional trade items. The key products in the interregional trade are the veneer and plywood. Tropical plywood was the success story of the 1980’s and early 1990’s. In the global annual snapshot of the year 2000, in figure 3.5 this is reflected especially as a major flow of panels from other Asia to Japan.

Figure 3.6 illustrates the development of global plywood exports. It is important to note that no separation is made by species. Softwood plywood is important component of non-tropical plywood. The global trade in plywood had been increasing very fast until the mid-1990s. The dominant component of the growth was tropical plywood. The whole plywood trade slowed in the latter part of 1990s and tropical plywood suffered more than the rest. Figure 3.5 illustrates the development in global production of plywood. While the total production has continued a slow trend-wise growth, the tropical plywood production has remained at roughly the same levels for almost ten years.

3.1.2 Origins and Destinations of Developing World’s Trade in Forest Products

As illustrated in the previous figures, the tropical (and developing world) trade has been fluctuating widely both due to global economic cycle, and in terms of its relative market share. Some of the main reallocations of the forest product trade from developing countries have taken place in Asia. After a very strong expansion of Asian plywood and sawnwood capacity and exports, the importers relative shares have changed as well. Mainly China has increased its share while the largest importer, Japan, has decreased its imports somewhat.

Figure 3.7 illustrates the development of the share of tropical sawnwood in the hardwood sawnwood consumption in China. The tropical sawnwood has been a very small player in China, until recently. The consumption share of tropical sawnwood increased slowly until 1996, after which the tropical share increase dramatically, from under 5% to almost 30% of hardwood sawnwood consumption.

Figure 3.8 illustrates that the increase in the Chinese imports has not covered all the tropical products in a similar manner. Instead, as figure 3.8 illustrates, the share of tropical plywood has decreased, while plywood from other sources has increased its share.
Figure 3.7 Tropical and Other Hardwood Sawnwood in China, 1980-2000

* Tropical includes ITTO members only
Source: Annual Reviews and Assessments of ITTO, FAOSTAT

Figure 3.8 Shares of Tropical and Other Plywood in China, 1980-2000

* Tropical includes ITTO members only
Source: Annual Reviews and Assessments of ITTO, FAOSTAT

3.1.3 Developing World’s Trade Share in Consumption of Other Regions

Figure 3.9 illustrates the development of the import market shares of the main importer regions in the global trade in tropical logs. The import market has gone through very large structural changes. Firstly, Japan has trend-wise decreased its import market share, especially in the 1990s. Even here, the pattern is not smooth. China has very quickly taken a large market share in the tropical log imports in the late 1990s, increasing its share from 10% to almost 50%. This is the largest single shift in the tropical timber trade in the last five years. European Union countries reduced their share as tropical log importers quite dramatically...
since 1995. In effect, EU’s decrease in share is almost as dramatic as the growth of Chinese imports. However, EU still has an import market share of about 20% in global tropical log trade. The trade in logs is concentrating, as Japan, China and EU have increased their joint share in the 1990s.

Figure 3.10 illustrates the development in the import market shares in the global trade of the main consumer regions of tropical sawnwood in 1980-2000. Japan has radically decreased its import share of tropical sawnwood in the latter part of the 1990s. China has effectively compensated for the change, at least in volume terms. EU has maintained its share at over 40%, USA has remained at 5-8% level, while the rest of the world has decreased in import share of tropical sawnwood.

**Figure 3.9 Import Shares of Consumers in Tropical Logs in 1980-2000**

![Graph showing import shares of tropical logs](image)

*Source: Annual Reviews and Assessments of ITTO, FAOSTAT
EU= present 15 EU members*
3.2 New Directions of Developing World’s Trade in Forest Products

3.2.1 Market Performance: Competitiveness, Market Shares and Prices

Figures 3.11-3.13 illustrate the results from the trade value and price analysis. The attempt was to capture the overall shifts in the markets. The prices were ranked in increasing order and cumulative trading volumes were calculated. The results have been plotted in these figures. As the volumes and prices both react to demand and supply shifts, this was used as a method to visualize the overall shifts in the market. In these figures, the total annual sales value (at importers) is represented by the area under the curve.

Figure 3-11 illustrates the shift in the markets of tropical logs, at consumer ports around the world. The shift between 1996 and 2000 shows that the period has seen an increase in the supply of tropical logs. The expansion is about 20% in volume terms. At the same time, the prices have declined. Obviously, the demand has not been strong enough to maintain the price level, while the supply has expanded.

Source: Annual Reviews and Assessments of ITTO, FAOSTAT
EU= present 15 EU members
Figure 3.11 Shifts in Tropical Log Markets between 1996 and 2000

**Estimated Prices and Volumes at ITTO Consumers**

USD/cum

Horizontal axis = Supply volume (Million cum)

![Graph showing shifts in tropical log markets between 1996 and 2000](image)

Source: Annual Reviews and Assessments, ITTO 1996-2001

Figure 3.12 Shifts in Tropical Sawnwood Markets between 1996 and 2000

**Estimated Prices and Volumes at ITTO Consumers**

USD/cum

Horizontal axis = Supply volume (Million cum)

![Graph showing shifts in tropical sawnwood markets between 1996 and 2000](image)

Source: Annual Reviews and Assessments, ITTO 1996-2001
Figure 3.12 illustrates the shift in the markets of tropical sawnwood, at consumer ports around the world. The shift between 1996 and 2000 shows that the period has seen a very strong expansion of tropical sawnwood production. Several features can be noticed. Firstly, the expansion has been around 30% from the 1996 depressed value. Secondly, the expansion has happened in the low cost (efficient) end of the supply. Accordingly, the market has absorbed almost two million m$^3$ of additional tropical sawnwood. While the new efficient capacity has found markets at prices closer to the commodity end of the continuum, the other production has been able to largely maintain its price level. With this kind of phenomenon, the average price is going down, expanding the market, while the often higher value species and grades and even niches maintain their markets.

Finally, figure 3.13 illustrates the shift, between 1996 and 2000, in the markets of tropical plywood, at consumer ports around the world. Plywood supply has stayed at the level of the year 1996. What is dramatic, is the simultaneous downward shift of the prices. While the producers have been able to maintain their volumes as well as market shares, the demand has not been strong enough to maintain the 1996 price level.

**Figure 3.13 Shifts in Tropical Plywood Markets, 1995-2000**

![Graph showing shifts in tropical plywood markets, 1995-2000.](graph)

*Source: Annual Reviews and Assessments, ITTO 1996-2001*
3.2.2 Evolution of Prices of Developing World’s Trade in Forest Products

Figure 3.14 is a sample illustration of price development of tropical timber. It confirms the downward shift in prices between 1999-2000. Since then the prices have strengthened and reached historic highs in nominal terms.

3.2.3 Value Added Trade in Developing World’s Trade Flows

Exports of Major Producers of SPWP

Table 3.1 summarizes the export development of secondary processed wood products (SPWP) from ITTO producer countries in 1996-2000. In the descriptions above, the exports of SPWP was measured by approximate estimates of its volume. A more meaningful presentation is in value terms, as in Table 3.1. This table differentiates the export destinations by ITTO producers, consumers, and the world total. One can conclude that only 1% was traded between ITTO producers, and that about 10% were directed to outside ITTO member countries.

Asia Pacific region dominates the exports of tropical SPWP and covers almost 85% of the export value. Most of the remaining exports come from Latin America. The very encouraging phenomenon is the strong recovery and overall growth of SPWP exports in 1999 and 2000. Indonesia, Malaysia, Thailand, the Philippines and Brazil have all reached their record exports in those years. In total the exports of SPWP has grown by 28% in four years.
Table 3.1 Developing Country Exports of Secondary Wood Products

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<td>Asia Pacific</td>
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<td>581</td>
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<td>4</td>
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<td>Producers</td>
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<td>4 313</td>
<td>4 920</td>
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Source: Annual Review and Assessment, ITTO 2001

Imports of SPWP

Figure 3.15 demonstrates that the import market of the secondary processed wood products (SPWP) is a very dynamic one. It is important to note that this table includes all SPWP, where tropical SPWP is just one component. However, the table makes a distinction between tropical SPWP and the other.

The most important conclusion from table 3.2 is that while the SPWP market has been growing fast (18% in four years), the imports of SPWP from tropical sources has outpaced the average global growth and increased by 26% in four years. The total net value by major importers of SPWP from ITTO producer countries was at 5.2 billion USD in the year 2000.

Figure 3.15 Major Importer of Secondary Wood Products 2000 in USD million

Source: Annual Reviews and Assessments of ITTO 2001
UK, France and Belgium have all clearly increased their imports of SPWP from tropical countries. The Netherlands is a special case, it has increased its imports strongly but most of it from outside of tropics, which again have suffered and lost in market share. Also, the case of USA is worth a closer look, it has increased its SPWP imports by a massive 88% in four years (to a level of over 12 billion USD, over twice of the total tropical SPWP trade value). Even if the tropical SPWP imports to USA have increased by 50% in four years, they have still lost in market share.

**Tropical Timber Markets by Level of Value Added**

Figure 3.16 illustrates the value shares in the Japanese tropical timber imports in 1995-2000. The structural change has been quite fast. The value share of logs has dropped from 27% to 15%. The value share of plywood has increased from under 40% to 50%. The value share of sawnwood has slightly decreased to about 10%. Most importantly, the value share in SPWP has increased from 15% to 25% of tropical timber import value in five years.

Figure 3.17 on Chinese tropical timber imports by value demonstrates a completely different pattern of behavior. The value shares show a dramatic decrease in the degree of processing. Logs in 2000 make over 40% of the total value of Chinese imports of tropical timber. Other primary processed timber products make over 50% of the import value, the value of SPWP is under 5%.

**Figure 3.16 Value Shares of Tropical Wood Products in Japanese Imports**

![Graph showing the value shares of tropical wood products in Japanese imports from 1995 to 2000.](image)

*Source: Annual Reviews and Assessments, ITTO 1996-2001*
Figure 3.17 Value Shares of Tropical Wood Products in Chinese Imports

![Value Shares of Tropical Wood Products in Chinese Imports](image)

Source: Annual Reviews and Assessments, ITTO 1996-2001

Figure 3.18 Gross Value of Interregional Trade in Wood Pulp in 2000

![Gross Value of Interregional Trade in Wood Pulp in 2000](image)

Source: UN Comtrade, WFSE/EFI, FAOSTAT
Figure 3.19 Gross Value of Interregional Trade in Paper in 2000

Source: UN Comtrade, WFSE/EFI, FAOSTAT
3.2.4 Temperate and Boreal Hardwood as Competitor to Developing World

Temperate and Boreal Competition in Chinese Markets

China has increased its wood imports very fast during recent years, especially in 1999. In the year 2000 China already imported more than 13 million m$^3$ of logs, of which 6.4 million m$^3$ of softwood logs and 7.2 million m$^3$ of hardwood logs. Tropical log imports were at 6.1 million m$^3$, or 85% of the total hardwood log imports. The tropical log imports to China continued increasing in the year 2001, reaching 7.3 million m$^3$. Thus the tropical logs have had an excellent market performance in China.

The patterns of Chinese consumption of imported raw material and semi-processed materials (such as sawnwood) are explained, in part, by China’s expanding exports of wood products. So, it is important to note that an important share continues to third markets in the form of value added products.

In 2000 China imported 3.1 million m$^3$ of hardwood sawnwood. Almost 2.0 million m$^3$ of this volume was tropical, the remaining 1.1 million m$^3$ was from temperate and boreal sources. In the period of 1997-2000 tropical sawnwood maintained its market share (at 62-64%) in the Chinese imports. This does indicate competitiveness of tropical sawnwood in the Chinese import markets, and likely non-existence of high barriers or impediments to market access.

Temperate and Boreal Competition in Japanese Markets

The Japanese tropical log imports have declined from 5.8 million m$^3$ in 1997 to 2.1 million m$^3$ in the year 2001. Tropical sawnwood imports decreased from 1.1 to 0.6 million m$^3$ in the 1997-2001 period. Tropical plywood imports to Japan have remained on a high level (4.8 and 4.5 million m$^3$ for 1997 and 2001, respectively).

Temperate and boreal hardwood logs have maintained an important and stable import market in Japan, varying in the range of 0.4-0.6 million m$^3$ in 1997-2001. As the tropical log market has declined, the relative share of temperate or boreal hardwood logs has increased from 9% in 1997 to 18% of hardwood log imports to Japan, in the year 2001.

The analysis of temperate and boreal hardwood sawnwood development is somewhat difficult, as the statistics tend to differ. However, the indications are that the temperate and boreal hardwood sawnwood has maintained its markets quite well, while the tropical hardwood sawnwood market has declined in Japan since the year 1997. In the hardwood plywood markets, the role of temperate and boreal hardwoods is almost negligible in Japan.

In conclusion, the part of the Japanese sawnwood and plywood production, which uses temperate hardwoods, has been declining, but more slowly than tropical log based production. The consumption and imports of temperate hardwood sawnwood and plywood seem to have maintained their levels rather well in 1997-2001. The structural adjustment in the past decade has not been as drastic as that of tropical sawnwood and plywood trade. In tropical plywood, the competitive edge has clearly shifted and stayed with tropical supplier countries.
3.2.5 Non-Wood Competition to Forest Products Trade

An earlier study on market access reports survey responses on non-wood substitutes for tropical hardwood in various end-use markets. The following competing products and end-uses were identified (cf. Choon & Ginnings, 1999):

<table>
<thead>
<tr>
<th>Product</th>
<th>End use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastics</td>
<td>windows, doors, furniture, siding, cabinets, packaging</td>
</tr>
<tr>
<td>Plastic laminates</td>
<td>veneer</td>
</tr>
<tr>
<td>Vinyl tiles</td>
<td>flooring</td>
</tr>
<tr>
<td>Cement/concrete</td>
<td>structural construction, poles, railway sleepers</td>
</tr>
<tr>
<td>Gypsum panels</td>
<td>partitions, wall lining</td>
</tr>
<tr>
<td>Ceramic tiles</td>
<td>flooring</td>
</tr>
<tr>
<td>Cement fiberboard</td>
<td>ceilings, wall lining, cladding</td>
</tr>
<tr>
<td>Bricks</td>
<td>construction</td>
</tr>
<tr>
<td>Aluminum</td>
<td>window and door frames, siding</td>
</tr>
<tr>
<td>Steel</td>
<td>structural joists, beams, studs, furniture</td>
</tr>
<tr>
<td>Glass</td>
<td>doors, furniture</td>
</tr>
</tbody>
</table>

The authors noted that although some respondents see an impact by alternatives and substitutes on their present tropical timber trade, several indicate that they expect this to change in the future. One of the issues, which were expected to become important, was the environmental cost of alternatives such as aluminum, steel and plastics.

Sustainability issues keep becoming more important, and are decisive e.g. when considering the “procurement from legal and sustainable sources”. The procurement policies and rules, again, may have a decisive role in affecting the competitiveness of various products in the purchase decision. A study prepared by the Subgroup Substitution Project of the Joint FAO/ECE Team in the Forest Industries Sector, stated as follows: “In the past, the most important environmental issues for manufacturing industries were emissions, discharges and waste. These are still very important issues and likely to remain high on the environmental agenda. However, increasingly the focus is shifting towards raw material procurement.” (Burrows and Sanness, 1998)

Another study project (Rametsteiner, E., et al.1998) researched the perceived environmental friendliness by consumers in Germany, France, Italy and UK. Similarly to some other studies, wood ranked high. In this study, a difference was made between domestic wood and tropical wood. The “environmental friendliness” of tropical wood ranked lower than that of domestic wood or glass, but higher than other substitute material, including plastic, aluminum and steel. The bottom line may be, as stated by Burrows and Sanness (1998): “…The report concludes that substitution of forest products by competing products is accelerating. In some cases, substitution is resulting from environmental claims that are erroneous, incomplete and unproven”. The study continues: “There is a need for international cooperation and action to meet these challenges because of consumers’ growing awareness of environmental issues, their ignorance concerning the forest and forest industry sector and continuing focus on the sector by environmental organizations.”
3.3 Conclusions from Description of Forest Products Trade

- As described in this chapter, the long distance trade of raw material is rather limited, especially in value terms as presented here. The key driver is the better transportability of processed products – if the market access is there!

- Traditionally, trade in logs has been an important export income source for developing countries. The dominance of tropical logs in the international trade of hardwood logs has diminished over the years. Especially during the 1990s, the share of tropical logs has decreased from about 75% of the trade to clearly less than one half. It is important to note that the overall trend in the hardwood log trade has been almost horizontal, with some growth in past years. The temperate and boreal logs have substituted for the tropical logs, which have become relatively scarce in supply.

- Globally, the supply of wood fibre will be increasingly met from managed natural forests or plantations. The role of tropical forests as an excess supply area, is necessarily becoming smaller in relative terms. The global policy issue is, if the tropical forests will be valued for the full range of services they are able to provide. The danger is that policies and investment support in the fast growing plantation forestry may reduce interest and perceived value of the tropical forests, thus speeding up the clearance for other uses.

- Most of the value created through international exchange of forest based products comes from value added products. Measured by the value of inter-regional gross trade (as was used in map illustrations of this chapter), pulp and paper create more than ten times the value of wood raw materials.

- A number of developing tropical countries have been able to create sizeable export trade by shifting the production to value added products. A range of policies and other measures have been used to facilitate this development. These measures have included instruments that have established market access barriers or impediments (such as log export taxes or log bans). Some other instruments have been closely related to market access issues (such as subsidized industrial development, fiscal incentive schemes or low concession fees on wood from government owned forests).

- Successful industrial wood based export countries in the tropics have become a part of the highly competitive global trade. There are signs that the prices of commodities have become depressed. Increasing liberalization is likely to further enhance the competition. The challenge is to keep the value chain in such shape that the forest resource retains a value high enough to support the SFM of the natural resource.
4. MARKET ACCESS IN RELATION TO FOREST BASED TRADE

4.1 Globalization and Market Access Impacts on Forest Product Trade

Globalization including a variety of aspects of relevance to forestry and forest based trade. The driving forces include: liberalization of trade, influence of transnational companies (TNC), implementation of international agreements, including legal regime on trade. The influences of these developments are very complex, and both positive and negative impacts can be observed on the level of forest products trade and forest governance.

The risk in trade liberalization, i.e. elimination of market access barriers and impediments, is that it may expose a local economy, society and forestry sector, which are not capable of controlling the situation. Trade, industry, harvesting and forest management may be vulnerable to increased economic pressures with negative structural impacts, especially in case where the inherent cost competitiveness is low. The government and private sectors are both vulnerable to suffering from policy failures, and cases of rapid decline of governance have been reported, including in the forest sector. In effect, the opening up of the trade is likely to function as a “magnifier” and tends to amplify the inherent weaknesses.

The global tariff barriers to trade declined significantly as a result from successive GATT negotiation rounds. The Kennedy Round, completed in 1967, reduced average tariffs by 35%. The Tokyo Round, completed in 1979, reduced average tariffs by 6%. The Uruguay Round of GATT, completed in 1994, reduced most import tariffs on industrial products by one-third in the period of 1994 to 1999.

Chapter 7 of this report attempts to summarize some of the key results from the empirical studies on trade liberalization. In addition to purely historical observation of trade developments and their impacts, global and regional model simulation studies have been carried out. These studies have the benefit of rigorous specification of the basis and the assumptions. Simulation of different scenarios has helped to improve understanding of forest related phenomena during the era of globalization and reduced barriers and impediments to trade.

4.2 National Policy Instruments and Market Access of Forest Products

4.2.1 Exporter Related Barriers to Trade

Export Tariffs, Taxes and Quotas

Export restrictions are still of considerable significance. They include total bans, export quotas, or selective bans based on species; direct charges such as export taxes or export levies; indirect quantitative restrictions due to controls on harvest levels; and administrative controls such as permits and licenses. Export restrictions are common in most developing countries and in some developed countries.

In the past, export taxes were used by tropical timber exporting countries primarily as a means to raise revenue from exports of roundwood and many countries continue with this practice. In a way, there was an option to collect the revenues either at the border or at stumpage. Typical export taxes were in the range of 10-20% for logs. The export taxes for processed...
products, sawnwood, veneer and plywood were usually negligible or small. With an increasing need for economic development, promotion of forest-based industries has become more important. The policy objectives have generally shifted to industrial investment incentives, and export taxes were replaced by strategic export bans or restrictions.

The export bans have been criticized from the point of view of effectiveness and cost. For example, the efficiency of wood conversion stayed low, partially due to export restrictions. The restrictions worked in the sense that they lowered competition on the roundwood markets, and thus lowered log prices. From an economic production function point of view, they caused substitution of wood for other factors of production. The end result was wasteful wood raw material use, *i.e.* low product recovery rates from logs, and unnecessarily high harvesting area and impact on forests. Some studies have indicated that the restrictions have been effective in contributing to the industrial development goal, but at a substantial financial cost (Barbier et al. 1995).

A key conclusion to be drawn from the Asia-Pacific experience is that logging bans are neither inherently good nor bad as natural forest conservation and protection policy instruments. Logging restrictions are simply one set of policy tools available to decision-makers within a spectrum of options and alternatives. If bans are adapted selectively and used in combination with other complementary policy instruments, they can help assure that natural forests will be sustained and will continue to contribute to enhancing the well-being of the peoples (Durst et al. 2001).

Export restrictions are commonly used to encourage and promote greater domestic processing by protecting local industry from import competition, enabling the local industry to obtain logs at cheaper prices, encouraging industry into further processing by banning the export in log form, *etc.* Since export bans are technically illegal under Article XI of GATT, many countries (such as Indonesia and Malaysia) are now turning to other measures, ranging from export taxes to permits and licenses, in place of direct quantitative controls. In recent years the focus has shifted towards encouragement of value added timber products, including placing export controls on intermediate products such as sawnwood, and even more recently towards forest sustainability issues, where the intent is to reduce overall pressure on the resource. (Bourke, 1999)

4.2.2 Importer Related Barriers to Trade

Trade in forest-based products is often subject to tariff and non-tariff barriers. Even though the former have been significantly reduced as the result of the Uruguay Round, they still represent a restriction, particularly in the context of tariff escalation (higher tariffs are applied to value-added products than raw material or intermediate products). The impact of tariff reductions is limited by the fact that some large importers did not participate in the Uruguay Round (*e.g.* China). However, a number of countries that did not participate in the Uruguay Round, have by now undergone accession (most notably China), and their tariffs are on their way down also.

Even low tariffs may still be significant in some cases, especially where long distances are involved because the duty is charged on the basis of CIF value, rather than FOB value. In addition, tariff escalation for some finished products, *e.g.* for panel products, builders’ woodwork items and furniture is significant. Lower tariff barriers for developing countries, in the form of GSPs, which are discretionary, tend to retain high tariffs for these finished
products. It is unclear whether they are enough to exclude some developing countries from exporting such products to developed countries since there may be other factors, which may influence that outcome (Bourke and Leitch 2000). Nonetheless, one impact of this tariff escalation may be that developing countries are increasingly dependent on raw material and basic commodity export. Annex 3 summarizes selected relevant tariffs of wood products.

Codes and standards are necessary in international trade as they define the criteria of products and services from the producer to the consumer. They include importer country building codes and approval systems. Testing procedures with respect to various standards are a part of the specification. The required testing procedures may be not easily adapted to the local conditions. Code harmonization, and creation of performance-based standards will facilitate trade but their development has typically progressed only slowly.

Standards in relation to plant health are generally acknowledged legitimate. However, the complexity and severity of the requirements may have an effect on trade and be interpreted as impediment by exporters.

In recent years, environmentally motivated NTMs have become more common. The WTO rules make some exceptions to the main trade rules, based e.g. on conservation of exhaustible natural resources. As a main rule, such environmental measures as voluntary certification are considered to be outside the WTO rules. There is a concern about discriminatory treatment, as the same standards are not applied to all countries, and especially to all competing materials.

Standardization is an important NTM issue. For example, the International Technical Tropical Timber Association (ATIBT) has a “Commission 3, Standards and Uses”. This commission works on standards and rules effecting tropical timber and its products. The commission works towards the progress of tropical wood standardization as well as its integration in the new standards of utilization.

The two principal missions of this commission are:

- To represent the ATIBT in front of the large international standardization organizations such as the ISO and CEN
- Compiling and promoting of the ATIBT International grading and measuring rules

To date the achievements of the commission are the following:

- Drawing up of a publication entitled: “Terminology of round and sawn tropical wood”, due out for publication this year
- Following and evaluation of the African sawnwood and Okoume rules, in collaboration with the ATIBT arbitration chamber
- Commission 3 is currently working on the realization of a practical commercialization guide for peeled, sliced and sawn veneers. The object of this guide is to favor the commercialization and regulation of these products. This document is neither standard, nor a regulation, and in addition integrates the existing CEN and ISO recommendations concerning plywood (It is planned that the guide will be available for distribution by the end of 2002).

4.2.3 Development of Tariffs, Taxes, Quotas and Subsidies

Subsidies are relatively common in the forestry sector to promote reforestation and other investment where the returns are too low to attract private investment. Subsidies have also
been used for strategic reasons, e.g. to create a critical mass of wood supply to encourage industrial investment. From the point of view of trade policy, incentives, particularly financial subsidies, influence the competitiveness of individual producers. For example, subsidies (from low royalty rates) have been a trade issue in the bilateral negotiations on a softwood lumber agreement between Canada and the United States. But subsidies are a concern for sustainability of forest management also, for example, in natural forests where they can encourage excessive harvesting levels. Subsidies to alternative land-uses can also lead to undue clearing of natural forest land.

The WTO Agreement on Subsidies and Countervailing Measures specifies disciplines on the granting of subsidies and taking action against subsidies given by other countries. Both production and export subsidies are recognized. Three categories of subsidy are identified: (i) prohibited subsidy, (ii) permissible subsidy, and (iii) actionable subsidy (otherwise permissible, except if they cause injury or threat to domestic industry of the importing country).

Among the permissible subsidies are (a) non-specific subsidy (with regard to industrial unit or sector), and (b) subsidies which are specific but meant for research and development purposes of disadvantaged regions or for environmental purposes. Counter measures and countervailing duties can be imposed by injured importing countries in certain circumstances. The Subsidies Agreement establishes special provisions for developing countries, including exemptions from the prohibition of export subsidies in countries with a per capita GNP of less than USD 1,000 per annum.

The low rent capture in tropical forest concessions prevailing in many countries is an implicit subsidy that has been considered one of the main reasons for excessive harvesting and forest degradation. While such implicit subsidies may not easily qualify as a subsidy under the WTO criteria (and therefore are not subject to WTO discipline), they are a source of serious concern (e.g. IPF 1997).

Fiscal incentive schemes have enabled such countries as Brazil, Chile and Uruguay to develop large-scale export-oriented industries. The experience of Brazil indicates that, when the fiscal incentives are removed, the supported activity (tree planting in this case) will drastically decline. From the environmental viewpoint, the expansion of industrial plantations in these countries, and elsewhere, has been criticized as natural forest area has been converted to “monoculture”. More recently, national legislation has been instituted to seek an acceptable balance between the objectives of conservation and economic development. In Brazil, for example, 20% of each holding used for tree planting is to be reserved for natural vegetation as a “legal reserve”.

The dispute between USA and Canada on the countervailing duty to compensate forestry subsidies shows that the issue can be raised in trade negotiations even though forest policies have largely been perceived as a national issue. The USA has claimed that Canada subsidizes wood production through low royalty fees from forest concessions, such that the production cost is lower than economically justified. At the same time, it is claimed that production in the US national forests is also subsidized, as many of the costs are financed by Congressional appropriations (Repetto et al. 1992). Such subsidies expand the export supply of softwoods and temperate hardwoods from the US and Canada. There is a risk that such subsidies are

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5 For the main body of WTO legislation, see Section 5.1.
encouraging oversupply and overuse, resulting in negative environmental impacts \((e.g., \text{CO}_2\text{ emissions})\) \((cf.\ \text{Repetto}\ 1993)\).

Another example of a subsidy in this context is government financial support to forest road construction to facilitate timber extraction. Environmental groups in USA have targeted these subsidies, to protect bio-diversity. It has been an issue in some European countries also.

It needs to be pointed out that subsidies in related sectors may have adverse environmental impacts on forests. Agricultural subsidies that make crop production or grazing an artificially attractive land use has led to conversion of natural forests \((\text{Laarman}\ 1995)\). Such conversion has proved to be unsustainable if the soil is too poor or gets depleted as a result of removal of the vegetation cover. Similar effects are observed in measures, which depress the market price of land. Within the WTO, agricultural subsidies are covered by the Agreement on Agriculture, not under the Agreement on Subsidies and Countervailing Measures.

Subsidies that make domestic prices differ from border prices risk generating external environmental cost, as they may promote wasteful production in resource use. In forestry however, subsidies are typically used to correct policy failures in a partial manner, rather than addressing such fundamental issues as under pricing. It is generally politically easier to apply subsidies than to remove them or increase stumpage prices on government lands. Subsidies in this context are not considered as trade policy instruments, but as stated above, they significantly affect production and, at the same time, the use and management of land resources, and thus impact on the environment.

The previous discussion has reviewed the impacts of production oriented subsidies. There are also environment-related subsidies through grants, tax concessions and other support schemes to promote research and development as well as implementation of sustainable forest management practices. Several notifications of information supporting the integration of environmental measures in the forestry sector have been made in the WTO \((\text{WTO}\ 1997)\).

In general, the elimination of subsidies could yield trade and environmental benefits. From the conservation point of view, subsidies as they have been applied in the past, have often encouraged land use for plantations with legitimate development objectives in mind. Without rules and disciplines that take into account conservation aspects, the impact of subsidies will often be negative. However, necessary incentives to set the process of forest management in motion in developing countries may require the use of well-targeted and temporary subsidies, which minimize rent seeking behavior \((\text{Hueth}\ 1995)\). Therefore, in addition to transparency, appropriate policy guidelines for the type of activities supported, are likely to be needed to avoid incentives in forestry from becoming a trade issue. Furthermore, a reconsideration of how the relevant trade rules might be adjusted to better support environmental ends would be appropriate \((\text{Simula}\ 1999)\).

**Empirical View on Tariffs and Escalation**

Figure 3.19 illustrates the post-Uruguay Round tariff levels of wood products by main industrialized regions. The main focus is on the tariff escalation. At least on the average regional level it seems clear that the processing stage is an important trade policy issues, and is reflected in the applied relative tariff rates. In general the tariffs escalate from raw materials to finished products, semi-finished products are often (but not always) in between.
Figure 4.1  Tariff Escalation: Wood Products in Developed Markets

Source: UNCTAD TRAINS, 2003; UNCTAD, 2003 (applied tariff rates)

Figure 4.2  Tariff Escalation: Wood Products in Developing Markets

Source: UNCTAD TRAINS, 2003; UNCTAD, 2003 (applied tariff rates)
Figure 3.20 illustrates the post-Uruguay Round tariff levels of wood products by main developing regions. Several conclusions can be made. While the main focus is still on the tariff escalation, the overall level of applied tariffs is dramatically higher compared with industrialized regions. The existence of escalation is very strongly demonstrated. In the two Asian sub-regions, the semi-finished tariff rates are lower than for raw materials or for finished goods.

As a general comment from figures 3.19 and 3.20, one can state that some scope for tariff liberalization remains even in the industrialized countries, especially in manufactured products. No scope for very dramatic tariff reductions remains in the developed regions. However, further allocation efficiency gains are still possible, and trade volumes involved are large. On the contrary, the tariff situation in the developing world is still very strongly restrictive and forms high barriers against international trade.

4.3 Other Policy Instruments and Forest Product Trade

4.3.1 International Trade Instruments and Forest Product Trade

In principle, and in enforcement of the international trade legislation, the forest-based products are treated in the same manner as any other internationally traded commodities. Of course, due to the nature of the products, certain aspects and regulations have more specific relevance. Such features include phyto-sanitary measures, concerning unwanted aspects of the bio-diversity of the place of origin. Section 5.2.4 covers more of phyto-sanitary measures.

Even after enforcement of the full arsenal of the international trade regime, a large number of technical and non-technical issues may remain unsettled. There are several groups of issues involved, including: (i) Environmental and conservation issues, (ii) Product quality issues, (iii) standards, and (iv) packaging, labelling and testing. Even if all technical hurdles would be overcome, important non-technical ones remain. These latter issues are often related non-trade policies of governments, or on preferences of the local consumers and local governments.

4.3.2 Non-tariff Barriers and Forest Based Trade

In addition to tariff related measures, various non-tariff barriers (NTBs) or non-tariff measures (NTMs) may be even more important, and their importance appears to be increasing (Bourke 1995). The NTMs can be defined as government laws, regulations, policies and practices that either protect domestically produced products from the full weight of foreign competition, or artificially stimulate the exports of particular domestic products.

The NTMs include both formal institutional measures designed to restrict or distort trade patterns, and other restrictions that act as impediments to trade. Even if incidence of NTMs is still high, some evidence indicates that at least regional reductions took place in the 1990s (Asia Pacific Economic Cooperation, APEC, 1997). However, a more recent APEC study identified that NTMs affect forestry and forest product trade in all APEC member economies.

Figures 4.3 and 4.4 illustrate recent occurrence of NTMs. Figure 4.3 looks at the situation from the point of view of developing countries exporting wood products. Figure 4.4 illustrates the situation from the point of view of developed countries, which export paper articles.

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6 Quad countries are: Canada, EU, Japan and USA
Annex 2 presents the coding of UNCTAD for measures of trade control measures. This illustrates how complicated and delicate issue NTM is.

**Figure 4.3** NTMs Facing Developing Country Wood Product Exports

![Graph showing NTMs facing developing country wood product exports](source)

*Source: Bora, et al. 2002 [% Frequency of non-tariff measures]*

**Figure 4.4** NTMs Facing Developed Country Paper Article Exports

![Graph showing NTMs facing developed country paper article exports](source)

*Source: Bora, et al. 2002 [% Frequency of non-tariff measures]*
The conclusion from the empirical investigation of non-tariff measures (NTMs) is that they are very frequent. Comparison of NTMs, that developing country wood product trade meets, and NTMs that developed country paper articles meet, reveals that the former have a much steeper NTM barrier to climb to have access to markets. This is especially true for developing countries trying to trade with the rich quad (Canada, EU, Japan and USA) markets.

4.3.3 Environmental Issues and Market Access of Forest Products

The environmental issues are often very central to market access of forest products, even if they are not part of the domain of GATT/WTO. The problem is that there is not one single, exhaustive and mutually complementary (to WTO) instrument that would govern the environmental part of the market access issues.

International environmental legislation comes to the rescue, in terms of environmental concerns of trade, only partially, and mostly indirectly. In terms of genetic origin of the forest based trade, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) provides an instrument, which is directly concerned about the genetic origin of the traded commodity. CITES lists are easy to implement if the customs procedures are in place. Its weakness from the ecological sustainability point of view is that it does not necessarily relate to the wellbeing of the eco-systems or habitats at the origin. Section 6.1.1 covers more of CITES.

The other Multilateral Environmental Agreements (MEAs), such as the Convention of Biological Diversity (CBD) and United Nations Framework Convention on Climate Change (UNFCCC) do span the concerns of the global society, but usually do not offer instruments to directly guide the trade development. More on MEAs in section 6.1.

The environmental concerns of the international community, including those who trade in forest-based products and services, need to be expressed through other instruments, in addition to the MEAs. A large variety of platforms exist to express those concerns. The national instruments are in the form of environmental policies, which again are to a varying degree reflected in the forest policies and national forest sector plans, and forest governance. Stakeholders, such as forest industry, can improve their implementation by following management plans, guides of utilization and codes of practices.

In the end, lots of concerns of the general public, the environmental movement and consumers are left with the “voluntary” measures, which include criteria & indicators as well as certification & labeling. Local governments are reflecting the voters’ attitudes more easily than national governments, and are introducing legislation on procurement from sustainable and legal sources. Some governments are entering into bilateral agreement and formulate pairing arrangements to tackle the environmental concerns. The international Forest Law Enforcement, Governance and Trade (FLEGT) process is taking the promotion of these principles to regional level.

4.4 Conclusions on Market Access Issues and Forestry

- “The practice of tariff escalation biases exports towards unprocessed resource-based commodities, characterized by low value added. This may cause difficulties to commodity-dependant developing countries in their efforts to diversify their export base…the extent of tariff escalation remains significant” (UNCTAD, 2003).
The environmental concerns of the international community, including those who trade in forest-based products and services, need to be expressed through other instruments, in addition to the MEAs. A large variety of platforms exist to express those concerns. The national instruments are in the form of environmental policies, which again are to a varying degree reflected in the forest policies and national forest sector plans, and forest governance. Stakeholders, such as forest industry, can improve their implementation by following management plans, guides of utilization and codes of practices.

In the end, lots of concerns of the general public, the environmental movement and consumers are left with the “voluntary” measures, which include criteria & indicators as well as certification & labeling. Local governments are reflecting the voters’ attitudes more easily than national governments, and are introducing legislation on procurement from sustainable and legal sources. Some governments are entering into bilateral agreement and formulate pairing arrangements to tackle the environmental concerns. The international Forest Law Enforcement, Governance and Trade (FLEGT) process is taking the promotion of these principles to regional level.

International trade instruments have varying degrees of discriminatory effect towards developing country trade. The international legal regime is quite neutral, in principle. The NTMs can be more severe towards developing country exports. However, the most difficult obstacle may be in the form of the voluntary measures, such as (i) certification and labeling, (ii) local government procurement rules, and (iii) meeting the other “sustainability and legality” requirements.

To summarize: at least three groups of market access measures still have a major negative impact on market access of developing country forest-based trade: a) tariff escalation, b) high rate of NTM occurrence, c) increasing frequency of “voluntary”, “soft” but very sticky barriers.
5. INTERNATIONAL TRADE REGIME AND FOREST PRODUCTS

5.1 Trade Liberalization, Timber Trade and Environment

Issues of Liberalization and Environment

Trade liberalization has led to a rapid expansion of world trade and accompanying concerns about the environmental impacts of this growth.

Liberalized trade can add value to forest products that are sustainably produced, by creating market opportunities for such products. However, the increased competition can also create pressure to exploit the resource base more intensively. Although Article 7(c) of the Convention on Biological Diversity (CBD) would appear to require that the overall impact of trade liberalization on forest bio-diversity be assessed to determine whether it has adverse impacts, to date no such comprehensive study has been done.

The international trade rules have been extensively reviewed in the literature in respect of the appropriateness of the disciplines and how they should be best applied in order to avoid unnecessary adverse effects. Ewing & Tarasofsky (1997) provide an excellent summary of the debate. The linkages between the CBD and the rules of the World Trade Organization have been identified by CIEL (1997) and analyzed in a comprehensive way by Downes (1998).

5.2 World Trade Organization

The purpose of the Uruguay Round was to advance the liberalization of international trade. The issues related to technical barriers to trade, sanitary and phyto-sanitary measures, subsidies and intellectual property rights are discussed in Chapter 6. In this chapter the relevant provisions of the GATT 1947 and 1994 are summarized. The WTO agreement listed below have specific implications for the conservation and sustainable use of forests:

- **GATT** General Agreement on Tariffs and Trade
- **TBT** Agreement on Technical Barriers to Trade
- **SPS** Agreement on the Application of Sanitary and Phyto-sanitary Measures
- **TRIPS** Agreement on Intellectual Property Rights
- **Subsidies** Agreement on Subsidies and Countervailing Measures
- **Agriculture** Agreement on Agriculture
- **TRIMS** Agreement Trade Related Investment Measures

The need to consider environmental protection in the context of the international trade rules under the GATT/WTO Agreements has been recognized. The WTO Committee on Trade and Environment (CTE) has reviewed environmental issues related to products and their production and processing methods (PPMs) but no significant decisions have been made due to slow progress in this area. This is a sign of the lack of consensus between member countries on moving forward. In the area of forests, the CTE has, nevertheless, recognized environmental benefits arising from the removal of trade restrictions and distortions (WTO 1997).
5.2.1 General Agreement on Tariffs and Trade

The core principles of GATT/WTO are (i) non-discrimination, (ii) most favored nation (MFN), and (iii) national treatment (NT). The two latter ones can be called “liberalizing principles”. The MFN treatment, by construct, first applied to trading partners on bilateral basis, partners often agreeing on mutual concessions in terms of tariffs. WTO membership guarantees a permanent and unconditional MFN status.

The principle of national treatment means that an imported product, on entering the importing country, must be accorded treatment no less favorable than that accorded to the domestic product. NT includes three main elements:

- The imported product must not be subject to internal taxes or other internal charges in excess of those applied to a like domestic product.
- The imported product must be accorded treatment no less favorable than that accorded to a like domestic product in respect of rules and requirements relating to sale, purchase, transportation, distribution or use of the product.
- No member country can have a regulation laying down that in use of a product, a certain amount or percentage must be from domestic sources.

In the past GATT and WTO dispute panel decisions, “like” products have been taken to mean products with the same or similar physical characteristics or end uses. As a result, environmental trade measures that distinguish between products based on their PPMs have sometimes been found to be in violation of these obligations (Downes 1998).

The MFN principle requires equal treatment between all WTO member nations, e.g. extending any trade preferences agreed by any two countries to all others (with some exceptions set forth in GATT 1947 Art. I.2). Article XI prohibits quantitative restrictions on exports and imports of goods, except in certain very specific circumstances.

The WTO contains rules and jurisprudence on import restrictions based on both legality and environmental considerations. In addition, some of the instruments to combat illegal trade, such as verification of origin, certification and labeling, are under continuous discussion in the Committee on Trade and Environment, and Committee on Technical Barriers to Trade.

Article XX of GATT provides general exceptions applicable to all GATT obligations. One exception is for measures necessary to protect human, animal or plant life or health (Art. XX(b)). Other relevant exceptions are for measures relating to the conservation of exhaustible natural resources taken in conjunction with domestic restrictions (Art. XX(g)) or measures necessary to protect public moral (Art. XX(a)). However, none of these measures may constitute arbitrary or unjustifiable discrimination between countries or constitute a disguised restriction on international trade (Art. XX, Chapeau).

It remains uncertain whether and how the GATT obligations and exceptions relate to measures implementing the CBD, such as import restrictions on genetically modified organisms (GMOs) to protect the environment. There are strong arguments that GATT Article XX exceptions should be generally understood to exempt from the GATT disciplines those measures directly authorized by the CBD or any other MEA (Downes 1998). In the absence of any definitive rulings on such cases by WTO dispute panels, although a preference has consistently been expressed for multilaterally agreed trade measures, firm conclusion...
appears to be premature. The Johannesburg Summit in September 2002 elaborated on this, which may lead to clarification of this issue in the future.

5.2.2 Generalized System of Preferences

MFN negotiated through GATT/WTO still maintains certain levels of tariffs, even if they are converging to lower levels. Developing countries do not, in general, need to pay the MFN level tariffs. This is due to preferential treatment schemes. The United Nations Conference on Trade and Development (UNCTAD), based on its mission, is looking for special trade treatment for developing countries. The main instrument for this purpose is the Generalized System of Preferences (GSP).

Under GSP, individual developed importing countries offer lower tariffs to selected developing countries without requiring any reciprocal benefits. The GSP conditions vary widely, each importing country which offers GSP preferences sets its own conditions. Countries can therefore be quite selective both as to the product and the exporting country on which they apply the GSP. A country may exclude a particular product, it can make special reductions, and it may give duty-free access through a specific quota system. The developing country, which has enjoyed GSP treatment, may graduate out from the system if the GSP includes a condition on the level of economic development.

For example, Taiwan, Hong Kong, Korea and Singapore, which count for the bulk of the developing country exports of value added tropical wood products, have had GSP preferential treatment removed by many importing countries, as their Gross National Product (GNP) per capita has increased. Thus they are now facing the higher MFN rates. One feature of GSP benefits, as regards tropical wood products, is that they are limited to the products that still do have higher tariffs, such as plywood, builders’ woodwork and furniture (Bourke and Leitch, 2000).

As MFN rates have been decreasing, the relative advantages from GSP have been decreasing in relative terms as well. As a result, the relative competitive positions of different exporters have been changing. The ones who have already faced full MFN rates (not having GSP treatment) are gaining but the ones who enjoy GSP privileges become relatively worse off.

5.2.3 Technical Barriers to Trade

In the discussion about the general Technical Barriers to Trade (TBT) agreement, a special emphasis here is on aspects of specific interest in relation to tropical timber. The applicability of the TBT Agreement to certification is a current source of controversy. The objectives of the TBT Agreement are (i) to ensure that technical regulations and standards are not used as disguised protectionist measures, and (ii) to reduce the extent to which technical regulations and standards operate as barriers to market access, primarily encouraging their harmonization. The main substantive provisions of the Agreement have been summarized below (TBT Agreement, Annex 3):

- In respect to standards, products originating from other WTO Member countries shall not be accorded treatment less favorable than like products of national origin.
- Standards and the process of their preparation shall not create an unnecessary obstacle to international trade.
- International standards shall be used if they exist and are relevant.
National standardizing bodies shall participate in the preparation of international standards. The standardizing body in a Member country shall avoid duplication of or overlap with the work of other standardizing bodies in the national territory or of international or regional standardizing bodies. Every effort shall be made to achieve a national consensus on standards. The standardizing body shall specify standards based on product requirement in terms of performance rather than design or descriptive characteristics. At least every six months the standardizing body shall publish a work program on standards under preparation or adopted. The titles of specific draft standards shall, upon request, be provided in English, French and Spanish. Before adopting a standard, the standardizing body shall allow a period of at least 60 days for the submission of comments on the draft by interested parties. Upon request, the standardizing body shall promptly provide a copy of draft standard, which has submitted for comments.

TBT agreement sets out procedures to ensure that technical regulations and standards, including packaging, marking and labeling requirements, do not create “unnecessary obstacles to international trade”. The TBT seeks to ensure that product standards are not used as disguised protectionist measures, and to reduce the extent to which they act as barriers to market access.

The text of the TBT Agreement is not very explicit as regards its coverage and application to voluntary labeling programs based on non-product related PPMs. There are two aspects to this issue: (i) Whether standards or regulations that distinguish between products based on non-product related criteria, such as PPMs, are covered by the TBT Agreement. (ii) Whether certification and labeling schemes, related to forest products and services, are motivated by protectionist intent or constitute arbitrary discrimination.

The TBT Agreement deals with two types of possible barriers to trade: (1) Technical regulations refer to “product characteristics or their related processes and production methods, with which compliance is mandatory”. (2) A standard is “approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory”. As certification of forest management is usually a voluntary activity, the TBT provisions on standards would appear to be relevant.

**Production and Process Methods (PPM)**

Process and Production Methods (PPM) is about how a particular good is produced. The basic principle of GATT/WTO is that any product should be considered as such, without consideration of how it is made. “Like” products are treated under trade rules alike. If one wants to use trade sanctions against a product for some reason (unfair treatment of labor, unsustainable use of natural resources, etc.) one is at the same time questioning the PPM principle.

A core issue in the trade and environment debate concerns the treatment of measures, which place distinctions on products based on their processes and production methods, as compared to distinctions based on the quality of the product as such. Holistic environmental regulation, by definition, addresses the manner in which products are produced, thereby treating the “same” products differently. Often, countries introducing such PPM based measures on their
own products look to treat imported products similarly, *inter alia*, to offset any negative competitiveness effects.

GATT Articles I (most favoured nation (MFN), and III (non-discrimination between domestic and imported products) do not specifically deal with the issue of processes and production methods. However, successive GATT/WTO dispute settlement panels have interpreted these provisions as prohibiting any such distinctions. Article XX (general exceptions) has been relied upon in favor of such measures, but so far not successfully. All disputes so far have involved unilateral trade measures (i.e. taken by a single country).

Trade policy objections to differentiating between products on the basis of PPMs, can be made on three grounds: (i) There may be parochial definitions of sustainability or “good” or “improved” forest management which apply poorly elsewhere. (ii) they may constitute one-sided rulings imposed by buyers in rich countries and effectively constitute pressure on countries to adopt high environmental standards; and (iii) they may represent a means for disguised protectionism (*cf.* Workshop on Trade and Bio-diversity 1998). It has been argued that these arguments are not valid, in respect of certification and labeling schemes because such schemes tend to be voluntary.

Ruddell et al. (1998) have reviewed the interpretation of PPMs in the case of forest products. The TBT Agreement sets out a number of requirements in respect of technical regulations (Art. 2), while a Code of Good Practice is provided for the preparation, adoption and application of standards (Annex 3 of the TBT Agreement). Indufor (1997) has reviewed these requirements from the point of view of certification of forest management. They are also relevant for product standards, building codes and other standards used in specifying timber products.

### 5.2.4 Sanitary and Phyto-sanitary Measures

Sanitary and phyto-sanitary (SPS) measures are used to guarantee that the producer has been capable of cleaning, sanitizing, sterilizing or by other means to render the offered commodity free from unwanted dirt, seeds, pests or germs. Standards in relation to plant health are generally acknowledged as legitimate, since introduced pests and disease can have devastating effects on the health of domestic forests. However, the complexity and severity of the requirements and the manner in which they are enforced may have such substantial effect on trade that they are interpreted as obstacles to trade by exporting countries. Exporters also perceive costs associated with conforming to phyto-sanitary rules as being non value adding compared with other “fitness for purpose” requirements such as kiln drying or preservative treatment.

In general, alien species are one of the greatest threats to bio-diversity and they can be one of the biggest hidden environmental costs of trade. Alien species are also a significant threat to forest bio-diversity (U.S. Congress 1993). Introduction of pests into North America has infested the American chestnut and elm. An introduced pest is currently causing serious danger to North American populations of white pines.

Regulatory requirements related to sanitary and phyto-sanitary measures have been put in place to address this problem, including several unilateral and bilateral plant protection agreements (starting with the 1951 Rome Convention, UNTS 150/67, as amended). In many countries these are being tightened and becoming more demanding, especially with regard to
non-wood products (e.g. medicinal plants, spices and food) and other products like softwood timber. Regulations concerning heating (or kiln drying) of sawn softwood coming into the EU market from outside the region have been in place to control the introduction of pine nematode. There does not appear to be any serious cases on this issue, which would be specifically related to tropical timber.

Protective measures of SPS type are regulated under the WTO Agreement on Sanitary and Phyto-sanitary Measures (SPS Agreement). Although some trade distortion is caused as a result of such national regulations, they are not usually unreasonable controls, since their enforcement is essential for health and safety reasons (Iqbal 1995). The SPS Agreement states that such regulations should not become unnecessary barriers to trade. It requires that any sanitary or phyto-sanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, and is based on scientific principles and sufficient scientific evidence (Art. 2.2). Although there is a presumption in favor of using international standards, countries may take stricter measures if there is a scientific justification or as a result of a prescribed risk assessment (Article 3(5)). For the time being, it is not foreseen that the SPS issues would emerge as a serious constraint to market access of tropical timber.

5.2.5 Trade Related Investment Measures Agreement

The Trade Related Investment Measures Agreement (TRIM) is an extension of trade rules towards investments. The TRIM Agreement recognizes the fact that trading in goods can lead to investments. Some countries wanted to include investments already in the Uruguay Round, the result was the rather narrow TRIM agreement. However, some governments, including EU and Japan, have promoted negotiations on a wider investment agreement. One group of countries, mostly OECD members, has been seeking for a better protection of investor rights. Another group of countries, especially under UNCTAD, is seeking rules on investor obligations.

Many activities, including tropical forest operations, may have problems with sustainability. In some cases at least, structural adjustment through investments could help the progress towards sustainable practices. The issue is if a wider agreement would support investments towards more sustainable industrial structure. Within OECD there was an attempt to negotiate a multilateral agreement on investments. The draft included investor rights and a dispute settlement process. The process was discontinued as there an was opposition, which saw shortcomings in the draft. It is clear that the investment issues have a much longer time frame than the trade issues, thus it is much more difficult to design rules or modalities. From the point of view of development, the issue is that the measures should not put unnecessarily stringent constraints on e.g. domestic industrial policies. Investment regulation at international level influences access to finance and thereby potential supply of tropical timber. Trade impacts would therefore be indirect and not related to market access as such.

5.2.6 Traditional Forest Related Knowledge

Wide recognition of the importance of traditional forest related knowledge (TFRK) has started to emerge as a result of the CBD and the process continuum of Intergovernmental Panel on Forests (IPF), Intergovernmental Forum on Forests (IFF), United Nations Forum on Forests (UNFF). In the trade regime, TFRK is related to the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). The intellectual property rights covered include patents in “all fields of technology, provided that they are new, involve an inventive
step and are capable of industrial application” (Article 27.1). Members may, however, deny patents on “plants and animals other than micro organisms, and essentially biological processes for the production of plants or animals”, but they must protect plant varieties under either a patent or a sui generis system of protection (Article 27.3(b)). The obligations of the TRIPS Agreement were delayed for developing countries until 2000, and for least developed countries until at least 2005 (Ewing & Tarasofsky 1997).

The IFF has recognized TFRK as an important source of knowledge, which can benefit forest management practices. In particular, knowledge about growing and using of plant species (including trees), behavior of wildlife habitats, etc. can be invaluable. The IPF has urged coordinated development in this field. It has singled out three areas where further work is needed: (i) Application and development of legal and other forms of protection for TFRK. (ii) Legislative, policy and administrative measures, best forest practices and case studies on access to forest genetic resources and benefit sharing arising from the use of those genetic resources. (iii) Consideration of the relationships between intellectual property rights and relevant provisions of the TRIPS (IPF 1997).

For tropical timber trade, the TRIPS Agreement does not have direct impacts. Indirectly, it may influence production conditions regulating how relevant knowledge can be shared.

5.2.7 Plurilateral Government Procurement Agreement

Government purchases make a very important share of the total markets. Government expenditures make between 10 to 25% of the Gross Domestic Product (GDP) in OECD countries. The purchase decisions of governments are important from several viewpoints: (i) economic influences, (ii) environmental influences, and (iii) last but not least, they have a very strong leverage impact on the rules and functioning of the market in general.

Most governments apply national procurement rules. Some rules or procurement provisions include provisions for sustainability of PPMs and some have even specific references to tropical timber. For example, in the recent drafts, it is stated that timber product eligible for purchasing should be “from legal and sustainably managed sources”. These kinds of rules are easy to administer and can even be politically popular. But the rules may become much more complicated and then raise many of the same issues as PPMs or certification for SFM. The government may even choose to require a domestic eco-label or SFM certification for purchased products. Suppliers would have to demonstrate of meeting the criteria through verification by a third party, the cost of which would be internalized. From the administrative point of view, such an arrangement could be relatively cost efficient.

One problem with public procurement is that it is often not harmonious between countries, and not necessarily between different sub-regions in the country. Thus the PPM based criteria are usually different. As a whole, the procurement rules may act as barriers to trade and cause three types of bias: (i) Redirection of trade between areas within the consumer country, (ii) Redirection of trade between importing countries, (iii) They may cause discrimination against foreign exporters as the procurement rules often (even unintentionally) favor local producers.

The Government Procurement Agreement (GPA) is different from most WTO agreements in the sense that it is plurilateral, i.e. the countries that are WTO members do not automatically become members in this agreement. The GPA has around 30 signatories, mostly from OECD.
countries. The objective of GPA is to require that governments are fair and transparent in their tender bidding.

GPA is different from GATT in the sense that it does not rule against discrimination between “like” products, but it rules against discrimination between foreign and domestic suppliers. GPA rules that technical specifications should be “based on international standards, where such exist, otherwise on national technical regulations, recognized national standards, or building codes.” A national technical regulation is any standard set by a recognized body. Thus it is likely that ISO 14001 Environmental Management System (EMS) as well as eco-label programs would be acceptable from the point of view of GPA.

Sub-national governments (i.e. regional councils, local authorities, municipalities, etc.) and in some instances even parts of national governments (e.g. government departments) have banned, or proposed banning, the use of timber from sources, which do not come from sustainably managed resource. The main target, either implicitly or explicitly, has often been tropical timber. Actions of this type have been especially prevalent in Germany, the Netherlands, parts of the United States, and the United Kingdom (Bourke, 1999). These initiatives are discussed in detail in Chapter 6.4.

Closely related to the above is the situation where retailers and timber traders in some countries have, as a group, voluntarily agreed to handle products that come from sustainably managed or well-managed resources (i.e. buyers’ groups promoted by WWF). The Global Forest and Trade Network (GFTN) has been set up as a coordinating mechanism between such groups which also include some producer groups which have made commitments to SFM and independent certification.

5.2.8 Other Agreements under WTO

Anti-dumping

If a company exports a product at a price lower than the price it normally charges on its own home market, it is said to be “dumping” the product. Is this unfair competition? The Agreement on the Implementation of Article VI of the General Agreement on Tariffs and Trade 1994 does not pass judgement. Its focus is on how governments can or cannot react to dumping, it disciplines anti-dumping actions, and it is often called the “Anti-Dumping Agreement”.

The legal definitions are more precise, but broadly speaking the WTO agreement allows governments to act against dumping where there is genuine (“material”) injury to the competing domestic industry. In order to do that the government has to be able to show that dumping is taking place, calculate the extent of dumping (how much lower the export price is compared to the exporter’s home market price), and show that the dumping is causing injury.

GATT (Article 6) allows countries to take action against dumping. The Anti-Dumping Agreement clarifies and expands Article 6, and the two operate together. They allow countries to act in a way that would normally break the GATT principles of binding a tariff and not discriminating between trading partners. Typically anti-dumping action means charging extra import duty on the particular product from the particular exporting country in order to bring its price closer to the “normal value” or to remove the injury to domestic industry in the importing country.
The OECD statistics on anti-dumping measures include 1,066 cases for the 1995-2001 period, but only 15 of these refer to the broad wood and wood products sector (while there are hundreds of cases in chemicals and plastics as well as metal and electronics). Anti-dumping has been used more frequently as an argument for paper than timber products. In tropical timber, logs, veneer and sawnwood are usually differentiated in the market by species (or species group), and they are, therefore, not very susceptible to anti-dumping claims. In plywood, the situation is different, particularly in utility grades, and therefore, the risk for anti-dumping claims could be higher.

Safeguard

A WTO member may take a “safeguard” action (i.e., restrict imports of a product temporarily) to protect a specific domestic industry from an increase in imports of any product which is causing, or which is threatening to cause, serious injury to the industry. Safeguard measures were always available under the GATT (Article XIX). However, they were infrequently used, and some governments preferred to protect their industries through “voluntary” or “gray area” measures.

It should be noted that the safeguard agreement is only applicable to bound tariffs (MFN tariff rates under GATT in a country's commitments to other WTO members. If a GATT contracting party raises a tariff to a higher level than its bound rate, the countries adversely affected have the right under GATT to retaliate).

The WTO Agreement on Safeguards broke new ground. It prohibits “gray area” measures, and it sets time limits (a “sunset clause”) on all safeguard actions. The Agreement says that members must not seek, take or maintain any voluntary export restraints, orderly marketing arrangements or any other similar measures on the export or the import side. These bilateral measures had to be modified so that they conformed to the Agreement, or else they had to be phased out by the end of 1998. Countries were allowed to keep one of these measures until the end of 1999.\(^7\)

An import “surge” justifying safeguard action can be a real increase in imports or it can be an increase in the imports’ share of a shrinking market, even if the import quantity has not increased.

The Agreement sets out criteria for assessing whether “serious injury” is being caused or threatened, and the factors which must be considered in determining the impact of imports on the domestic industry. When imposed, a safeguard measure should be applied only to the extent necessary to prevent or remedy serious injury and to help the industry concerned to adjust. Where quantitative restrictions (quotas) are imposed, they normally should not reduce the quantities of imports below the annual average for the last three representative years for which statistics are available, unless clear justification is given that a different level is necessary to prevent or remedy serious injury.

In principle, safeguard measures cannot be targeted at imports from a particular country. However, the Agreement does describe how quotas can be allocated among supplying countries, including in the circumstances where imports from certain countries have increased.

\(^7\) The only case where this has happened is the European Union’s restrictions on imports of cars from Japan.
disproportionately quickly. A safeguard measure should not last more than four years,
although this can be extended up to eight years, subject to a determination by competent
national authorities that the measure is needed and that there is evidence that the industry is
adjusting. Measures imposed for more than a year must be progressively liberalized.

To some extent developing countries’ exports are shielded from safeguard actions. An
importing country can only apply a safeguard measure to a product from a developing country
if the developing country is supplying more than 3% of the imports of that product. Or
alternatively, if developing countries with less than 3% import share collectively account for
more than 9% of total imports of the product concerned. In some markets, developing country
producers reach these thresholds. There are no reports on the use of safeguard measures
related to forest products from developing countries. Such cases could emerge, e.g. in some
further processed products between two developing countries, on an exporter and the other
one an importer.

The WTO Safeguards Committee oversees the operation of the agreement and is responsible
for the surveillance of members’ commitments. Governments have to report each phase of a
safeguard investigation and related decision making, and the committee reviews these reports.

Dispute Settlement Understanding

WTO’s procedure for resolving trade quarrels under the Dispute Settlement Understanding is
vital for enforcing the rules and therefore for ensuring that trade flows smoothly. A dispute
arises when a member government believes that another member government is violating an
agreement or a commitment that it has made in the WTO. The authors of these agreements are
the member governments themselves, the agreements are the outcome of negotiations among
members. Ultimate responsibility for settling disputes also lies with member governments,
through the Dispute Settlement Body (DSB).

The dispute settlement procedure has been seen as the WTO’s most individual contribution to
the stability of the global economy. Without enforcement, the rules based system would be
worthless. The WTO’s procedure underscores the rule of law, and it makes the trading system
more secure and predictable. It is clearly structured, with flexible timetables set for
completing a case. First rulings are made by a panel, appeals based on points of law are
possible. All final rulings or decisions are made by the WTO’s full membership, no single
country can block these.

There are a number of stages in the dispute settlement process, with possibilities of
settlements at several stages of the process. At all stages the countries are encouraged to settle
the issue out of court. These include consultation, when panel is established, terms of
reference composition, panel examination, interim review stage, when panel report issued to
parties, when panel report circulated to DSB, appellate review, when DSB adopts
panel/appellate reports, at implementation, negotiation of compensation pending full
implementation, at retaliation, and finally there is a possibility of arbitration.

There have been a number of disputes related to tropical timber under the WTO, e.g., the
proposed laws on forest certification or labeling of tropical timber by the Austrian and Dutch
Governments.
Customs Valuations

The actual customs valuation of a particular delivery of goods is in practice made in various different ways. The valuation for customs purposes can be based e.g. on the Brussels Definition of Value (BDV). The basic principle of the BDV is that dutiable value is the normal price or import price of goods at the port or place of importation. It pre-supposes that the sale has taken place in the open market between an independent buyer and seller. Where goods are dutiable, *ad valorem* or specific rates may be applied. An *ad valorem* rate, which is the most commonly applied, is a percentage of the assessed value of the imported goods. A specific rate is a particular amount per unit of weight or other quantity. The level of customs value has, of course, an important direct impact on the value dependant instruments, *e.g.* fees or taxes. In addition if valuations are not harmonized, they have an indirect effect on relative competitiveness between countries. Valuation is regulated by the Agreement on Implementation of Article VII of GATT 1994.

Rules of Origin

Determining where a product comes from is no longer easy when raw materials and parts cross the globe to be used as inputs in scattered manufacturing plants. The chains of custody are particularly complex in timber products, which are traded in different forms, *i.e.* raw materials, primary and further processed products. Many tropical products are combinations of different timber species from different origins, and there are also products where tropical timber is combined with other materials (plastics, steel, aluminum, *etc.*).

“Rules of origin” are the criteria used to define where a product was made. They are an essential part of trade rules because a number of policies discriminate between exporting countries: quotas, preferential tariffs, anti-dumping actions, countervailing duty (charged to counter export subsidies), and more. Rules of origin are also used to compile trade statistics, and for “made in ...” labels that are attached to products.

This first ever agreement on the subject requires WTO members to ensure that their rules of origin are transparent; that they do not have restricting, distorting or disruptive effects on international trade; that they are administered in a consistent, uniform, impartial and reasonable manner; and that they are based on a positive standard (in other words, they should state what does confer origin rather than what does not).

WTO and Trade Facilitation

Once formal trade barriers come down, other issues become more important. For example, companies in trade need to be able to acquire information on other countries’ importing and exporting regulations and how customs procedures are handled. Cutting red-tape at the point where goods enter a country and providing easier access to this kind of information are two ways of “facilitating” trade.

The 1996 WTO Ministerial Conference in Singapore instructed the WTO Goods Council to start exploratory and analytical work “on the simplification of trade procedures in order to assess the scope for WTO rules in this area.”

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8 WTO Agreement on Rules of Origin.
Numerous and complex customs procedures and requirements generate substantial costs. According to one source, the average customs clearance transaction in developing countries involves 40 documents and 200 data elements, some 30 of which are requested at least 30 times, and 60 to 70 percent of which must be re-keyed at least once. The costs of excessive control and inefficient customs clearance procedures, combined with the monopoly of service providers in the port or other key entry points, can exceed tariffs in many cases.

Documentary red tape in customs has been estimated to increase the cost of imports substantially, by an estimated 7-10% of the value of trade. For example, in the mid 1990s, customs clearance transactions in countries of the Middle East and North Africa often required 25 to 30 stages, and could take several weeks. Valuation procedures are a major uncertainty for importers, as customs generally expect under invoicing. It is the practice in some countries of the Middle East and North Africa that customs officers question every invoice in order to charge penalties or collect “rewards” (Hoekman and Kostecki, 2001); Staples (1998); and WTO (S/C/W/60).

The cost of inefficiency is a loss for all parties involved. Some sources estimate the cost of inefficient cross-border procedures to cost anywhere between 2% and 15%. A process on trade facilitation has started, where several international organizations are involved, including the United Nations Center for Trade Facilitation and Electronic Business (CEFACT) and UN Conference on Trade and Development. United Nations Economic Commission for Europe (UNECE) organized in May 2002 the International Forum on Trade Facilitation. APEC’s trade facilitation work has included (i) faster customs clearance, (ii) expanded paperless trading, and (iii) easier access to government procurement markets.

To improve access to the Japanese markets, the Japanese Government has established the Office of Trade and Investment Ombudsman (OTO). The OTO receives and processes complaints relating to market access and import facilitation, including import procedures. It is often the case that OTO solution leads to a reform of the relevant regulation. The Royal Institute of International Affairs (RIIA) has launched a research project on trade regulation reform, comparing Japan to EU and UK.

5.3 Conclusions on International Trade Regime

- The trade value, at importers, of all forest products was USD 160 billion in the year 2000. This has been a result from several decades of development, where the trade in forest products has been growing clearly faster than the production. And this has been during a period when the whole industry has gone through a major growth period. At least we can safely conclude that the international trade liberalization process and the trade growth process have proceeded in parallel. At least a part of the growth has been due to lessening of market access barriers, such as tariffs.

- Judged by the expansive development of the trade in forest products, one can conclude that the international legislation has been influential enough to support this tendency. One may, as well, conclude that the basic rationale of trade liberalization has been effective enough to reach the objective of welfare increase to a large number of people around the globe. Basically, those who consume most have gained most. Income distribution aspects are a much more difficult area, and one, which is causing friction in the move towards even more of globalization. The distribution aspects include sharing of the fortune
between nations, as well as sharing the factor income between capital, labor and the forest resource base.

- The international trade regime is very strict on focusing on the product market platform. What takes place below, beyond or beside the market does not get as much attention, or is explicitly excluded from the domain of the legislation. A case in point is the GATT/WTO legislation on production and processing methods (PPM), which is based on the principle of 'equal' products having to be treated equally (independently from where they came from or how they were made). Of course, the regime has qualifications on the rule, but they are much less powerful than the rule itself; perfectly designed for the competitive market place, as it is.

- The main conclusion on the international trade regime should not concern its effectiveness, which has undoubtedly been great. The main conclusion from the sustainable forest management (SFM) point of view should be what the trade regime leaves undone (because it is outside its domain). The conclusion is that a complementary policy toolbox should exist to complement, enhance and modify the aspects and impacts of free trade, which the international trade regime excludes. The complementary issues and tools are many and a number of them have relevance for forestry.
6. OTHER INTERNATIONAL INSTRUMENTS AND FOREST PRODUCTS

6.1 Multilateral Environmental Agreements

6.1.1 Convention on International Trade in Endangered Species

The growing global economy is placing an increasing strain upon global ecosystems. Sometimes this strain involves the over-exploitation of species, putting them at risk of extinction. Due to the integration of the global economy, such overexploitation appears to be often driven by international trade. As regards timber from natural tropical forests, however, it needs to be recognized that the volume of trade has not shown a growing trend.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was adopted in 1973 to prevent over-exploitation of endangered species through international trade. The Convention bans commercial trade in species most threatened with extinction (listed in Appendix I) and strictly controls trade by means of export permits in other species that might be threatened with extinction unless trade is controlled (listed in Appendix II). The Convention also creates an Appendix III, which contains species nominated by individual Parties, for which those parties undertake to issue export permits. In 2002, seven tree species appear in Appendix I, twelve in Appendix II, and six in Appendix III, although only two are traded in significant volumes.

Recent CITES proposals to control the trade of certain timber species have been particularly controversial. Some exporting developing countries have raised concerns about the current listing criteria as they apply to trees. However, other countries have firmly defended the listing criteria as adequate for tree species, and the current polarization may well continue for some time. There are also disputes about whether there is scientific evidence that a tree species proposed for listing is really endangered or threatened by international trade. The problem is compounded by generally poor data on tropical forests, and limited information on trade flows by species.

The trade regulation of mahogany (*Swietenia macrophylla*) is a recent case in point, as the species has been proposed three times for CITES Appendix II listing, with a negative result each time (the last vote being very close). Bolivia, Brazil and Costa Rica have now listed it on Appendix III. The international attention led to the establishment of a regional Working Group on Mahogany, which has developed a number of proposals for joint actions and improved cross-border co-operation between the involved countries.

A CITES listing tends to have a negative impact on trade flows of the listed species. CITES is aware of this problem, and a Timber Working Group was established to make recommendations on proposals for listing of tree species, as well as on implementation of appropriate export controls on listed species (FAO 1997). To make CITES listing effective, adequate enforcement measures both in exporting and importing countries are needed.

The efforts by CITES to protect and improve the survival of all endangered species living in forests are widely supported because of the increasing global pressures. From the trade point of view, such trade measures as CITES listings should be limited to what is necessary to achieve the objective. On the other hand, CITES trade restrictions should be made and implemented effectively so that the survival of a species, which is endangered by commercial trade, is indeed ensured by the measures taken (Simula 1999).
The twelfth Conference of Parties (COP12) of CITES in November 2002 made the following updates:
- included *Swietenia macrophylla* in Appendix II (starting from November 2003)
- included *Araucaria araucana* in Appendix I.

Annex 5 of this report summarizes the tree species included on CITES.

### 6.1.2 Convention on Biological Diversity

The Convention on Biological Diversity (CBD) is one of the most important of the MEAs from the point of view of forestry. Most of the environmental effects are indirect in causing changes in levels and patterns of production and consumption (WTO 1997). While recognizing the potential benefits of trade to the environment, there can also be negative effects, and therefore trade liberalization should be implemented in conjunction with environmentally sound policies (United Nations’ Commission on Sustainable Development, CSD 1996). Complementarity can be observed in the WTO and CBD rules. The following inter-linkages between CBD and the WTO rules can be identified in the area of forest biodiversity (cf. Downes 1998; Simula 1999):

**Monitoring of trade impacts on bio-diversity.** CBD Article 7 requires Parties to assess and monitor the status of bio-diversity and the activities likely to interfere with conservation and sustainable use. In the forestry sector, there is a particular need to carry out bio-diversity assessments including the impacts of trade on bio-diversity. There is inadequate scientific information available on the subject, and views differ. There are several on-going regional processes to develop Criteria and Indicators (C&I) for SFM which include bio-diversity aspects, including the C&I by ITTO. These intergovernmental processes provide a common framework to be applied at the national level according to local conditions and priorities. They offer one tool that can be drawn on when bio-diversity impacts of forest management are assessed.

**Setting standards for sustainable use of forest bio-diversity.** The Technical Barriers to Trade (TBT) Agreement provides a framework for setting standards, taking into account the specific goals and rules of the Agreement as well as those of the other WTO Agreements. These explicit goals do not include such issues as sustainable use of biological resources. The CBD could complement WTO’s work in this field together with other competent bodies such as ITTO, FAO, UNEP, etc. The standards themselves and the process of their development can be made to work towards conservation and sustainable use of bio-diversity and equitable sharing of benefits if the two regimes can be implemented in mutually supportive way that takes into account the national conditions.

The TBT Agreement does not include a general exception clause related to environment and exhaustible natural resources that are present in the GATT. The Agreement emphasizes the role of the ISO as a harmonization framework, but the ISO’s capability and power balance to address standard setting in forest management has been subject to criticism from the environmental non-governmental organizations (ENGOs) (Hauselmann 1996). It is apparent that further work in the field of setting standards for sustainable use of forest bio-diversity will be necessary. In view of the importance and policy implications of the issue, governments should be involved in defining an appropriate framework.
Market-based incentives. Using market based incentives to make “green” products more attractive is still in the formative stages, and many views exist on how environmental features of products and their processing and production methods can be made to work towards environmental conservation (Elliott 1998). In principle, however, a fairly broad agreement exists on the preference to be given to using incentives and using other positive measures in promoting environmentally friendly products. Certification and labeling belong to this group of attractive instruments to promote sustainable production and consumption of forest-based products. But they may prove to be problematic within the context of the TBT Agreement. There are several issues to be clarified in the future so that such schemes can be made effective while not constituting disproportionate barriers to trade. The COP VI of the CBD encouraged implementation of voluntary third-party credible forest certification schemes that take into account relevant forest bio-diversity criteria and that would be audited taking into consideration indigenous and local community rights and interests.9

Criteria and guidelines for sustainable forest management. There is no globally applicable definition of sustainable forest management and respective criteria and indicators within which all the relevant aspects relating to trade could be duly considered. This creates confusion among policy makers, in the market place, and among agencies and enterprises working in this sector. The UNCED Forest Principles provide only a starting point in this respect. The existing regional sets of Criteria and Indicators for SFM have a high degree of commonality, but they also reflect regional differences. Further work in this field is being undertaken under the International Conference on Criteria and Indicators for Sustainable Forest Management (ICCI). COP VI of CBD in its decision on Forest Biological Diversity (VI/22) and more specifically in the annexed Expanded Program of Work called for the development and implementation of international, regional, sub-regional and national criteria and indicators within the framework of SFM.

Illegal trade in forest products. The serious problem of illegal harvesting and trade is currently left for regulation at the national level in producer countries. The problems of enforcement are often enormous and beyond the capacity of national governments. The underlying reasons are structural and therefore difficult or impossible to solve at the sector level. The COP VI of CBD recognized the importance of the issues of law enforcement and the need to address related trade. The proposed activities of the Work Program included, *inter alia*, evaluation and reform, legislation, capacity building, codes of conduct for sustainable forest practices and implementation of tracking and chain-of-custody (COC) systems.

Internalization of environmental and social benefits and costs relating to forests. Recognition of the global environmental value of forests offers the potential to use trade as an instrument in conservation financing. Such benefits can be derived mainly from carbon sequestration and bio-diversity, but local hydrological benefits or other externalities may also be significant. In spite of the promising progress made in internalizing the externalities of forestry in some fields (carbon offset pilot projects, eco-tourism, water protection services, bio-prospecting, etc.), the present set of instruments tend to be partial and limited in their scope. This also holds true with financing mechanisms, such as the Global Environmental Facility (GEF) which is funding “incremental costs of measures to achieve agreed global environmental benefits”.

9 [www.biodiv.org/decisions](http://www.biodiv.org/decisions)
Country-level efforts to move ahead in internalization may be constrained if the result is weakened cost competitiveness in the international market. Thus, further work to develop appropriate instruments may have to become increasingly comprehensive with regard to the level of application (national territories, sectors). Due to the complexities involved, a stepwise approach to internalization appears to be the only feasible way to proceed in order to generate practical solutions.

6.1.3 United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change (UNFCCC) addresses the issues related to climatic influences, including the interface with forest ecosystems. The interface between forest resources and climate change has three main facets: (a) What will be the impact of climate change on forests (on which little scientific information is available). (b) An important share of carbon emissions is coming from deforestation and forest degradation, which is also the main reason for the loss of bio-diversity. (c) Enhancing the role of sinks in mitigation of emissions as outlined by the Kyoto Protocol. The Clean Development Mechanism (CDM) will be applied to afforestation and reforestation and is expected to mobilize significant amounts of financing to increase forest bio-mass in developing countries.

It is possible that the range of eligible activities for CDM will be broader after the first Kyoto commitment period (2008-2012) furthering the potential role of this instrument to raise funds for SFM in developing countries. From the trade point of view, this may become an issue when the increased carbon stocks are renewed at the age of final harvest, releasing probably significant volumes of timber for industrial use, fuelwood and other purposes. This increased supply would change market situation, both nationally and internationally. The assessment from the trade point of view would be related to the reward which the forest owner receives for the environmental service he is providing through carbon sequestration.

6.2 Regional Agreements

6.2.1 European Union Agreements

Role of EU and National Governments

The European Union (EU) is in a process of harmonizing all major aspects of economic policy as well as many related policy areas. At the heart of the EU is a customs union and a single market, with a common external tariff. It is a supranational organization, widely interpreted as providing for the shared exercise of its member states’ sovereignty. The EU can legislate in the sense that it can adopt binding legal instruments through the action of its institutions alone. For this purpose it has a comprehensive institutional structure, involving legislative, executive, judicial and advisory organs.

EU has two principal legislative instruments, Regulations and Directives. Regulations are directly applicable and are used for technical aspects of issues where the EU has exclusive competence, such as trade. Directives are instruments of choice for most environmental issues since they determine the objectives to be achieved but leave member states free to choose the means of implementing them. In practice, directives can be technically quite detailed in those areas where upward harmonization is sought.
EU’s environmental legislation has more than 300 items, covering every aspect of environmental policy. Directives cover, among other things, eco-labeling, eco-management and auditing, and have established financial and economic instruments for environmental management. Environmental management is a responsibility shared between the EU and member states, whereas trade lies exclusively with the EU. This asymmetry has rendered the balancing of environment and trade interests more difficult since the functions of key actors are different in the two areas of policy.

Concern About EU Conformity with Other Timber Traders

It is also important to consider how enforcement mechanisms fit into an overall context of bilateral and multilateral co-operation on trade and development. Action in this direction has already been taken at EU-Japan summit in Tokyo, in July 2002 as closer collaboration has been included as a priority in the Action Plan for EU-Japan: “…examine ways to combat illegal logging including export and procurement practices”. This topic in relation to the timber trade was discussed at the most recent EU–Japan Summit.

First talks have also been held on this between the EU and the USA. Regional arrangements such as the Cotonou Agreement are potential entry points for such mechanisms. However, it is also important that any agreed control mechanisms are in conformity with trade disciplines established under WTO.

EU is currently in a process of revising its legislation on public procurement. Some NGOs have raised the question if the new legislation limits the governments in their options to take social and environmental concerns into account when awarding public contracts (cf. public procurement).

North American Free Trade Agreement

The North American Free Trade Agreement (NAFTA) Article 104 lists seven international environmental agreements (IEAs), and agrees that they will surpass NAFTA in the case of disagreement. They include CITES which has direct relevance to tropical timber. The domestic laws resulting from the listed IEAs must be those “least inconsistent with the other provisions of NAFTA.” So a party would have to show that a challenged measure could not have been somehow ‘better’, or more consistent with NAFTA. But the more NAFTA-consistent alternative does not need to be politically or economically feasible.

Association of South East Asian Nations

There are eight member countries in the Association of South East Asian Nations (ASEAN). They are Malaysia, Indonesia, Philippines, Singapore, Thailand, Brunei, Vietnam and Myanmar.

Until the Asian economic crisis that is now slowly being resolved, the countries of ASEAN were among the fastest growing economies in the world with Indonesia, Malaysia, Singapore and Thailand all having GDP growth rates over a prolonged period of more than 6% a year. As one means to step up the intra ASEAN trade, a Common Effective Preferential Tariff (CEPT) scheme was initiated in 1992. The objective was to arrive at an ASEAN Free Trade Area (AFTA) in the year 2008.
In the years leading to AFTA, tariffs on manufactured and processed agricultural goods would be reduced first to a maximum of 20% and subsequently to a maximum of 5%. In 1995, it was decided to accelerate the implementation of tariff cuts to realize AFTA in 2003.

Obviously, the implementation of AFTA will significantly improve market access and to boost intra-ASEAN trade in forest products, as well as intensify competition in semi-processed and secondary processed wood products (SPWP) to the extent that inefficient and high cost producers are likely to face problems.

Asia-Pacific Economic Cooperation

Initiated in 1989, Asia-Pacific Economic Cooperation (APEC) initially comprised the then six ASEAN members, i.e. Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand and their six “official Pacific dialogue partners” namely Australia, Canada, Korea, Japan, New Zealand and the USA. Later, the membership was enlarged to include China, Hong Kong, Taiwan, Papua New Guinea, Mexico and Chile.

Under the Bogor Declaration signed in 1994, APEC agreed on a timetable for trade liberalization. Accordingly, negotiations to achieve free trade were to commence in the year 2000 and be completed within ten years for the developed nations, 15 years for the newly industrialized countries, and 20 years for the developing nations. As APEC is committed to the principle of “open regionalism”, trade concessions would then be extended to non-members on a reciprocal basis to promote global trade liberalization.

In 1997, APEC economies agreed to include forest products among the nine sectors which would be liberalized as part of an Early Voluntary Liberalization (EVSL) initiative. In November 1998, APEC agreed to move these sector discussions on tariff reductions to the WTO for finalization and implementation on the basis of an agreed framework on product coverage, end rates and end dates. The initiative was later called accelerated tariff liberalization (ATL).

As part of the ATL on forest products, it was also agreed for a survey to be conducted to review the non-tariff measures affecting trade in forest products with a view towards improving trade conditions, including the harmonization of standards pertaining to wood products use in construction. The ATL expands the so-called “zero for zero” agreement among some APEC members to eliminate tariffs on forest products between themselves. A similar effort to achieve this target in the Uruguay Round failed, and the full objective of the process within APEC has also not been achieved. This proposal has generated considerable controversy, particularly among environmental groups that are concerned about the impacts this proposal could have on the environment.

Mercosur & Free Trade Area of the Americas

Mercosur, Mercado Común del Sur or the Southern Common Market, is a subregional integration agreement involving Brazil, Argentina, Uruguay and Paraguay, with Chile and Bolivia holding a special associated status. It is now a customs union (all members have the same tariffs to the outside world) and is committed eventually to becoming a full common
market. In this sense it aspires to regional integration like the EU, rather than a free trade area like NAFTA.

The Mercosur structure, though still evolving, provides several environment-related innovations. Mechanisms for public participation were provided in the original Protocol of Ouro Preto, through a Foro Consultivo Económico y Social (social and economic advisory council, which exists as part of the Mercosur institutional structure). This forum receives information from labor, business and consumer representatives. Experts from the public also attend relevant meetings of Mercosur’s many technical sub-committees.

More explicit environmental and trade linkages are made through various legal mechanisms that combine as elements of a developing regime. Several resolutions of the Grupo Mercado Común and decisions of the Consejo de Mercado Común have touched upon environmental issues. The Canela Declaration of 1992 created an informal working group, the Reunion Especializada en Medio Ambiente, to study environmental laws, standards and practices in the four countries. This forum evolved into the creation of a Sub-Grupo No. 6 on the environment, which is one of the recognized technical working bodies of Mercosur. This group has discussed issues such as environment and competitiveness, non-tariff barriers to trade, and common systems of environmental information. This body has been involved for over two years in negotiating a new environmental protocol, which is being added to the Treaty of Asunción of Mercosur. The draft agreement provides a comprehensive stand-alone treaty for upward harmonization of environmental management systems and increased cooperation on shared ecosystems, in addition to mechanisms for social participation.

6.3 International Policy Forums on Timber Trade and Forestry

6.3.1 IPF, IFF and UNFF

Intergovernmental Panel on Forests (IPF)

The United Nations Commission on Sustainable Development (CSD) at its third session decided to establish the “open-ended ad hoc Intergovernmental Panel on Forests” (IPF). The IPF had, among others, the following task in its mandate: “…Trade and environment related to forest products and services.” This proved to be one of the most challenging elements of the work program of the IPF.

IPF concluded that full cost internalization may contribute to sustainable forest management in the long term. Without it, socio-economic and environmental costs may not be fully reflected in and addressed by the market, with the result that unsustainable practices may appear more attractive and less costly than SFM. Only a limited consensus exists on the concepts, definitions, measurement techniques and data requirements to introduce environmental costs into pricing mechanisms (IPF 1997).

When forest products are traded without full cost internalization, the resource is not adequately valued, one of the underlying causes of deforestation. In addition, the competitiveness of forest products is influenced, with adverse consequences for sustainable forest management (SFM), because the products from forests not sustainably managed do not suffer any competitive disadvantage, in fact often the opposite. Full cost internalization should therefore be aimed at all forest products and their substitutes.
Full cost internalization provides a useful and comprehensive objective towards the sustainable use of bio-diversity. Achieving this requires that regulations, rules and economic instruments, such as subsidies and other incentives, and other relevant instruments, be incorporated into a comprehensive strategy. In practice, this has not yet proved possible.

Typical instruments of internalization have been charges and taxes for environmental purposes and environmental requirements relating to products, including standards and technical regulations, packaging, labeling, and recycling. All these tools are applicable to forest-based products and could have direct or indirect effect on the valuation of bio-diversity. The GATT does not prevent the domestic use of taxes and charges for cost internalizing, provided that imported products are not treated less favorably than domestic “like” products. However, applying such levies on forest based products have generally not been politically feasible.

The IPF Proposals for Action, which are texts negotiated by governments, represent a “soft law” instrument on how sustainable management and development of forests could be achieved at the national level. Trade and environment in relation to forest products and services is one of the areas where only limited progress in consensus building can be observed. Therefore, substantive discussions on this topic continued on the subject under Intergovernmental Forum on Forests (IFF). In the Program Element on trade and environment, the IPF Proposals for Action includes (i) market access, (ii) relative competitiveness of forest products, (iii) lesser used species, (iv) certification and labeling, (v) full cost internalization, and (vi) market transparency.

The consensual Proposals for Action adopted by IPF on market access included: (a) Urging the study on environmental, social and economic impacts of trade related measures affecting forest products and services. (b) Requesting countries to undertake the reduction in tariff and non-tariff barriers to trade in accordance with existing international obligations and commitments. (c) Urging countries to formulate and implement voluntary codes of conduct for promoting sustainable forest management for relevant target groups involved in forestry.10

Consensus was not reached on options to ensure that forest products from all types of forests are subject to non-discriminatory rules and multilaterally agreed procedures. Neither was consensus reached on the relationship between obligations under international agreements and national measures, including actions by sub-national jurisdiction.

Intergovernmental Forum on Forests (IFF)

IPF’s work has continued by the ad hoc, open-ended Intergovernmental Forum on Forests (IFF). One of its tasks was to consider matters left pending when IPF was dissolved, including those related to trade and environment. Already in its first meeting, IFF decided to consider a number of market access related issues, which included: (a) Non-discriminatory international trade in forest products from all types of forests. (b) Role of tariff and non-tariff barriers in relation to sustainable forest management. (c) Relevant certification issues. (d) Improved market access. (e) Relationships between obligations under international agreements and national measures, including actions by sub-national jurisdiction. (f) Relative competitiveness of wood versus substitutes. (g) Valuation issues. (h) Market transparency. And (i) Illegal trade in wood and non-wood products.

10 (a) and (c) re-endorsed by COP-VI of the CBD with slightly different wording.
The international debate was focussed on certification and labeling as voluntary instruments to improve market access for and acceptance of forest products, and to contribute to SFM. This debate has involved many key stakeholder groups, i.e. forest owners, forest industry, environmental NGOs and social groups. Certification has proved to be a more complex instrument than expected because it is a new type of policy tool and because many practical issues have emerged in its implementation for which ready answers do not exist.

IFF urged countries to consider the potentially mutually supportive relationship between sustainable forest management (SFM), trade, and voluntary certification and labeling schemes, operating in accordance with relevant national legislation. It also urged the countries to ensure that such schemes are not used as a form of disguised protectionism, and to help to ensure that they do not conflict with international obligations. IFF also recognized the challenges of forest biological diversity, obstacles in international trade of forest products and perverse subsidies, and the need for cross-sector policy harmonization.

IFF stressed the link between sustainable development and market access for tropical timber. It was concluded that the relevance of market access to sustainable development lies in the fact that market access is a critical aspect of the trade, which in turn, is an integral component of development. Improved market access would facilitate international trade, enabling economies to grow, create wealth and generate export earnings.

**United Nations Forum on Forests (UNFF)**

Following the establishment of the United Nations Forum on Forests (UNFF), and the inclusion of trade in the UNFF’s multi-year program of work (2001-2005) and plan of action, trade will be one of the common items to be considered at each of its future sessions. The work is based on the Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests (the UNCED Forest Principles). Trade will feature as a principal element of the economic aspects of forests, which UNFF will focus on. The Forum pursues three inter-related objectives for forests: (a) promoting sustainable forest management through trade liberalization; (b) making trade and sustainable forest management mutually supportive; and (c) promoting trade in forest products and services, particularly those derived from sustainably managed forest resources.

Further guidance to the issue of trade, as provided by the UNCED framework, includes the following:

- Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or disguised restriction on international trade (Principle 12, Rio Declaration on Environment and Development).
- Efforts of developing countries to strengthen the management, conservation and sustainable development of these forests should be supported…, taking into account… the problem of achieving at least the replacement value of forests through improved market access for forest products, especially processed products (Principle 9(a), UNCED Forest Principles).
- Trade in forest products should be based on non-discriminatory and multilaterally agreed rules and procedures consistent with international trade law and practices. In this context, open and free international trade in forest products should be facilitated (Principle 13(a), UNCED Forest Principles).
Reduction or removal of tariff barriers and impediments to the provision of better market access and better prices for higher-value-added forest products and their local processing should be encouraged (Principle 13(b), UNCED Forest Principles).

Forest conservation and sustainable development policies should be integrated with economic, trade and other relevant policies (Principle 13(d), UNCED Forest Principles).

Trade ...and other policies and practices that may lead to forest degradation should be avoided (Principle 13(e), UNCED Forest Principles).

Unilateral measures, incompatible with international obligations or agreements, to restrict and/or ban international trade in timber or other forest products should be removed or avoided, in order to attain long-term sustainable forest management (Principle 14, UNCED Forest Principles).

In its second substantive session, UNFF (2002) assessed the status of market access as follows:

“In recent years, the international trade in forest products has benefited from the provisions of the Uruguay Round, which has secured further reductions in most tariffs for forest products, reduced uncertainty through the binding of tariffs in major markets as well as reduced degree of tariff escalation. However, the continuing use of barriers particularly of non-tariff barriers, which are aimed, inter alia, at encouraging domestic processing, promoting products from sustainably managed forests and restricting imports of unsustainably or illegally produced forest products has affected market access for many forest products.”

“In the context of the IPF/IFF/UNFF process, consensus has yet to be reached in respect of some important issues, including the removal of unilateral measures to the extent that these are consistent with international agreements. Removal of unilateral bans and boycotts inconsistent with the rules of the international trade system, as called for under paragraph 14 of the UNCED Forest Principles. Increased market transparency in order to improve market access for forest products and services, including those coming from sustainably managed forests; removing trade restrictions, which constrain market access, particularly for value-added forest products.”

“The promotion of trade in forest products and services produced from sustainably managed forests is pivotal to efforts at making trade and sustainable forest management mutually supportive. It is a matter of priority that appropriate and workable measures be found to ensure complete market access for these products and services. At the same time one should address the concern of developing countries regarding the implications this would have on their exports of forest products, which are derived from forests that have yet to be sustainably managed.”

“Following the outcome of the Doha WTO Ministerial Conference 2001, opportunities for further improvements of the multilateral trading system are likely to bring a salutary effect on the trade in forest products and services. Further efforts should be focused on reducing tariffs on high value and processed forest products and dismantling existing non-tariff barriers on forest products.” (UNFF/ECOSOC 2002).

6.3.2 Food and Agriculture Organization

The Food and Agriculture Organization of the United Nations (FAO) helps to facilitate contacts and information flow among on-going, new and emerging processes and between these and other related programs, such as national forest programs and the global forest...
resources assessment in the forestry field, and works within the framework of the Convention on Biological Diversity (CBD) in the field. Also, FAO’s statistical and analytical work on trends and outlooks for forest product supply and demand is highly relevant. FAO has also monitored the developments in the tariff and non-tariff barriers to trade through a series of studies (including Bourke and Leitch 2000).

With regard to market access, FAO is giving priority to:

- Ensuring compatibility and comparability in the various on-going initiatives, as well as harmonization of forest-related concepts and definitions among them; this work has direct relevance to trade.
- Support to country capacity building and training.
- Promotion of development of appropriate links between criteria and indicators for SFM applied at (i) the national, and (ii) the forest management unit (working) levels; and appropriate linkages between these and efforts towards the development and implementation of forest certification programs.
- Publication of well-focused, practical guidelines on the assessment and measurement of indicators ensuring compatibility between the assessment guidelines, at global level;
- Assistance to countries in securing necessary resources and support, drawing on both national and external sources, for the further development, testing and implementation of criteria and indicators; support to institutional twinning between developed and developing countries to further the implementation of sustainable forest management practices.

In the area of certification, FAO will continue to maintain an interest in global trends and opportunities, related to both market and forest management aspects. As an organization, which acts as a neutral forum, it will assist where appropriate. In this respect, in association with ITTO, FAO held a consultation dealing with the subject of mutual recognition between certification processes held in Rome, in 2001.

6.3.3 International Tropical Timber Organization (ITTO)

The International Tropical Timber Agreement (ITTA) is in the very focus of the international debate on market access for tropical timber. Market access has been subject to periodic investigations. ITTO’s work on this subject area was summarized in Chapter 1.1. It shows how complex the issue is and how difficult it is to make concrete progress in reducing market barriers and impediments.

ITTA is a commodity agreement, however, with a strong environmental link. ITTO has a double role: (1) promotion of trade of tropical timber, and (2) dealing with the environmental issues. The ITTO Mission Statement reads: “The ITTO facilitates discussion, consultation and international cooperation on issues relating to the international trade and utilization of tropical timber and the sustainable management of its resource base”.

In carrying out its mission, ITTO has faced a large number of challenges. In the words of ITTO Yokohama Action Plan (2002): “The linkages of the supply chain from sustainably managed resource to consumer require an integrated approach to maximize synergy. Managing and harvesting the resource, processing and marketing are mutually interdependent: it is important that the development and gains in one element are incorporated fully into the others.”
The ITTO Yokohama Action Plan (2002) describes the strengthening of the several linkages. These include the founding membership in Collaborative Partnership on Forests (CPF).

6.4 Unilateral Measures and Bilateral Agreements and Arrangements

Unilateral Measures

Unilateral measures have historically been taken both in exporting and importing countries. Trade regulation in exporting, in particular in developing countries, is generally aimed at promoting further processing of wood products as part of a wider national policy to create employment and alleviate poverty. In relation to non-wood products, export controls have been applied to reduce harvesting levels and to ensure the availability of supply to the domestic market (Iqbal 1995). The potential impacts on sustainable forest management can be both negative and positive as such measures easily create policy and market failures.

Log export bans or other restrictions (species quota, excessively high log export taxes, etc.) have been used in many producer countries to provide low-cost raw material to domestic industry in order to generate employment and value-added. These measures can also be seen in the bio-diversity context since gaining additional income through value-added processing would reduce pressure to harvest natural forest (WTO 1997). Performance in reaching these economic objectives varies extensively (weak in West and Central Africa, high in Indonesia and Malaysia). Bans and restrictions have been strongly criticized because they have been found to contribute to the under-valuation of logs, inefficiency in harvesting and processing, losses in value added, and probably deforestation (FAO 1994). Experience in using trade restrictions such as log export bans as a tool for conserving scarce forest resources have been discouraging (WTO 1997).

In the mid-1990s new trade flows of tropical timber emerged when log exporters from Africa and Latin America found new markets in Asia. This led to a paradoxical situation where some Asian importers were restricting their own log exports but advocated the abolition of such measures for their log import sources in Africa and Latin America. In this debate, the focus has been only on the export bans themselves, while less emphasis was placed on defining an appropriate mix of policy instruments for SFM based trade. In addition, long-term strategic considerations appear to have been overlooked.

On the importers’ side, attempts were made in some industrialized countries to introduce unilateral import bans of tropical timber in an effort to support forest conservation. But these were not successful. Austria once raised the issue in the WTO Council, but it was resolved when Austria decided to voluntarily withdraw its intention. Barbier et al. (1994) have shown that such selective bans could be counterproductive. In some countries, sub-national authorities continue to apply unilateral actions to restrict the use of tropical timber (Baharuddin & Simula 1998).

The consistency of such practices with the WTO rules could be challenged. Those rules oblige national governments, in the case of preparation, adoption and application of technical regulations by local government bodies and non-governmental bodies, to take such reasonable measures as may be available to ensure compliance with these rules. Such actions are also against the spirit of the WTO Plurilateral Agreement on Government Procurement (PGA), which does not allow discrimination on the basis of the country of production, and which places an obligation on Members to facilitate imports from developing countries. In practice,
the small number of signatories and the relatively high threshold level for contract values limit the possibilities of applying this instrument to forest products.

**Bilateral Arrangements and Memoranda of Understanding**

In principle, Memorandum of Understanding (MOU) is a general instrument on any contractual matter, often bilateral, sometimes with several parties. In the field of international tropical timber markets MOU has been used *e.g.* between governments to agree upon joint action in combating illegal activities in the forest sector. An example is “Memorandum of Understanding between the Governments of the Republic of Indonesia and the Government of the United Kingdom of Great Britain and Northern Ireland On Co-operation to Improve Forest Law Enforcement and Governance and to Combat Illegal Logging and the International Trade in Illegally Logged Timber and Wood Products”.

The MOU above is a result from the Forest Law Enforcement, Governance and Trade (FLEGT) process. The MOU refers to the commitment to involve stakeholders, including local communities, in decision making in the forestry sector, thereby promoting transparency and ensuring greater equity. The parties decided to work together to reduce, and eventually eliminate, illegal logging and the international trade in illegally logged timber and wood products, by rapid development and implementation of the necessary regulatory and policy reforms, including:

- Identification, by both Governments, of any reform of forest and related legislation and action required to prevent harvesting, export, and trade in illegally logged timber and wood products
- Support by both Governments for the development, testing and implementation of systems for the verification of legal compliance based on individually verified chain-of-custody tracking and identification systems, in due course to be applied throughout Indonesia
- The provision of technical and financial capacity building assistance by the UK to support the design and implementation of these systems of compliance verification and the necessary accompanying legal and administrative reforms
- Support by both Governments for the involvement of civil society in the effort to curb illegal logging and trade and particularly in monitoring the implementation of compliance verification
- The joint development of systems for timely collection and exchange of data on timber trade and wood product between the two Governments
- The joint development of effective collaboration between enforcement agencies and network in the two countries, aiming to provide mutual assistance in the application of Indonesia law and UK law
- Encouragement by both Governments for action by industry to reduce and eventually eliminate the volume of illegal timber and wood products transported and sold, including sourcing only timber and wood products identified as legal through compliance verification systems referred above, or through other, equally effective, means of identification.

The recent FLEGT seminar (April 2002) concluded that bilateral MOUs are likely to be the only feasible way to regulate trade in illegally harvested products until a broader international arrangement can be put in place.
6.5 **Multilateral Finance Agencies’ Role**

The World Bank (WB) and WTO have strengthened their relations and have signed between them an agreement for cooperation and collaboration. The cooperation emerged from the mutual recognition that the trade and development policies are increasingly inter-linked within countries and in the way they affect other countries. The agreement covers, *inter alia*, (i) cooperation to achieve greater coherence in global economic policy making through consultation and exchange of views, (ii) improved communication between the two institutions through the exchange and sharing of information, including access to their respective databases, joint research and technical cooperation activities.

The World Bank and WWF have joined forces in the Alliance for Protection and Sustainable Management of Forests. One of the targets of the Alliance is to achieve 200 million hectares of certified forests. The Bank’s draft Forest Strategy (World Bank 2002) recognized certification as a useful instrument towards SFM and defines what is considered acceptable certification schemes. The Bank is promoting certification in many of its client countries.

The Multilateral Investment Guarantee Agency (MIGA), a part of the WB Group is developing a loan guarantee instrument, which may also be linked to certification if its eligibility criteria will include third party certification. Access to funding by concession holders and industries (in this case through IFC) would become conditional to voluntary certification, which would serve as a tool for environmental and social risk mitigation.

Regional development banks are active in financing export-targeted reforms in the public sector in their client countries. For instance, the Inter-American Development Bank (IDB) has identified competitiveness as one of its five strategic intervention areas. The strategy of “open regionalism” has enabled the economies not only to exploit the advantages of geography, but also to position themselves more competitively in the world markets.

6.6 **Conclusions on Other International Instruments**

- The whole range of MEAs gives a wide perspective on the environment. One of the problems from the enforcement point of view is that their memberships do not have an exclusive coverage. Another, very basic one, is that they are often quite distant from the forest based market procedures. The trading partners or consumers do not usually have an easy way of link a particular product and a particular MEA.

- The regional agreements are easier to formulate and implement than global ones, but the have a danger of acting as blocks of external market access barriers or impediments. On the other hand they may provide a path of convergence for unilateral and bilateral measures. All of these, however, have a basic problem of creating sub-optimal partial solutions, and thus run a danger of compromising the global objectives.

- International policy forums are important from the point of view of keeping the communication process going. However, the results from the point of view of production of legally binding global principles have been disappointing. ITTO, as a commodity agreement, is in an excellent position to work towards elimination of market access barriers. Its strength and its weakness is that it has a partial regional coverage (of timber sources, the forests) as its domain (even if it has a wide membership of consumer countries as well).
7. IMPACT ASSESSMENT OF FOREST PRODUCTS TRADE LIBERALIZATION

7.1 GATT Negotiation Rounds and Tariff Liberalization

The Uruguay Round of GATT, completed in 1994, reduced most import tariffs on industrial products by one-third in the period of 1994 to 1999. Tariffs on some products, including pulp and paper, would be eliminated completely in major developed country markets before the year 2005. Also tariff escalation was considerably reduced. Developed countries set bounds on all their tariffs, while developing countries did the same for 65% of their tariffs. As well, much attention was paid on non-tariff barriers, subsidies, countervailing duties, technical barriers and standards.

Based on Uruguay Round, tariffs on most forest products would be reduced by 33% on trade-weighted basis. Austria, Canada, EU, Finland, Japan, New Zealand, USA and several other major importers agreed to tariff elimination on pulp and paper. These countries would reduce their (1986) tariff by 50% by year 2000, and eliminate them by 2004. The major developed countries were also committed to reducing tariffs by 50% on solid wood products in period 1995-2000. For developed countries the average tariff on forest products (wood, pulp, paper and furniture) would be reduced from 3.5% to 1.1% (Barbier, 1996).

The Uruguay Round committed all major developed countries and a high proportion of developing countries to binding tariff rates on forest products, thus reducing market risk. For non-tariff barriers, the Agreement on Sanitary and Phyto-sanitary Measures and the Agreement on Technical Barriers to Trade would improve market access. Nevertheless, while the Uruguay Round reduced tariffs significantly, its implications for the non-tariff barriers was less clear. (Barbier, 1999).

7.2 Results from Early Studies on Tariff Liberalization

Boyd, et al (1993) found that due to the US tariff removal on the North-American sawnwood trade, Canadian sawn softwood exports to USA would increase by 4.5%. After the 1994 Uruguay Round, FAO made several assessments of its effects on world agriculture, forestry and fisheries. Barbier (1996 and 1997) contributed to the forestry part of this work. He found that the Uruguay Round would increase the world imports by 0.4-0.5%. Brown (1997) found that gains of trade due strictly to the Uruguay Round would be relatively small also for Asia-Pacific countries.

Effects of the tariff reduction have been research through a global partial equilibrium model (global forest products model, GFPM, see “Accelerated tariff…”). Further, both local and global effects have been analyzed (Brooks et al. 2001). The conclusion of Zhu et al. (2002) includes that the effects of ATL on trade would be much more important than on consumption and production. The simulation results indicate that the roundwood trade would decrease by about 5.5% on global level under ATL. As expected, the world trade in manufactured products would increase by 5-6%.
7.3 Accelerated Tariff Liberalization Proposal

Even in some industrialized countries, tariffs on forest products (such as wood based panels) remain high. In other countries tariffs in the range 10-20% are common. In 1997 ministers of Asia-Pacific Economic Cooperation (APEC) countries called for the nomination of sectors for early voluntary liberalization (EVSL). Canada, USA, New Zealand and Indonesia proposed the forest sector.

The process led to the Accelerated Tariff Liberalization (ATL) proposal to cover all forest products. Products included were: logs, wood products, pulp, paper and paper products. Parties to the Uruguay Round of GATT zero-for-zero agreement would move up the elimination of tariffs on pulp, paper and paper products from January 1, 2004 to January 1, 2000. Others would attempt to remove tariffs by the same date but could delay removal until January 1, 2002. (Buongiorno, et al., 2003).

7.4 Simulation Results of Accelerated Tariff Liberalization Impacts

The simulation of tariff liberalization with a global model produces a large number of numeric results for any chosen set of conditions. In this context it is only possible to summarize a few key results reported in the literature.

Comparison of simulation results from two large models, Global Forest Products Model (GFPM) and CINTRAFORE Global Trade Model (CGTM), indicates that they produce similar results on similar assumptions (Brooks, 1999). With similar assumptions on economic development and tariff cuts, the results were: (i) No major global changes on production and consumption, (ii) significant changes in commodity composition of trade and in geographic patterns of production and trade. According to Wisdom (1999), for many countries and the world, the welfare gain of consumers would exceed the welfare loss of producers (due to trade liberalization), but not by much. “The question of whether, in fact, they should be compensated, and if so, how, is a political question. It is a very important question (Wisdom, 1999).

According to Buongiorno, et al., (2003), “To judge the environmental implications of further liberalization, changes in timber harvest can be used as a coarse indicator of impacts on the forests. Based on model projections, aggregate global timber harvest would increase little, as compared to the base scenario in 2010. The expected change in the world timber harvest is the net effect of both increases and decreases in individual countries. Projected timber harvesting would increase most in the former USSR and South America (by about 1% on an average year) and decrease slightly in Oceania and Europe, with accelerated tariff liberalization.”

According to Tomberlin and Buongiorno (2000) and Sedjo and Lyon (1990), increased harvest in managed secondary forests, especially plantations, is likely to account for much of the net increase in world timber harvest. Taken together, these projections suggest that, at a broad scale, further tariff liberalization in the forest sector would be neutral with respect to some high-profile environmental consequences (harvesting primary forests) (Buongiorno, et al., 2003).

According to Buongiorno, et al., (2003), “Further tariff liberalization may also lead to positive environmental changes by stimulating increases in manufacturing efficiency in export-oriented developing countries. In addition, trade liberalization in forest products is
most likely only as a part of a broader set of reduction in tariff and other barriers. This may contribute to increasing income and rising standards of living in developing countries, accompanied by decreases in consumption of fuelwood and increases in consumption of other forest products – including forest amenities and attendant conservation measures – along an environmental Kuznet’s curve (Raunikar and Buongiorno, 1999).”

7.5 Single Country Case: Trade Agreements and New Zealand

It is often important to assess the potential effects of trade liberalization on a single country. Due to the complex interactions between industrial units, domestic wood and product markets, and international linkages, it is important to have an analytical framework that allows for a whole range of trade flows to adapt to a particular scenario of assumptions.

GFPM model (see e.g. FAO 1997), which was used for ATL simulation above, was used to simulate impacts on a single country, New Zealand. Modifications were made to include bilateral trade flows, to allow better modeling of regional trade agreements. In addition, country parameters were set specifically for New Zealand (Brown, 1997 a,b).

Effects of three alternative scenarios were studied (Brown, 1997 a,b):

(i) P5 agreement between USA, Chile, Australia, New Zealand and Singapore. The tariff rates of 1997, targeted for removal by 2005, are summarized in table 7.1.

(ii) AFTA-CER between ASEAN Free Trade Association (AFTA) and Closer Economic Relations (CER) countries (Australia and New Zealand). The tariff rates of 1997, targeted for removal by differing target years, for selected commodities are summarized in table 7.2.

(iii) GATT (1994) Uruguay Round agreement.

Table 7.1 Tariff Rates of 1997 Targeted for Removal by 2005 in P5 Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Tariff Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td></td>
</tr>
<tr>
<td>Plywood and veneer</td>
<td>5.0</td>
</tr>
<tr>
<td>Particleboard</td>
<td>0.8</td>
</tr>
<tr>
<td>Fiberboard</td>
<td>0.6</td>
</tr>
<tr>
<td>Printing and writing paper</td>
<td>1.5</td>
</tr>
<tr>
<td>Other paper and paperboard</td>
<td>2.4</td>
</tr>
<tr>
<td>Chile</td>
<td></td>
</tr>
<tr>
<td>Industrial roundwood</td>
<td>11.0</td>
</tr>
<tr>
<td>Sawnwood</td>
<td>11.0</td>
</tr>
<tr>
<td>Plywood and veneer</td>
<td>11.0</td>
</tr>
<tr>
<td>Chemical pulp</td>
<td>11.0</td>
</tr>
<tr>
<td>Newsprint</td>
<td>11.0</td>
</tr>
<tr>
<td>Australia</td>
<td></td>
</tr>
<tr>
<td>Sawnwood</td>
<td>5.0</td>
</tr>
<tr>
<td>Plywood and veneer</td>
<td>5.0</td>
</tr>
<tr>
<td>Printing and writing paper</td>
<td>5.0</td>
</tr>
<tr>
<td>New Zealand</td>
<td></td>
</tr>
<tr>
<td>Sawnwood</td>
<td>8.0</td>
</tr>
<tr>
<td>Particleboard</td>
<td>7.5</td>
</tr>
<tr>
<td>Fiberboard</td>
<td>6.5</td>
</tr>
<tr>
<td>Newsprint</td>
<td>7.5</td>
</tr>
<tr>
<td>Singapore</td>
<td></td>
</tr>
<tr>
<td>All products</td>
<td>0.0</td>
</tr>
</tbody>
</table>
### Table 7.2 Tariff Rates of 1997 Targeted for Removal by AFTA-CER Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Product</th>
<th>Tariff rate (%)</th>
<th>Target year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>Sawnwood</td>
<td>10.0</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>Plywood and Veneer</td>
<td>20.0</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>Wastepaper</td>
<td>25.0</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>Printing and writing paper</td>
<td>15.0</td>
<td>2010</td>
</tr>
<tr>
<td>Laos</td>
<td>Industrial roundwood</td>
<td>2.0</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>Sawnwood</td>
<td>5.0</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>Plywood and veneer</td>
<td>20.0</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>Chemical pulp</td>
<td>3.0</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>Newsprint</td>
<td>10.0</td>
<td>2015</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Plywood and veneer</td>
<td>40.0</td>
<td>2100</td>
</tr>
<tr>
<td></td>
<td>Newsprint</td>
<td>5.0</td>
<td>2100</td>
</tr>
<tr>
<td></td>
<td>Other paper and paperboard</td>
<td>20.0</td>
<td>2100</td>
</tr>
<tr>
<td>Thailand</td>
<td>Sawnwood</td>
<td>5.0</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>Plywood and veneer</td>
<td>20.0</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>Chemical pulp</td>
<td>7.0</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>Newsprint</td>
<td>35.0</td>
<td>2010</td>
</tr>
<tr>
<td>Australia</td>
<td>Sawnwood</td>
<td>5.0</td>
<td>2005</td>
</tr>
<tr>
<td></td>
<td>Plywood and veneer</td>
<td>5.0</td>
<td>2005</td>
</tr>
<tr>
<td></td>
<td>Printing and writing paper</td>
<td>5.0</td>
<td>2005</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Sawnwood</td>
<td>8.0</td>
<td>2005</td>
</tr>
<tr>
<td></td>
<td>Particleboard</td>
<td>7.5</td>
<td>2005</td>
</tr>
<tr>
<td></td>
<td>Newsprint</td>
<td>7.5</td>
<td>2005</td>
</tr>
</tbody>
</table>

**Impacts on Production:** The simulation results from all of the three cases indicated an increase in New Zealand production of processed forest products such as newsprint and plywood (compared to no liberalisation). The regional agreement scenarios (P5 and AFTA-CER) indicated a lower roundwood production, while GATT 1994 scenario indicated stable or increasing roundwood production.

**Impacts on Exports:** The simulation results indicate that the impacts are greater for exports than for production. Export of processed commodities – plywood, veneer, newsprint, and printing and writing paper- increased under all three alternative liberation scenarios. Instead, the primary materials, roundwood, and pulp as well, were lower under the liberation scenarios. The global liberation scenario (GATT 1994) resulted in largest changes in exports.

**Impacts on Local Consumption:** According to the case simulations, all the liberalization scenarios led to moderate increase in local consumption of most products (Buongiorno et al. 2003). Further, the higher production led to higher fiber consumption. However, the three scenarios differed from each other in the implications of composition of consumption.

In the case of New Zealand the basic objective was to increase the value added of the already expanding roundwood supply. The regional agreements, according to these case simulations, actually reduced the primary wood consumption. Instead the global liberalization scenario (GATT 1994) resulted in a moderate increase in roundwood consumption. Thus, only global scheme was open enough for primary supply expansion.
7.6 Conclusions from Impact Assessments

- The empirical studies seem to support the theory, that trade liberalization expands the volume of economic activity, and especially of trade.

- The studies in general give support to one of the basic assumptions of liberalization, that most of the consumers will face lower prices (and higher welfare) as a result of liberalization.

- The conclusion that consumers get more of commodities at a lower price, and thus gain in welfare, is partly shadowed by the fact that sometimes producer country consumers may not gain. On the other hand, the producer welfare has a tendency of going down instead of increasing.

- There is no inherent indication of the mechanism of compensation from those who gain to those who suffer, in the simulation assessments in general.

- According to the assessments, the regional trade agreements (with tariff reductions) do have similar volume enhancing and price reducing impacts, as the global trade agreements, but to a lesser degree and less consistent manner.

- The chosen single country case seems to indicate the basic fact that opening up makes a country vulnerable to the harsh realities of the international competitive market place. This offers great opportunities if the country has rich resources and competitive factors of production. In an opposite case, the trade, production and factor markets (including forestry) will suffer.
8. KEY ISSUES RELATED TO FOREST PRODUCTS TRADE AND SUSTAINABILITY

8.1 Codes of Practice, Standards and Certification

8.1.1 Logging Practices and Sustainability

There are a large number of issues related to wood sourcing, logging practices and sustainability, which have a potential effect on market access. They concern (i) the legal rights to harvesting, (ii) harvesting practices, and (iii) demonstration of sustainability of forest management.

The issue of legal rights to harvesting opens up the question of land use regime, e.g. the legal and administrative status of the forest estate or forest land. Closely related are the ownership and user rights. Further, this issue covers the conditions of concession rights. The questions on forest dwelling peoples rights and participation of civil society are closely related to the issue of legal rights of harvesting.

Harvesting practices, as well as silviculture, road building and other management interventions can have significant impacts on bio-diversity and the health and condition of the forest ecosystem. This should be built-in when operational guidelines are prepared and enforced. The biggest threat to bio-diversity is, however, the outright loss of habitats due to deforestation associated with conversion of forest land for other uses.

Managing forest profitably requires distinction between “good” and “bad” practice. Whether it is possible to manage forest complexity profitably while minimizing ecological damage to future harvests is the subject of considerable current debate. The widespread under-pricing of forest products from illegal or undesirable trade presents a formidable challenge to ‘good forestry’. Notwithstanding the evidence of increase profitability when Reduced Impact Logging (RIL) techniques are used under experimental conditions (Dykstra, 2001), there are numerous reasons why poor logging practices persist in the tropics (Putz et al., 1999). Making “good forestry” profitable will almost certainly require some discrimination between “good” and “bad” practice, and some argue that positive and/or negative enforcement may best be achieved through trade measures (Richards, 2000).

8.1.2 Product Standards and Grading Rules

While the tariff barriers will continue to be lowered further, the role of non-tariff barriers will become increasingly important. Product standards, building codes and other standards and regulations, which influence the use of timber for various end-uses, will continue to be a concern and would need to be continuously monitored.

In the European Union, national standards are being harmonized within the regional framework (EN standards). They tend not to duly consider the specific characteristics and applications of tropical timber and may indirectly have a negative impact on their market shares. The situation is not aided by the fact that main tropical timber producers tend to apply their own standards for sawn timber. These are not well coordinated, and such a co-ordination has proved to be difficult, as it is laborious to deal with a whole range of grading rules. This has, in practice, led to an additional entry barrier to any new producer entering the international market.
From exporter’s point of view, the fact that Japan, the US and the European market apply their own typical product standards makes it difficult to serve more than one market from the same mill. There has not been sufficient incentive to harmonize the specifications and standards, which have been built up over decades based on long traditions prevailing in each market.

The emergence of USA as a significant temperate hardwood supplier in all the major import markets has lead to a situation where the requirements specified in the grading rules of the National Hardwood Lumber Association (NHLA) are frequently used as a reference to other suppliers as well, including tropical timber. As the raw materials are different, this may represent a potential economic loss for tropical producers. On the other hand, such an international benchmark can facilitate the trade for other suppliers as well.

During this study, it was not possible to carry out a detailed investigation into what extent national building codes may represent barrier to tropical timber. In some important countries, the issue has been studied from the viewpoint of timber in general. The available information is fragmented and far from comprehensive. There is a need to carry out a separate study on this topic.

8.1.3 Certification, Labeling and Their Potential Impact on Market Access

Greening of consumers is taking place, even if it is difficult to judge the pace, and to see what it means in actual consumption patterns. There are several ways, through which the consumers can get their views voiced, firstly through their buying behavior, secondly, with legislation through political representation, and thirdly through the NGOs and the civil society in general.

Certification is one of a number of market-based instruments that may contribute to improved management of forests and improved forestry sector development. The goal is to link trade in forest products to sustainable management of the forest resource, by providing buyers with information on the management standards of the forests from which the timber came. As an instrument, it has both strengths and weaknesses which vary with the specific circumstances of the country, the ownership of forests, the social environment and last, but certainly not least, the markets being served.

Many countries, which are involved in the development, testing and implementation of criteria and indicators, are also aiming at eventually providing certified forest products. Some countries have addressed the two issues of sustainability indicators and common, minimum quality standards for certification in parallel, and have focused on how best to achieve recognition or compatibility with other certification approaches. They all involve wide participation of interested stakeholders, although the participation and influence of different groups varies.

Most countries have used the international criteria and indicators as the basis or starting point for their certification activities. For example, a number of producing countries who are members of ITTO have used the C&I of ITTO for the Sustainable Management (SFM) of Tropical Forests; other countries have used the Pan-European or the Montreal Process, the Principles, Criteria and Indicators of the African Timber Organization, etc. Almost all have taken note of the Forest Stewardship Council (FSC) Principles and Criteria and made efforts
to ensure a degree of compatibility. Thus there has been a considerable degree of cross-
fertilization involved.

Tropical countries, while making progress in the development of criteria and indicators for sustainable forest management, have had slow progress in certification (Eba’a and Simula 2002). The main reason has been that the current status of much of the forest management, and the defined criteria have been incompatible or too distant from each other. Furthermore, know-how, resources, institutions and to some extent commitment by governments are less well developed. In many situations it is still uncertain whether certification is necessary or even desirable. Finally, the benefits to be achieved from certification need to be substantiated.

8.1.4 Certification of Quality and Environmental Management Systems

The relationship between certification and trade includes the question of whether certification is necessary or desirable for forest management reasons and whether it can provide tangible market benefits through market share, price premiums, etc. Judgements about the desirability of undertaking certification, who would do it, how it would be done, and whether it is a government or private sector responsibility, vary between countries. Certification is being promoted for several reasons, from marketing to forest management (Rametsteiner and Simula 2001).

Although by itself certification is unlikely to ensure sustainable forest management, it does have the potential to encourage efforts towards sustainable practices, which has been recognized by several international forums. There are a number of potential benefits, and some disadvantages, but the main motivation of those undertaking certification at present is more for marketing than for forest management reasons, e.g. to gain an advantage over other suppliers in some ecologically sensitive markets, and for market access reasons.

The important need is to focus on improved, sustainable management of those forests that are at present under threat. Interest in certification as a marketing tool is only of significance if it can play a major role in meeting this goal. If it cannot, then certification is a tool that should be left to private interests if useful, and to be ignored if not. The SFM goal implies that all forests are better managed, not to ensure that only those that can meet certification standards are recognized.

The effectiveness of the certification in achieving its fundamental objective is not yet proven, i.e. (i) to improve forest management and (ii) to ensure market access. It needs to be recognized that certification is not a sufficient condition alone to achieve these objectives, and can only play a complementary role (Baharuddin and Simula 1994). In addition to these specific objectives, environmental labeling responds to the consumer’s interest in exercising her buying preferences and managing the environmental impacts of her consumption, as well as the consumer’s right to information about products she may be interesting in buying.

A set of ancillary objectives may be achieved through improved internal and external transparency of operations. Such objectives can be set at the sector (e.g. better control of forestry operations and land use change, higher recovery of collection of forest fees and taxes) or firm level (e.g. improved total productivity, cost savings). The weight given to the various objectives varies by country. For instance, in the case of Indonesia, the sustainable development argument is said to far outweigh the promotion of trade (Salim et al. 1997), while in North America and Europe certification is probably mainly seen by the industry as a
trade issue. Countries are in different situations in terms of quality of forest management, existing legal framework and its enforcement mechanisms, trade dependency, and exposure to environmental pressures in trade, which all influence the potential contribution of certification to SFM and trade development.

There are still a number of unanswered and unresolved issues and uncertainties concerning certification, including (cf. Eba’a and Simula 2002):

- What is the market for certified products? It remains unclear as to whether there will be a demand for certified wood or whether a price premium is likely. The current growing demand in some countries has been largely pushed by the distribution chain rather than pulled by final consumers. Price premiums are reported in some cases but are unlikely to remain when certified products become available in large quantities.

- How will certification contribute to improving forest management? Only 8% of the world’s certified forests are found in the tropics. The progress looks slow if the specific situation in the management of tropical forests cannot be addressed by the certification schemes.

- Which system of certification is most appropriate? In many countries this is one of the major issues that are under debate. Lack of support to international schemes has lead to the development of national solutions.

- How to encourage mutual recognition between different certification systems? Certification schemes and certification bodies working under them are competing with each other in the market place. Mutual recognition has not been possible for competition and ideological reasons. The conclusions of the recent ITTO International Seminar on Comparability and Equivalence of Certification Schemes (ITTO 2002) clearly indicate how limited the progress in this issue has been and what the key underlying issues are.

Trade intermediaries, particularly do-it-yourself (DIY) retailers in Western Europe, have been the major catalysts to move markets towards certified products. Softwood based products have been more easily certified than those of hardwoods. Tropical hardwoods are even more difficult, since they need individual attention to species and it is usually more difficult to ensure uninterrupted supply of certified tropical hardwood with uniform quality and sustained commercial volumes. Plantation timbers such as rubberwood and eucalyptus have made market inroads, becoming the first certified hardwoods with larger volumes.

In addition to official action, a number of important independent initiatives have taken place that can help to track timber. Certification schemes aiming at sustainable forest management can also help to track the legality of timber. Most prominent is the FSC, which includes legality of the source as one of its criteria, and explicitly requires chain-of-custody monitoring. However, other schemes, such as the Pan European Forest Certification (PEFC) scheme as well as national schemes, e.g. Brazil (CERFLOR), Indonesia (LEI) and Malaysia (MTCC), have also potential to contribute to verification of legality of certified timber. Compliance with legal requirements is implied or explicit in all the forest certification standards.

What constitutes a “credible”, “acceptable” or “reliable” certification standard or scheme still remains undefined through an inclusive process at an international level. Several parties have attempted to define such requirements but there is no consensus on them, and there is no identified forum, which would have a mandate to undertake this task (Rametsteiner and Simula 2001). The only generally agreed set of requirements was developed by the IPF but those criteria are very general by nature.
It is commonly agreed that forest certification should be based on sustainable forest management (SFM) but sometimes good or responsible forest management is referred to. This has also been subject to debate.

The World Bank has agreed with leading international conservation agencies that it will encourage the widespread use of internationally agreed criteria and indicators for SFM. In supporting independent certification, the Bank will not endorse any one particular approach to certification. However, in the absence of any broad stakeholder consensus on the acceptability of a particular system, the Bank in its draft forest strategy (World Bank 2002) has adopted a set of principles and criteria to assess the adequacy of different certification systems. The World Bank-WWF Alliance for Forest Conservation and Sustainable Use has the following criteria for credible certification systems:

- Institutionally and politically adapted to local conditions
- Goal oriented and effective in reaching objectives
- Acceptable to all involved parties
- Based on performance standards defined at the national level that are compatible with generally accepted principles of sustainable forest management
- Based on objective and measurable criteria
- Based on reliable and independent assessment
- Credible to major stakeholder groups (including consumers, producers and conservation NGOs)
- Certification decisions free of conflicts or vested interests
- Cost effective
- Transparent
- Equitable access to all countries.

The Alliance believes that a common set of principles should underscore any standard for improving the management of both natural and planted forests. These principles include:

- Compliance with all relevant laws
- Documented tenure and use rights
- Respect for indigenous peoples’ rights
- Respect for community relations and workers’ rights
- Encouragement of multiple benefits from forests
- Containment of the environmental impacts of forest use
- Rigorous forest management planning
- Active monitoring and assessment
- Maintenance of critical forest areas.

Certification and labeling is an example of a PPM related instrument (see Section 5.2.3). In the forestry sector, certification of forest management quality and labeling of forest products has emerged as a challenging issue in the international fora and the marketplace. The development process of this instrument started in the beginning of the 1990s as an initiative to provide market based incentives to those forest owners and managers, who respect high management standards in their forests.

Certification is seen as a major information based instrument, which could make trade contribute to the sustainability of natural resources. Both consumption patterns and production methods are influenced through voluntary action towards reduced environmental impacts. A single PPM issue is concerned, i.e. the quality of forest management. For labeling of products, differentiation has to be established throughout the chain-of-custody (COC) from
the forest to the final end user in order to enable communication of correct information. There are also other options to communicate the certification of forest management to consumers (off-product, e.g., brochures, advertisement, etc.). In the forest sector, most PPMs related to timber are non-product related, and the environmental effect is primarily national, although of global concern.

The ISO 14001 standard on Environmental Management Systems (EMS) is being implemented by large forest organizations both in developed and developing countries. A special guidance document (ISO TR 14061) has been prepared to facilitate the application of the ISO 14001 standard in forest management. It applies to those environmental aspects, which the organization has control of and over which it can be expected to have an influence.

The EU Eco-Management and Audit Scheme (EMAS) is a management tool for companies and other organizations to evaluate, report and improve their environmental performance. The scheme has been available for participation by companies since 1995 (Council Regulation (EEC) No 1836/93 of 29 June 1993) and was originally restricted to companies in industrial sectors. Since 2001, EMAS has been open to all economic sectors, including forestry (Regulation (EC) No 761/2001 of the European Parliament and of the Council of 19 March 2001). In addition, EMAS was strengthened by the integration of EN/ISO 14001 as the environmental management system required by EMAS. Participation is voluntary and extends to public or private organizations operating in the European Union and the European Economic Area (EEA), Iceland, Liechtenstein, and Norway. An increasing number of candidate countries are also implementing the scheme in preparation for their accession to the EU.

The ISO 14001 standard has been complementing the ISO 9000 series of standards on Quality Management Systems, which is much more widely applied than ISO 14001. Many developing countries have promoted ISO 9000 standards as a means to improve the competitiveness of their export systems. In the timber industry, this process, with a few exceptions, is still in its initial stages, largely due to the fragmentation of the industry and weakness of the existing management systems.

Certification to ISO 9000 series and 14001 are actively communicated in the market place by the companies, which have achieved them. Buyers in importing countries also pay attention to ISO 9000/14001 certifications as a complementary criterion when selecting among suppliers. Developing countries have expressed concerns that this could represent an undue cost burden in their case as they do not have similar access to accredited certification bodies as suppliers in developed countries. Their weak management systems mean larger incremental costs to achieve certifiable operations than in developed countries.

8.2 Legality of Forest Products and Law Enforcement

8.2.1 Problem of Illegal Logging and Trade in Forest Products

The range of illegal activities related to logging and timber trade is wide. Such illegal activities include (cf. FAO, 2001b):

- illegal occupation of forest lands
- illegal logging
- illegal timber transport
- illegal trade and smuggling
Illegal logging is increasingly recognized as a major cause for unsustainable practices and deforestation. This is particularly apparent in some major forested countries, and some sources suggest very high figures for illegal operations, such as 85% for Brazil, 51% for Indonesia, (some sources give a higher estimate), 50% for Cameroon, and in 20% for Russia (ITTO 2002, Morozow 2000). These estimates are rarely based on detailed studies on the ground and they should be interpreted with care. Illegal logging not only creates ecological damage, but also leads to economic loss, in that it diverts significant revenues and benefits from key stakeholders, such as national and sub-national governments, forest owners and local communities.

Trade can be at least a partial driver of illegal logging, if the law enforcement capacity can not meet the challenge. Although no reliable quantification exists of precisely how much timber in trade is from illegal sources, there is increasing evidence that the amount is considerable and that the problem is substantial (Scolan and Ludwig 2002). A consensus appears to exist that controlling trade in illegal timber will be an important contribution to halting illegal logging.

Existence of corruption creates general friction in the society, including economy and trade. Evidence exists that in many countries corruption is still a driving force behind misappropriation of forest resources. It has been said that corruption is a symptom, not a disease itself. We have to look at land use and forest policy, among other wider things. It is probably fair to say that good forest policy goes against corruption and is good for integrity. On the other hand, even the best forest policy does not necessarily guarantee corruption free and good governance.

8.2.2 International Action to Combat Illegal Logging and Trade

There have been increasing calls at the international level to address the problem of illegal logging and the illegal timber trade. To date, there is no internationally legally binding instrument focussing exclusively on the problem of illegal logging or illegal trade. So far, the only legally binding international instrument that covers illegal trade in timber is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

A key international forum that has considered the problem of illegal logging and illegal trade is the G-8. The Forest Action Program, agreed upon at the meeting in Birmingham (UK) in 1998 contains several measures on illegal timber trade, including:

- Sharing of information and assessments on the nature and extent of international trade in illegally harvested timber
- To identify and assist in implementing measures to improve economic information and market transparency regarding international timber trade, including through the Intergovernmental Forum on Forests and the ITTO
- To identify and assess the effectiveness of their internal measures to control illegal logging and international trade.
These commitments were subsequently reaffirmed at the summit of Okinawa in July 2000, which pledged to “combat illegal logging, including export and procurement practices (G8 Communiqué Okinawa 2000, paragraph 67)

Most recently, the World Summit on Sustainable Development Plan of Implementation calls for taking “immediate action on domestic forest law enforcement and illegal international trade in forest products.” This was preceded by similar entreaties by the Intergovernmental Forum on Forests.

FAO has also studied the problem and its causes (Contreras 2000) and recently produced an excellent guide for design of forest legislation to combat forest related illegal activities (Lindsey et al. 2002).

8.2.3 Forest Law Enforcement, Governance and Trade (FLEGT) Process

An important process currently underway is the Forest Law Enforcement, Governance and Trade (FLEGT). It offers a forum for discussion and co-operation between developed countries and emerging economies, particularly for those, which produce and consume or import wood or wood products. FLEGT covers a wide range of issues relating to reform and application of the law in wood producing countries, governance, management, production capacity, as well as trade related aspects.

The first Ministerial Conference on FLEGT was held in Bali (Indonesia) in September 2001 for the region of East Asia. The Conference brought together nearly 150 participants from 20 countries, representing governments, international non-governmental organizations (NGOs), and the private sector. According to the Ministerial Declaration, participating countries (in the Bali Conference) agreed, inter alia, to explore ways in which the export and import of illegally harvested timber can be eliminated, including the possibility of a prior notification system for commercially traded timber. The Annex to the Declaration lists several indicative actions on implementing those aspects of the Declaration that address combating illegal timber trade, including:

- Harmonized customs commodity codes
- Protocols for sharing of export/import data
- Complete chain of custody audit and negotiation systems
- Initiative for improved and timely trade statistics
- Prior notification between importing and exporting countries.

A further FLEGT workshop was held in Brussels in April 2002 to help elaborate solutions for the EU. The discussion revolved around four main themes: (a) legality verification, customs co-operation and enforcement, (b) finance and procurement, (c) forest based industries, and (d) influence of trade policies and WTO. A further Ministerial Conference is focusing on the African continent (AFLEGT).

There is a concern among tropical timber producers that an international system to ensure that illegally harvested timber does not enter international trade could represent yet another undue hurdle for them. It is apparent that, in spite of being a global phenomenon, the problem of illegality is, in general, more serious and complex in their case than among temperate or boreal countries. The main reasons are weak enforcement institutions and unnecessary bureaucracy together with widespread corruption. High transaction costs of legal operations provide thereby an additional economic incentive for illegal harvesting and trade. A system of
notification, coupled with an obligation to verify the “legality of the origin of tropical timber” is feared to add producers’ costs, thereby reducing competitiveness.

8.2.4 Public Procurement from Sustainable and Legal Sources

A legal instrument, Plurilateral Government Procurement Agreement (PGA), exists to control the trade distortions of public procurement. The field is a dynamic one, national and local governments, especially in the EU, the USA and Japan are using public procurement as a means to guarantee “legality and sustainability” of their purchases of tropical timber.

United Kingdom

Controlling the illegal timber trade has been a focus of some national initiatives. Amongst the most prominent ones, is the Green Procurement Initiative. The UK policy is to require, as far as possible, that Government bodies purchase sustainably produced timber, for example by specifying in order and contracts that suppliers must provide documentary evidence that the timber derives from lawful and sustainably managed sources. This documentary evidence may take the form of a certificate issued under a credible, preferably independent, verification scheme or other documents that demonstrate the timber producers are conforming to internationally recognized principles. In the words of the UK Government:

“As a part of its contribution to sustainable forestry the UK Government is committed to purchasing the timber and wood products it needs only from legal and sustainable sources. It has considerable purchasing power. By requiring its suppliers to produce credible evidence that the source of their products was indeed legally harvested trees from well-managed forests, the Government plans to have a major influence on the supply chain.”

“Already this policy has begun to be implemented in central Government departments and their executive agencies. But it is now clear that Government buyers need clearer central guidance and advice.”

In UK, the stated policy is under a process of elaboration of the details of implementation. Whatever the final outcome, the following issues and aspects are covered (www.defra.gov.uk):

- The contracting authorities can require the procurement to meet environmental standards.
- The authorities can define the criteria and indicators, which specify what constitutes timber from “legal and sustainable sources”
- There has to be choices for the provider of the “documentary evidence”, no one single certification (such as FSC) or standard (ISO 14001), or Audit scheme (EMAS/EU) would suffice as an alternative, even if each one is valid as such
- A decision has to be made if alternatives to the certification, as defined above, can be acceptable. Potential alternatives are eco-labels (such as EU Eco-label, Nordic Swan, German Blue Angel)
- Further alternatives to certification would include “producer groups” a concept developed by WWF, based on voluntary participation, but obligations to comply with the rules set
- An assessment system has to be in place to verify that the ‘sustainable source’ meets the Government criteria and indicators
- The supplier has to provide evidence that the product complies with the Government’s criteria, and acceptable methods of verification of the chain-of-custody have to be in place.
European Union

In addition to the UK, several EU member countries are actively promoting the public procurement from legal and sustainable forest sources. At the April 2002 meeting of the intergovernmental Conference of the Parties (COP6) of the Convention on Biological Diversity (CBD), the French and German governments announced that they will favor the purchase of timbers certified by FSC or equivalent certification systems. The German and French ministers for the environment also expressed their support for the fight against “destruction of ancient forests” and called for an international action plan.

The European Commission has restricted the imports of Brazilian mahogany. The environmental directorate of the Commission sent a note on that purpose to the management authorities of the 15 EU Member States on March 26. The note “advices Member States not to accept export permits for specimens of *Swietenia macrophylla* (mahogany) from Brazil until further notice, without first obtaining from Brazilian authorities a statement that those specimens were legally acquired.” The Commission’s move follows announcement made by German and Belgian governments to stop mahogany being imported into their countries and from entering trade.

Under EU legislation, the trade restrictions on illegal timber can only be imposed at EU level. UK, for example, is promoting the following agenda for EU:

a) Implementing a government timber procurement policy that seeks to procure forest products only from legal and sustainable sources.

b) Working with a number of timber exporting countries to help them improve governance and strengthen forest law enforcement.

c) Building capacity of civil society to monitor and contribute to the control of illegal logging.

 d) Reforming forest legislation and taxation policies that provide greater incentives for legal compliance.

e) Developing independent monitoring and verification processes to track forest crime.

f) Providing decision makers and civil society with independent and accurate information to monitor concession policies.

g) Working to develop capacity for the implementation of timber certification schemes in some producing countries.

h) Promoting bilateral arrangements between the UK and timber producing countries whereby countries work together to tackle illegal logging and associated trade.

i) Showing leadership within the European Forest Law Enforcement, Governance and Trade (FLEGT) process that will see the European Commission draft a FLEGT action plan by the end of 2002. The EU FLEGT action plan will include consideration of new EU legislative requirements to enforce the control of access to the EU market of illegally logged timber and timber products.

j) Sponsoring research which has shown the negative economic impacts of illegal logging for the development of certain producing countries with a view to help them manage their natural resources in a more sustainable manner.

United States

Annex 4 summarizes the state and local legislation, which restricts the public procurement of tropical timber. At least ten states have enacted legislation, which restricts tropical timber use in public procurement. The issue is not new as the first bans and restriction in relation to
“rainforest” or “tropical” wood were introduced in 1990. What is new is that the existing legislation has in some cases been reviewed and replaced with new and more specific ones. Thus, e.g. Arizona’s tropical timber purchasing bill (1990) has been amended in 1997 to prohibit ‘endangered tropical woods’ in government projects. In the new form the Arizona legislation refers to all wood not just tropical. This is the first time that CITES (Appendix I) as the recognized source for listing is directly linked to the local legislation.

The issues evolve in the motivation and stipulation of the restrictive legislation by local authorities in the USA. The City of Los Angeles was the first to include certification as an instrument, and went as far as requiring a specific scheme to be applied, i.e. that only FSC certified tropical hardwood was allowed. The State of New Jersey introduced a state-wide law in 1994 (revised in 1996) which allowed the use of tropical wood only if verified as sustainably produced by a certification program, but this piece of legislation remained pending. The New Jersey legislation was updated in 2001 to require Forest Stewardship Council (FSC) certification but is still pending.

Atlantic City of New Jersey introduced a law with the requirement of sustainability verification through certification in 1996, and the law was enacted. The state of Pennsylvania introduced a law in 1997, banning tropical woods except if deemed sustainably produced by a certification program. The law has been introduced four times but is still pending. The more recent introductions of tropical wood restrictions in local legislation are in Massachusetts (2000), and New York City (2002) which introduced preference in procurement for certified timber (the certifying organization is not specified but principles and criteria of FSC are used). Since 1997 the City of New York has banned tropical wood except FSC certified.

The unfortunate feature of most US state level legislation is the singling out of the requirements only for tropical timber implying implicitly that other timber has no sustainability concerns. Certification requirements clearly weaken the cost competitiveness of tropical timber and there are no allowances in procurement rules how this could be considered when assessing competing bids from tropical and temperate hardwood producers. The laws are well intentioned but they communicate a negative overall image for tropical timber.

8.2.5 Local Initiatives to Combat Illegal Timber Trade

EU Efforts to Prevent Imports of Illegal Timber

EU is a major importer of tropical timber, and therefore is an important potential target for illegal exports. It has been seen that to control illegal imports of timber, the EU can make a significant contribution to combating this problem. A recent Communication of the Commission to the Council and the European Parliament (Com 82/2002) expresses the objective of developing the European Union Action Plan on Forest Law Enforcement Governance and Trade (FLEGT) to combat illegal logging and associated illegal trade. This commitment to follow and promote FLEGT and to develop an Action Plan was renewed at the World Summit for Sustainable Development (WSSD) in Johannesburg in August-September 2002.

An enforcement mechanism against illegal timber needs to be carefully designed. Given the complexity of the problem, the logistical difficulties in tracking illegal timber, and the multiplicity of actors involved, this mechanism needs to be politically, methodologically and technologically feasible. This involves, inter alia, ensuring that the mechanism is acceptable
to producer countries and can be properly integrated into an overall strategy to combat illegal logging.

A key consideration is which types of illegality will the control mechanism seek to focus on. The issue is far from straightforward, and yet a clear definition of illegality for this purpose is essential for the effective functioning of the mechanism.\textsuperscript{11} The issue was discussed at the FLEGT meeting in April 2002. It was suggested that the legality or illegality of a product should be determined by the national law of the wood producing country, as well as the international law that has been incorporated into the law of the producer country. However, this is not always easy to determine, since some rules depend on administrative decree, which can be easily modified by local and national authorities. In addition, the range of illegal activities is considerable, and includes illegal occupation of forest lands, illegal logging, illegal timber transport, trade and smuggling, transfer pricing and other illegal accounting practices, and illegal forest processing. Not all of these illegal activities can be appropriately dealt with through an importing mechanism.

In addition, the most efficient and appropriate techniques of identification need to be found. A variety of high and low technology alternatives exist, and can be complemented by other instruments, such as certification schemes and the work of local officials and NGOs. Furthermore, the mechanism must be applicable by EU customs officials. Several models have been discussed in the FLEGT process, e.g. the CITES licensing model and the US Lacey Act model (Workshop, 1998).

**National Efforts to Prevent Imports of Illegal Timber**

National governments in importing countries have focused on combating illegal trade using, among other instruments, public procurement guidelines (see Section 6.4). Certification schemes aiming at sustainable forest management can also help to track the legality of timber, and usually have legality explicitly in their criteria and indicators (C&I) (see Section 6.2).

The government of the United Kingdom is discussing the content of MOUs with a number of both timber producing and timber consuming countries, as a possible model for taking forward actions on combating illegal logging on bilateral, regional and multilateral basis. These countries include the United States, Japan, Canada, New Zealand and Malaysia.

Among private initiatives, the Société General de Surveillance SA (SGS) has established a system that relies on several certificates, such as certificates of legal origin, legal compliance, as well as independent verification techniques. In addition, there are a number of influential companies that have adopted codes of conduct that call for transparent operations. Procurement policies of such multinational groups like IKEA and Kingfisher make reference to legality of timber supplies (Eba’a & Simula 2002).

**8.2.6 Technical Means and Tracking Mechanisms and**

Technical means of identification exist, and the matter of choice and development depend on the object, need and cost consideration. Remote sensing and automatic cameras are clearly not for single logs but can be used to control logging areas. In December 1999, for instance, NASA launched two environmental satellites (LANDSAT 7 and EOS TERRA) which could

\textsuperscript{11} Definition of illegal/legal origin has been called for by other bodies as well (e.g., the COP-VI of the CBD).
allow routine production of accurate maps and monitoring for the concession management or to ensure integrity of protected areas (Brack, et al. 2002).

Brack et al. (2002) list the following technical alternatives for tracking:

- Micro-taggant
- Chemical tracer paint
- Bar codes and scanners
- Radio frequency tags
- Brand hammers
- Description of individual logs, plus auditing (CIRAD-Forêt)
- Unique reflector identifiers
- Video, camera and automatic activation devices
- Satellite sensors
- Genetic fingerprinting

So, technology does provide alternatives for tracking. Micro-taggants are microscopic particles composed of layers of different colored plastics, millions of permutations are possible by combining several colors in different sequences. The coding is then read with a x100 pocket microscope. Another alternative is radio frequency identity tags, which can be programmed in the field or in advance. They are otherwise passive but transmit data when focused by a signal from a reader. Many other alternatives exist and are under testing. Compared to losses due to illegal operations, methods with suitable cost/benefit ratio can be found but in all cases there would be cost implications.

The CITES tracking is based on a straightforward documentation. Appendix I trade has to get permits both from exporting and from importing country. Appendix II needs an export permit which has to be presented to the importing country’s customs authorities. Appendix III trade requires that the management authority of the exporting state issues an export permit. CITES has recently increased its co-operation with the World Customs Organisation (WCO), which may yield valuable lessons for those seeking to control the illegal timber trade.

An important environmental monitoring service is run by the World Conservation Monitoring Centre (WCMC). It provides information services on conservation and sustainable use of the world’s living resources, and helps others to develop information systems of their own. WCMC was created in 1988 by IUCN, WWF and UNEP, the three partners in the development of the World Conservation Strategy and its successor, Caring for the Earth. The activities of the Center include assessing bio-diversity status and sustainability, and analysis of bio-diversity conservation issues in the tropics.

8.2.7 Anti-Corruption Agreements and Initiatives

The OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions went into effect on 15 February 1999, with 30 countries that have ratified the agreement. It commits 34 signatory countries, all 30 OECD members and four non-members (Argentina, Brazil, Bulgaria and Chile) to adopt common rules to punish companies and individuals who engage in bribery transactions.

One role, where the civil society can make a decisive difference is in combating corruption and helping to improve the forest law enforcement. Ownership of the resources and empowerment of the local communities is not always a feasible solution. However, there are
at least possibilities in involving the local civil society in the decisions, which have a direct impact on themselves. The strengthening of the civil society will create open debate, greater transparency and more information. Independent monitoring of forest resources will have to involve local communities and NGOs.

8.3 Conclusions on Key Issues

- Codes of Practice have a potential of improving the efficiency of local forest operators.
- Even if there is evidence of increased efficiency and profitability when Reduced Impact Logging (RIL), poor logging practices persist in the tropics, and elsewhere. I may be that trade measures can contribute to the enforcement of good practices, but they can hardly achieve their targets alone.

- While the tariff barriers will continue to be lowered further, the role of non-tariff barriers will become increasingly important. Product standards, building codes and other standards and regulations, which influence the use of timber for various end-uses, will continue to be a concern and would need to be continuously monitored.

- Most countries have used the international criteria and indicators as the basis or starting point for their certification activities. For example, a number of producing countries who are members of ITTO have used the C&I of ITTO for the Sustainable Management (SFM) of Tropical Forests; other countries have used the Pan-European or the Montreal Process, the Principles, Criteria and Indicators of the African Timber Organization, etc. Almost all have taken note of the Forest Stewardship Council (FSC) Principles and Criteria and made efforts to ensure a degree of compatibility. Thus there has been a considerable degree of cross-fertilization involved.

- Certification is seen as a major information based instrument, which could make trade contribute to the sustainability of natural resources. Both consumption patterns and production methods are influenced through voluntary action towards reduced environmental impacts. From the point of view of market access, however, only single process and production method (PPM) issue is concerned, i.e. the quality of forest management. For labeling of products, differentiation has to be established throughout the chain-of-custody (COC) from the forest to the final end user in order to enable communication of correct information.

- A legal instrument, Plurilateral Government Procurement Agreement (PGA), exists to control the trade distortions of public procurement. The field is a dynamic one, national and local governments, especially in the EU, the USA and Japan are using public procurement as a means to guarantee “legality and sustainability” of their purchases of tropical timber.

- The widespread under-pricing of forest products from illegal or undesirable trade presents a formidable challenge to ‘good forestry’. Trade can be at least a partial driver of illegal logging, if the law enforcement capacity can not meet the challenge. Although no reliable quantification exists of precisely how much timber in trade is from illegal sources, there is increasing evidence that the amount is considerable and that the problem is substantial. A consensus appears to exist that controlling trade in illegal timber will be an important contribution to halting illegal logging.
An important process currently underway is the Forest Law Enforcement, Governance and Trade (FLEGT). It offers a forum for discussion and co-operation between developed countries and emerging economies, particularly for those, which produce and consume or import wood or wood products. FLEGT covers a wide range of issues relating to reform and application of the law in wood producing countries, governance, management, production capacity, as well as trade related aspects.

There is a concern among tropical timber producers that an international system to ensure that illegally harvested timber does not enter international trade could represent yet another undue hurdle for them. It is apparent that, in spite of being a global phenomenon, the problem of illegality is, in general, more serious and complex in their case than among temperate or boreal countries. The main reasons are weak enforcement institutions and unnecessary bureaucracy together with widespread corruption. High transaction costs of legal operations provide thereby an additional economic incentive for illegal harvesting and trade. A system of notification, coupled with an obligation to verify the “legality of the origin of tropical timber” is feared to add producers’ costs, thereby reducing competitiveness.
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