

**DEVELOPMENTS AND PROGRESS IN TIMBER
PROCUREMENT POLICIES AS TOOLS TO PROMOTE
SUSTAINABLE MANAGEMENT OF TROPICAL
FORESTS**

Final Report

Prepared for

International Tropical Timber Organization

by

Markku Simula

in cooperation with

Baharuddin Haji Ghazali, Richard Eba'a Atyi
and Oscar Perez Contreras

28 December 2009

TABLE OF CONTENTS

EXECUTIVE SUMMARY	iv
ABBREVIATIONS AND ACRONYMS	xv
ACKNOWLEDGEMENTS	xvi
1. INTRODUCTION	1
1.1 Background	1
1.2 Objectives	1
1.3 Methodology	2
1.3.1 Analysis of the Existing Procurement Policies	2
1.3.2 Country Case Studies	3
2. PROCUREMENT POLICIES AND RELATED INSTRUMENTS AS TOOLS TO PROMOTE LEGALITY AND SUSTAINABILITY OF TROPICAL TIMBER SUPPLIES	3
2.1 Procurement Policies as Demand-Side Policy Tools	3
2.2 Purpose and Drivers of Procurement Policies	4
2.3 Timber Procurement Process and Its Legal Framework	6
3. PUBLIC SECTOR PROCUREMENT POLICIES	8
3.1 Status, Scope and Minimum Requirements	8
3.1.1 Development and Status of National Policies	8
3.1.2 Product and Material Coverage	11
3.1.3 Minimum Requirements	11
3.1.4 Level of Obligation	12
3.1.5 Policy Implementation	13
3.2 Definitions of Legality and Sustainability	13
3.2.1 Legality	13
3.2.2 Sustainability	17
3.2.3 Issue of Social Aspects	21
3.3 Evidence of Compliance with Policy Requirements	23
3.3.1 Forest Certification	23
3.3.2 Other Evidence	27
3.4 Local Government Policies	29
3.4.1 Tropical Timber Consuming Countries	29
3.4.2 Tropical Timber Producing Countries	30
4. REGULATORY MEASURES ON ILLEGAL TRADE	31
4.1 European Union	31
4.1.1 FLEGT Voluntary Partnership Agreements	31
4.1.2 Due Diligence Regulation	32
4.2 US Lacey Act	33
5. GREEN BUILDING STANDARDS AND RELATED INITIATIVES	35
6. PRIVATE SECTOR PROCUREMENT POLICIES	39
6.1 Corporate Policies	39
6.2 Trade and Industry Associations	40
7. COSTS AND CAPACITY OF TROPICAL TIMBER PRODUCING COUNTRIES TO MEET PROCUREMENT POLICY REQUIREMENTS	41
7.1 Public Sector: Enforcement Systems and Associated Needs	42
7.2 Private Sector and Community Forests	44
8. IMPACTS OF TIMBER PROCUREMENT POLICIES	49
8.1 Market Impacts	49
8.1.1 Demand	49
8.1.2 Supply	51

	8.1.3	Prices and Trade	52
	8.1.4	Substitution	53
	8.1.5	Trade Impacts on ITTO Producing Countries	54
	8.2	Forest Sector Impacts	59
	8.3	Forest Industry	61
	8.4	Other Development and Social Impacts	62
	8.5	Environmental Services	64
9.		CONCLUSIONS AND RECOMMENDATIONS	65
	9.1	Conclusions	65
	9.2	Recommendations	66
	9.2.1	ITTO	66
	9.2.2	Governments in Tropical Timber Producing Countries	66
	9.2.3	Governments in Tropical Timber Consuming Countries	67
	9.2.4	Forest Industry and Trade	67

LIST OF TABLES

Table 1.1	Country Case Studies	3
Table 3.1	Status, Scope and Minimum Requirements for Legality and Sustainability of Central Government Public Procurement Policies	9
Table 3.2	Certification Systems Referred in National Timber Procurement Policies	26
Table 7.1	Cost of Legality Compliance for Average-size Forest Management Unit by Type in Cameroon	45
Table 7.2	Additional Costs of Forest Certification for Average-size Forest Management Unit by Type in Cameroon	45
Table 7.3	Cost of Certified Sustainable Forest Management by Size of Forest Management Unit in Peru	46
Table 7.4	Additional National Level Costs of Certified Sustainable Forest Management in Peru	48
Table 7.5	Costs of Chain-of-Custody Certification of a Sawmill in Peru	48
Table 7.6	Average Costs of Sustainable Forest Management in Malaysia	48
Table 7.7	Direct Costs of Forest Certification in the Case Study Countries	49
Table 8.1	Potential Impact on Export Revenues of New Market Opportunities Offered by Meeting the Requirements of Procurement Policies – Theoretical Simulation with Peruvian Exports in 2007	62
Table 8.2	Economic Opportunities of Community Forests in Peru	64

LIST OF FIGURES

Figure 2.1	Timber Procurement Policies and Other Demand-Side Measures to Promote Legality and Sustainability of Timber Supply	5
Figure 2.2	Public Procurement Process for Timber and Timber Products	7
Figure 7.1	Unit Costs of Certified Sustainable Forest Management as a Function of the Size of FMU in Peru	47
Figure 8.1	Export Dependency of the Primary Processing Timber Sector in the ITTO Producing Countries	54
Figure 8.2	Main Exporters of Tropical Timber and Timber Products among ITTO Producing Countries and China	55
Figure 8.3	Export Dependency of Selected ITTO Producing Countries and China on the European Union Market	56
Figure 8.4	Export Dependency of Selected ITTO Producing Countries and China on the US Market	57
Figure 8.5	Export Dependency of Selected ITTO Producing Countries and China on the “Sensitive” Markets with Legality and Sustainability Requirements	58
Figure 8.6	Export Dependency of Selected ITTO Producing Countries and China on the “Non-sensitive” Markets	59

LIST OF BOXES

Box 3.1	Selected Definitions of Legality	16
Box 3.2	Selected Definitions of Sustainability	18
Box 3.3	Tropical Hardwood Reduction Plan of the City of New York	30

Box 3.4	Public Sector Timber Procurement and Financing Policies in Brazil	31
Box 5.1	Selected Green Building Initiatives	35
Box 5.2	US State-level Green Building Regulations and Legislative Initiatives with Specific Reference to Wood Products	36
Box 5.3	LEED Requirements and Rating System for Certified Wood (North America)	38
Box 5.4	BREAAM Code for Sustainable Homes (United Kingdom)	38
Box 6.1	Key Issues Related to Private Sector Sustainable Procurement of Wood and Paper	40
Box 8.1	Supply Situation of Legality and Sustainability Verified Tropical Timber in Selected Countries	52
Box 8.2	Assessment of Forest Sector Impacts of Legitimizing of Timber Exports in Ghana	60

APPENDICES

Appendix 1.1	Terms of Reference	
Appendix 3.1	Development and Status of Public Procurement Policies Related to Forest Products (August 2009)	
Appendix 3.2	Timber Legality Verification Service Providers	
Appendix 6.1	Elements of Selected Publicly Available Procurement Policies of Private Corporations Referring to Wood Products	
Appendix 7.1	Forest Management Units and Timber Production in Cameroon	
Appendix 8.1	EU Imports of Wood Products Derived from Saw and Veneer Logs in 2007	
Appendix 8.2	Global Supply of Roundwood from Certified Forests 2007-2009	
Appendix 8.3	Exports of Timber and Timber Products from ITTO Producer Countries and China	
Appendix 8.4	Export Market Distribution of ITTO Producer Countries and China in 2007/2008	

ANNEXES (separate working documents)

1.	Country Case Study on Cameroon
2.	Country Case Study on Malaysia
3.	Country Case Study on Peru

DEVELOPMENTS AND PROGRESS IN TIMBER PROCUREMENT POLICIES AS TOOLS TO PROMOTE SUSTAINABLE MANAGEMENT OF TROPICAL FORESTS

EXECUTIVE SUMMARY

Timber procurement policies are being considered and implemented by public agencies, trade associations and private companies in many traditional tropical timber markets. ITTO member countries (both producers and consumers) in the private and public sectors are in the process of implementing such policies with specific requirements for timber and timber products. More recently, green building initiatives have started to define specific requirements for how timber and timber products used for construction should have been produced. This study is a response to the need for monitoring these various initiatives, to assess tropical timber producers' ability to meet the emerging requirements, and to explore possible economic, environmental and social impacts on tropical countries.

Study Objectives

The study is targeted at assisting ITTO in monitoring of public and private procurement policies for timber and timber products which have influence on the market access and competitiveness of tropical timber producers. The objective is to identify drivers, trends and impacts of procurement policies, analyze their differences and commonalities, and to assess tropical timber producers' capacity to meet these emerging market requirements. The work had two main lines of action: (i) review and analysis of the existing procurement policies in the public and private sectors, and (ii) country case studies.

PROCUREMENT POLICIES AS A TOOL FOR SUSTAINABLE FOREST MANAGEMENT

Key Drivers

Public and private timber procurement policies (TPP) are part of the demand-side tools targeted at strengthening forest governance and promoting sustainable forest management (SFM). There are three main underlying drivers for their emergence: (i) international commitments (such as the ITTA (2006)), (ii) general concerns on illegal logging and unsustainable forest practices, particularly to the tropics, (iii) general national strategies for sustainable consumption and production, and more recently (iv) one of responses to needs for climate change mitigation. The strongest direct driver has often been NGO pressure together with responsible companies seeking for a level playing field against illegal logging and trade, and a marketing advantage. Other contributing factors have been grassroot public concerns on the environmental credentials of timber and timber products.

Objectives of Procurement Policies

The key direct objectives related to timber supply of most current procurement policies (public and private) are to ensure that products come from legal sources and the law is respected in the supply chain. Most policies also include sustainable forest management in their minimum requirements or as a preferential criterion for contract award. While originally the objective was to promote legally and sustainably produced products through procurement policies, the emphasis appears to have somewhat shifted to attempts to exclude illegal and unsustainable products from the market altogether through regulatory measures.

Public Sector Procurement Policies

A total of twelve countries have presently operational central government public sector procurement policies for timber and timber products. Their development has been particularly active in Europe, partly as a result of guidance and promotion by the European Union. Six EU member states have operational procurement policies, including Belgium, Denmark, France, Germany, the Netherlands and the UK. Outside the EU, China, Japan, Mexico, Norway, New Zealand and Switzerland have operational central government policies. In addition, several other countries are in the planning stage or address the issue within their broader green public procurement policies.

Public sector TPPs are relatively new instruments and their implementation is still at a relatively early phase of the learning curve. Many apply stepwise approaches and include ambitious targets, which have often proved to be unrealistic. Development processes have been time-consuming due to different stakeholder views on what procurement criteria should be applied. Only in few cases have *ex ante* impact assessments been made, usually from the perspective of the implementing country itself.

Several countries are in the process of revising their policies. Belgium and Denmark are in the final stages of the adoption of a new policy. Germany's TPP will be reviewed in 2010 and France will have to revise its policy to include criteria for the recognition of forest certification schemes.

Product and Material Coverage

The product coverage of public procurement policies always includes timber/wood and products but varies with regard to paper products. The overall tendency appears to be towards a comprehensive coverage including also paper and board, and products made thereof. The Norwegian policy is an exception as it refers to tropical timber only, prohibiting its use. Raw material coverage is usually comprehensive but some policies do not include sawmill co-products or recycled wood. This represents a problem for reconstituted wood-based panel producers, among others.

Minimum Requirements

The minimum requirements for timber supplies in the public sector policies refer to legality, sustainability or both. In the EU four countries define sustainability as a minimum (e.g. Belgium, France, Germany, the UK) which goes beyond the guidance of the EU which specifies legality as a core (minimum) criterion. The Japanese and New Zealand policies require legality while sustainability is preferred. In Mexico legal origin and sustainability are required. The Chinese policy requires meeting the criteria of a domestic eco-labeling scheme. Some policies allow a degree of flexibility with regard to availability of supply. The overall tendency appears to be towards both legality and sustainability as minimum requirements in public sector TPPs.

Degree of Obligation

All the policies are mandatory for central governments except the Danish, Norwegian and Swiss policies which are voluntary. The mandatory obligation has been expressed in different ways and some flexibility is also allowed in some policies (e.g. "must buy", "must seek to buy", "if available", "if possible", etc.). The tendency is clearly towards more binding mandatory implementation in central government purchasing while at the same time local governments in many countries are strongly encouraged to follow.

Implementation

Implementation of all the policies requires adequate evidence on compliance by the supplier and the products delivered. In most countries the guidance for purchasing agents and suppliers is fairly general or may be still lacking. The UK is an exception and its detailed approach can serve as a reference for other countries. Good guidance mechanisms are particularly needed in situations where the progress in policy implementation is slow. Sanctions may not be always defined but it is apparent that non-compliant suppliers take significant risks to lose any future business in the public sector market.

Definition of Legality

Clear definitions of legality and sustainability are crucial for procurement policy implementation. The general approach in defining legality is compliance with national laws and international conventions. This is in line with the recognition that trading partner countries have sovereign rights to define legality in their specific conditions. However, many public procurement policies contain quite detailed provisions for the scope and aspects of relevant national legislation to be covered to qualify for "legality". Policies have different interpretations on which regulations should be covered. Some of these differences have significant implications for tropical timber producers and should be duly considered in the policy design to avoid unnecessary obstacles for trade. There is clearly a need for more clarity in definitions of legality and consistency between various public procurement policies. As the overall approaches are largely similar, they offer ground for harmonization through e.g. elaboration of a generic definition (or standard) of legality. Future harmonization efforts could build on the experience of the Denmark, the Netherlands and the UK which have made significant progress in this field.

Definition of Sustainability

Three approaches have been applied in defining sustainability in timber procurement policies: (i) short overarching definitions (Japan) or listing of few key elements of SFM (Belgium), (ii) detailed provisions for various elements of sustainability, largely within the framework of the internationally agreed elements of SFM (Denmark, Netherlands, the UK), and (iii) relying on the definitions of forest certification systems (France, Germany, New Zealand, Switzerland).

Detailed sustainability criteria represent comprehensive sets of unilateral requirements for SFM for other countries to be complied with by all timber product suppliers (domestic and foreign). The level of detail in such requirements, particularly if expressed in prescriptive terms for inputs in forest management, can be problematic as they may not be applicable in specific country situations in the tropics with varying forest, ecological and socio-economic conditions.

The trade rules require that all the selection and award criteria in public procurement are related to the subject matter of the contract. There is an on-going process in Europe to clarify whether social criteria can be applied in this context. Due to the variety of social aspects and their broad scope in the context of forest management, this area is likely to remain subject to debate in spite of the fact that these aspects form the third pillar of the sustainability concept.

Proliferation of Policy Requirements

Significant differences in the detailed SFM and legality requirements between country policies is a cause of concern for tropical timber producers who want to supply several markets. There is a danger that differing definitions will continue to emerge complicating further international trade. Detailed comprehensive sets of requirements for sustainability are likely to lead to a situation where the options for demonstration of compliance will in practice be limited to certificates issued under the acceptable forest certification systems. For tropical timber producers it is particularly important that they have feasible, clearly identified options for means of alternative proof as they are not always capable for providing proofs of legality or sustainability through forest management certificates.

The situation is gradually improving as in sustainability the international sets of Criteria and Indicators for SFM are increasingly referred to as a framework and there is a strong emphasis to rely on FSC and PEFC certificates as proof of sustainability. In the case of legality, commonly agreed approaches do not yet exist. In public procurement policies there is a clear need for streamlining the use of the concepts of legality and sustainability and their respective verification, as the current non-harmonized approaches can lead to market distortions and additional administrative costs for bidders. Were there an intergovernmental instrument defining appropriate, globally applicable framework standards for legality and sustainable forest management, these could be relied upon by national procurement authorities. This would remove uncertainties and confusion on how to define and take into account sustainability and legality in public procurement policies of forest products. It would also help tropical timber producing countries meet market requirements on equal footing with other suppliers.

Evidence on Compliance with Policy Requirements: Certification

Public procurement policies apply three main options for evidence of compliance with their requirements: (i) certificates issued under recognized certification systems, (ii) audit statements issued by independent bodies, or (iii) other documentary evidence. The first type of evidence plays a leading role in implementation and therefore a need has arisen to define criteria and methodologies for assessing certification standards and systems. This should also concern standards and verification systems of legality but there is less progress towards harmonized, broadly accepted approaches than in the case of forest certification.

Four countries (Belgium, Denmark, the Netherlands and the United Kingdom) have defined minimum requirements for certification systems including definitions of legality, sustainability, standard setting processes, chain of custody and labeling, and structure and operation of these systems. The overall approach is similar but there are also significant differences between these policies. Other countries have directly recognized some certification systems without publishing the basis of assessment (Germany, France) or referred to systems which may prove adequate evidence without a formal endorsement (Japan, New Zealand, Switzerland). Yet another variant is the case of Mexico where only certificates issued by bodies complying with respective legal requirements and registered by the government are accepted.

The situation appears to be moving towards a situation where the two international certification schemes (FSC and PEFC) dominate as acceptable proofs of SFM (and legality). Independent national certification schemes in tropical countries have had difficulties in obtaining broad acceptance and PEFC endorsement appears the only feasible way for them. Frictions are likely to arise if only one of the international schemes (i.e. FSC) is accepted which outcome is being pursued by NGOs in some countries. This would have significant market implications as FSC-certified timber is not sufficiently available to meet demand for timber and timber products in such a situation.

Other Evidence

Trade rules do not allow using references to specific certification schemes in central government procurement policies without providing a possibility for other evidence. There are different approaches for what alternative evidence can be accepted and e.g. the policies in France, Japan and New Zealand provide a menu of options. In the UK, the Netherlands, Belgium and Germany the respective requirements cover the same elements as those for certification systems which means that meeting them would be difficult for tropical timber producers through other means and therefore these options have hardly been used in practice. If an alternative documentation route is offered, it should be a realistic practical option, not only for circumventing the international trade rules.

Local Government Policies

Since the 1990s many sub-national and local governments have established their own, frequently quite restrictive rules for their own timber procurement contracts, often targeted at prohibiting or limiting the use of tropical timber. These policies were based on the erroneous perception that such restrictions would be effective in combating deforestation in developing countries. Policies of local governments have often been defined under local pressures driven by environmental groups and they are not bound by considerations related to international trade rules. Local-level policies have not always duly considered what is being applied by the central government in the country. This has resulted in differences between national and local procurement policies. In the longer run, it can however be expected that national and local policies will gradually converge as several central governments are promoting this approach.

Local government efforts to promote legal and sustainable products are not limited to tropical timber consuming countries. Brazil is a good example where several local government initiatives have been taken during the last few years.

TRADE REGULATION MEASURES

European Union

As the progress to combat illegal logging and trade on a multilateral level has been relatively slow, the EU and the USA have taken regulatory measures to address the problem. FLEGT licenses issued under Voluntary Partnership Agreements (VPA) will be a tool to provide proof of legality of tropical timber supplies. Two countries (Congo, and Ghana) have already signed a VPA and six more countries are negotiating or in pre-negotiation consultations with the EU. The impact of VPAs is broader than on the export to the EU market as the required timber legality assurance system (TLAS) covers in principle the signatory country's entire timber production. FLEGT licenses are already referred to in the UK and French procurement policies and more countries may adopt the same approach.

As not all timber supplying countries will find it feasible to sign a VPA and the risk of circumvention remains, the EU is planning to adopt additional measures to fight illegal logging at the global level. These measures include the so called 'due diligence regulation' targeted at preventing the trade of illegally harvested timber on the EU market. The regulation would require operators to apply a due diligence system which minimizes the risk of placing illegally harvested timber and timber products on the EU market. The DD system should include measures and procedures which enable operators to track the timber and timber products, to have access to information concerning compliance with the applicable legislation, and to manage the related risk.

United States

The USA has recently amended the Lacey Act aimed at combating illegal logging and expanding anti-trafficking protection to a broader set of plants and plant products. The Act has made it unlawful to import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce any plants or products made from plants that were harvested or taken in violation of a domestic or foreign law. The Act gives the government the power to fine and jail individuals and companies that import timber products harvested, transported or sold in violation of the laws of the country in which the timber was originally harvested. In any prosecution, the burden of proof is on the US government to demonstrate that the violators knew or should have known of the underlying violation. The amended Act also includes new import declaration requirements which have implications for tropical timber suppliers to the US market.

The new legislative measures in the USA and the EU, and a number of similar initiatives currently under discussion in countries such as Switzerland, Norway, and New Zealand, will provide a robust

incentive for tropical timber producers and exporters to stamp out illegal practices in forest management and timber trade, and to encourage them to make rapid progress towards the demonstration of legal compliance. The US and the EU regulations represent different approaches but are likely to have similar impacts for all exporters to these markets. Tropical timber producers will have to build up adequate management systems and means of proof that buyers can adequately assess the risks and avoid possible penalties due to buying illegal products. From the perspective of public procurement policies, the EU and US regulations set clear baselines for legal timber and it can be questioned whether in these two markets procurement policies have to refer to legality any more.

GREEN BUILDING INITIATIVES

Green building initiatives (GBI) have been under active development for a number of years in several countries. The purpose is to minimize construction impacts on the environment, use less resources, particularly energy, and minimize waste. Targeted schemes are reported in nine countries and several international initiatives are also on-going. As a whole the market impact of GBIs has for the time being been fairly limited with the exception of the UK and the USA where more experience has accumulated. However, these initiatives are likely to become a strong market driver for sustainably produced timber. The existing schemes tend to rely on forest certification schemes as a key tool to demonstrate compliance. There is therefore a high degree of convergence between public timber procurement policies and green building standards. Where the policies and standards appear to differ is the acceptance of individual certification systems as proofs of sustainability and legality. Further convergence would therefore be desirable, particularly within countries, including with differing local government rules.

At present, GBIs do not adequately consider life-cycle assessment in material specification and this puts timber at a disadvantage: the carbon storage role of wood is not considered, the renewability of forests as a source of timber is not recognized, and no legality and sustainability criteria are applied to other materials. Many GBI provisions may not provide a sufficient incentive for increased consumption of wood as credit points can be gained only by timber certified under a particular system which is another constraint limiting the effectiveness of the GBIs in promotion of legally and sustainably produced timber products.

PRIVATE SECTOR POLICIES

Several large enterprises in the forest sector and their main customers have adopted their own corporate procurement policies. These focus on (i) accuracy and credibility of information on timber supplies, often associated with third party verification, (ii) sustainability of forest management, (iii) legality of production, and (iv) knowledge of product origin. There are differences in how the various concepts are expressed and detailed criteria also vary. This makes it difficult for tropical timber producers to provide proofs of performance if they are supplying several buyers who have different procurement criteria. However, many corporate policies refer to one or both of the existing international certification systems.

At least in twelve countries in Europe and North America timber trade and industry associations and their federations are reported to have purchasing policies or codes of conduct related to wood supply and they have become an increasingly important market driver. The principle of trading minimum with legality verified timber is inherent in most cases, together with preference to be given to sustainable supplies, whenever possible.

The codes of conduct and procurement policies of forest industry and timber trade associations are a powerful instrument as it is estimated that the association members usually account for about 60 to 80% of the total national imports of timber and timber products depending on the country. In spite of the common goals and similar basic approaches in purchasing policies, there are significant differences between them in terms of formulation of commitments, degree of obligation and specific requirements for operations of suppliers and member companies. This diversity is unfortunate from the tropical timber suppliers' viewpoint.

Like almost all government, trade and industry associations largely agree on the need to develop harmonized purchasing policies. Present mechanisms towards this objective include exchange of information and experience. Mutual recognition of each other's policies would be another option but it has received only limited interest. It is possible that regulatory requirements will harmonize some

private sector policy provisions in the EU and USA demonstrating the importance of the governments' role in this kind of issues.

COSTS AND CAPACITY OF TROPICAL TIMBER PRODUCING COUNTRIES

In general, most procurement policies will mean that suppliers in the tropical timber producing countries are in the long run expected to provide, through appropriate means, adequate evidence on the legal origin of their products, legal compliance of their operations, and sustainability of forest management in areas where timber was harvested. There are two main non-exclusive options for how such evidence can be provided and it appears that both systems will be applied in parallel in the short and medium term:

1. Government implemented assurance system for legality: this is likely to be applicable in countries where the size of the timber sector is sufficient to justify necessary public investment in setting up such a system.
2. Private sector implemented auditing/certification or other due diligence systems which typically involve independent audits meeting the requirements of the procurement policies. This option is generally applicable for sustainability requirements but also for legality verification in situations where the government-operated control and supervision system cannot (yet) provide necessary assurance on legal compliance.

National-level Legality Assurance Systems of Timber

Initial experience on strengthening of the existing monitoring and control systems in countries which have signed, or entered a negotiation process to sign, a VPA with the EU has shown that a considerable effort is often needed before the national TLAS can be deemed adequate by trading partners. Few tropical countries have sufficiently robust control systems in place.

Necessary measures to strengthen national enforcement systems in tropical timber producing countries depend on their current performance level. Situations vary extensively from smaller improvements in the control systems to major legal and institutional reforms. Needs for institutional strengthening are not limited to the forestry sector, as effective elimination of illegal logging often also requires improvement in the functioning of the overall regulatory and institutional framework.

Improvement of existing TLAS in tropical timber producing countries is a complex, country-specific exercise which requires resources and time to implement. In spite of their higher apparent costs, introduction of advanced technologies should often be favored, as Malaysia intends to do, because digitized systems can eliminate the loopholes of paper trail-based systems. In the short term many countries are, however, likely to opt for improvement of existing systems due to the significant additional costs of digitized control system.

Private Sector

In the private sector the key instrument to demonstrate sustainability is forest certification. It represents a significant cost burden for forest management units and the industry, particularly in community forests and smallholdings. Additional costs can represent several percentages of the product sales price depending on the country conditions, the size of enterprise/forest management unit, level of planning and management systems, needs for additional studies, staff and training, etc.

Need for Financing and External Support

In Cameroon it would cost in aggregate for timber producers about USD 36 million to achieve legality and another USD 17 million to achieve SFM certification in all forest management units individually. The cost of improved national information system would be another USD 4 million investment. In Peru strengthening of the control system would require about USD 14 million in investment costs and USD 2.7 million as annual operational costs. Another USD 28 million would be required for SFM certification of all forest management units in the country. While these costs would have to be mostly paid by the government and the timber producers, there is a need for external support.

Such a support would be needed in producer countries in several areas. For instance, in Malaysia three main areas have been identified (i) process support to include institutional redevelopment especially in capacity building; (ii) research as well as technical assistance, to strengthen security of asset and other control; and (iii) information and communication support to enhance marketability of the Malaysian timber. Short-term capacity building needs have been estimated at USD 1.6 million

while the government is planning to arrange financing of the institutional restructuring costing of about USD 4 million, focusing on law enforcement.

These examples show that significant additional investment and operational costs are clearly to be expected in most cases. New staff will have to be recruited both by the forest administration and the private sector. External support is particularly needed for the investment phase while the operational costs should be borne by the sector.

IMPACTS

Demand

A total of 25 to 40% of the total medium-term demand for tropical timber in the major import markets could perhaps be expected to be potentially subject to legality and sustainability verification to meet the public and private sector TPP requirements and the criteria of GBIs depending on the country. In addition, such a large market share would have a significant leverage impact on other purchasing for logistical reasons.

The direct impact of public TPPs will be strongest first in timber products used for office furniture and building construction and civil works, particularly in applications where tropical timber has an established position like marine construction. The market segment least affected by the public TPPs is likely to be home furnishing. The private sector policies have already had a major impact on imported garden furniture of tropical origin but in other home furniture the progress has been slow.

The short-term potential demand for legal and sustainable tropical timber induced by the public procurement policies in the six EU countries with operational TPPs alone is estimated at about 1.8-2.0 mill m³ RWE per year. In the longer run, the amount is expected to increase when more countries introduce TPPs and their implementation in general becomes more systematic. However, for the time being, the impact on demand of public TPPs appears still to have been relatively modest. On the other hand, TPPs have increased the awareness among procurement agents on the need to specify legality and sustainability. In Denmark, Switzerland and the UK it has become clear that the supply of temperate timber can respond to sustainability demands. In the tropical timber markets the situation is different as in some countries and market segments certified supply does not meet the demand.

The regulatory measures targeted at eradicating illegal timber products from international trade will have a much broader impact on the demand as non-complying actors will be gradually ruled out from the supply chain. The present and planned regulations in the USA and the EU would directly impact 49% of the total imports of tropical timber and timber products (including further processed products) from the ITTO producer countries and China combined.

The public sector is a very large and diversified enterprise also in developing countries and its purchasing policies can have a major impact on the domestic demand for timber. For instance in Vietnam 45–65 per cent of the government budget is spent on procurement. However, implementing a timber procurement policy in these countries is not a simple affair as a number of hurdles would need to be addressed including appropriateness of the legal framework, required changes in procurement practices, capacity and resources of procurement agents, and supply availability of acceptable products

Supply

The total area of certified forests in Africa, Latin America and Asia is 23 million ha with an estimated annual production potential of about 4.1 million m³ per year. While in Latin America the area has dropped last year, in Africa it almost doubled reaching 5.6 million ha and in Asia 3 million ha. The three developing regions accounted for only one percent of the total global supply of roundwood from certified forests. This demonstrates the slow past response from tropical timber suppliers to the demand for certified products.

Based on the global-level figures the certified production in the developing countries would appear to be sufficient to meet the short-term demand for sustainably produced tropical timber and timber products induced by the public and private procurement policies. However, in practice, this would not be the case due to different product and geographic patterns between demand and supply, complexity of supply chains, and the fact that part of the certified production is not sold as certified.

Prices

The available market information indicates that at present significant price premiums can be obtained for some tropical timber species and products. In Europe legality-verified timber from Asia may be sold with a 3 to 15% premium and high-end FCS-certified products from Africa and Brazil can catch 20 to 50% premiums while in certified temperate hardwood from the USA the premiums of 5 to 10% have been reported. Price premiums of this magnitude appear to be mainly in niche markets and cannot be generalized. Furthermore, how such price premiums are shared between various phases of the supply chain is unclear as much lower figures are quoted by exporters in producing countries. Obviously, most of the premium obtained is held down in the supply chain and does not reach forest management units.

With gradual elimination of illegal logging, industrial roundwood production in developing countries would decrease from 2007 to 2020 by up to 8% and world prices could rise 1.5 to 3.5% for industrial roundwood and 0.5 to 2% for processed products. International trade would be impacted more than production levels (3 to 5% depending on the country's illegal logging rate). Timber prices would significantly rise if there is a concerted international move to eradicate illegal logging. Success in these efforts will mean eliminating from the market, trade in stolen timber and timber products with price advantages due to avoidance of compliance costs.

Winners would be countries which have low rates of illegal logging, mostly in the northern hemisphere, and losers would be those developing countries where illegal logging rates are high. Price increases will benefit those tropical timber producing countries that already have effective controls in place.

Substitution

Substitution of timber by other materials would be promoted by the general price increase in legally and sustainably produced timber. However, it is possible that practical difficulties in procuring timber due to sustainability and legality requirements which are not faced by other materials are likely to have a stronger impact on substitution than cross-price elasticities. On the other hand, the increasing attention to promote low-carbon building materials may give timber and timber products a competitive edge over other materials.

Trade Impacts on ITTO Member Countries with Tropical Forests

The total trade of tropical timber and timber products including further processed products from the ITTO producing member countries is valued at about USD 44 billion per year. China's share of the total is 47% followed by Malaysia, Indonesia, Brazil, Thailand and other smaller exporters. In relative terms the share of exports in production of logs, sawnwood, veneer and plywood is highest in Thailand, Malaysia, PNG, Cambodia, the Democratic Republic of Congo, Gabon and Myanmar.

The dependency on "sensitive" markets with TPPs (the EU, USA and Japan) is highest in the Philippines, Mexico, Liberia and Cameroon (more than 80% of total export value) followed by China, Brazil, the Democratic Republic of Congo, Indonesia, India, Côte d'Ivoire and Bolivia (more than 60%).

On a regional level, the timber procurement policies in consuming countries will have strongest direct impacts in Africa due to its high dependence on the exports to the EU (53%). In Latin America the US Lacey Act is likely to have a strong impact as the US share of the total regional exports is high (39%). The intra-regional trade in the region is more important than in Africa which partly explains the difference between the two regions. In Asia, the USA takes a quarter of the total regional exports, followed by EU (21%) and Japan (15%).

The tropical timber exports to "non-sensitive" markets with no TPP pressure being felt for the time being is becoming increasingly important. For instance, the exports of Cambodia, Vanuatu, Myanmar, Trinidad & Tobago, Venezuela, Colombia, Panama and PNG go almost exclusively to such markets (more than 80% of the total exports). It is particularly the Chinese imports which have impacted the trade patterns of tropical timber. In fact, the trade impacts of TPPs will largely depend on how effectively the sustainability and legality requirements can be effectively met and demonstrated by producers in China and other in-transit producer countries such as Vietnam.

Future country-level impacts will also be influenced by the perceived risk of illegal or unsustainable products entering the supply chain. Risk assessment will be an essential element of the due diligence systems of importers of tropical timber. Suppliers in high risk countries will therefore face a competitive disadvantage. It is important that country risk assessments are made based on clearly defined criteria,

verifiable information and transparent processes with full participation of the countries involved to avoid biased results.

Forest Sector Impacts

Progressing towards legality and sustainability as induced by TPPs would obviously have a positive impact of the legal framework, forest governance, institutions, intersectoral coordination and cooperation. Voluntary certification has a potential to reduce government enforcement costs. Fiscal revenue could increase in countries where illegal production could be substituted by legal operators. However, this depends on the country's demand-supply balance for industrial roundwood and, if production needs to be scaled down to sustainable levels, there will be a loss of fiscal revenue. Improved security in forest areas is another beneficial impact.

Forest Industry

In countries where the processing capacity exceeds sustainable timber production downsizing will be necessary. This can have drastic short-term impacts on employment and income in forest areas. On the other hand, improved management of the supply chains is expected to bring significant competitive advantage in terms of cost savings and improvement of quality. With legal and sustainable products, the industry would have access to new markets and at least initially gain price premiums in some market segments. Loss of the present sources of export revenue would also be prevented which is crucial as alternative markets will be less lucrative.

Developmental and Social Impacts

In many countries impacts on poverty reduction of TPPs can be negative in the short run but their long-term effects are likely to be positive if necessary sector reforms can be implemented. In countries where the primary processing capacity has to be downsized significantly, the social costs are likely to be highest. Any positive future scenarios in the sector will depend on the possibility to shift to alternative raw materials, usually plantation wood, and to build up competitive further processing sector.

The most worrying impacts concern the informal timber products sector which in many countries supplies most of the national demand for timber products and which employs large amounts of people. The informal sector's social benefits are significant and "legalizing" their operations in the short run is usually unrealistic and unfeasible for political, economic and social reasons. In addition, forestry administrations are not able to monitor the activities of the informal sector. It would be more realistic to put in place procedures that would allow operators in the informal sector to progressively enter the formal sector and not trying to abruptly exclude them from the national market as there would often be a perverse impact on increasing poverty instead of reducing it.

Adequate assistance to local communities would be needed to cover their financial and capacity needs. As part of the informal sector, community forests seem to be the easiest to monitor if the land allocation is documented. However, the economic viability of community forestry is far from clear in many countries and the procurement policy requirements are risking to put this segment at an additional disadvantage if necessary external support cannot be provided.

Environmental Services

The beneficial impacts of sustainably managed tropical forests on biodiversity, soil and water, as well as forest health and vitality are well known. Improved governance, demarcated FMUs whose borders are effectively protected, and systematic forest management within the SFM framework would bring significant potential positive environmental impacts. In addition, improved forest governance would provide the necessary preconditions for forest owners to participate in the emerging payment mechanisms for environmental services, including mitigation of climate change. Implementation of effective TLAS and FMU legality verification/SFM certification may also reduce the investor risk in forest carbon offsets and may therefore have a direct positive impact on potential carbon revenue.

CONCLUSIONS

In spite of the difficulties and obstacles of tropical timber producers to meet the emerging requirements of public and private sector timber procurement policies in major import markets, it needs to be recognized that these instruments are 'soft' policy tools. The market pressures towards legal and sustainable trade are strong and increasing, and the timber sector worldwide has to adjust. TPPs can be taken to represent a compromise between the market pressures and what is possible to achieve by producers and governments. Pressures are expected to become even stronger in the

future, not least because of the introduction of such 'hard' regulatory instruments as the US Lacey Act Amendment and the planned EU due diligence regulation. It is time for the timber sector at large to shift emphasis from resistance to proactive measures and the current situation shows that this shift can pay off.

Many tropical timber products have unique characteristics offering an inherent market advantage against temperate wood and other materials. The sector's growth in the tropics will have to be increasingly generated through development of further processing and alternative raw materials for timber produced in natural forests. Eradicating illegal logging and trade will not only be necessary for meeting the current market requirements but also for enabling the industry to adjust its operations domestically to sustainable capacity levels.

The review of the public and private sector TPPs revealed that there is a lot of scope for their improvement in terms of definitions of legality and sustainability, procurement criteria, time-schedules and implementation arrangements in order to make these policies more effective in contributing to the identified objectives. The impacts on tropical timber producing countries can be drastic and create serious political problems for their governments if they lead to large job cuts. Such outcomes would neither be in the interests of importing countries.

Free riding by illegal loggers and traders cannot continue if the forest sector is going to be socially acceptable both in timber producing and consuming countries. Sustainable forest industry can only be based on a level playing field for responsible operators.

Importing countries should take necessary measures to help tropical timber producers in meeting the requirements of their public and private sector procurement policies. These support measures include, among others, facilitating effective participation of tropical timber producers in the design of their policies, due consideration of importers' policy impacts on trading partners in the tropics (e.g. through *ex ante* impact assessments), avoidance of proliferation of policy requirements (between and within importing countries), improving the clarity and consistency of policy provisions, adoption of realistic targets and time-schedules, including avoidance of constantly changing (often unrealistic) goalposts, as well as significantly expanded technical assistance and financial support to tropical timber producing countries.

In order to meet the procurement policy requirements of the public and private sectors, tropical timber producing countries will have to be prepared to accelerate their efforts in strengthening their forest governance, legality assurance systems, information base on the sector, and enterprise-level management and control systems. Of particular concern are community forests, SMEs and the informal sector which are least equipped to meet the emerging requirements as these actors risk to be excluded from export trade to the markets which require legality and sustainability. Many countries, particularly those with excessive primary processing capacity, should engage in sector reform strategies which emphasize further processing and development of alternative raw materials through planted forests. Integration of the informal sector into regulated production will be one of the most complex and politically sensitive issues to address.

RECOMMENDATIONS

In order to enhance the positive potential impacts of timber procurement policies in promoting legality and sustainable forest management in tropical timber producing countries, and to mitigate their potential adverse effects on these countries, the following recommendations are made:

ITTO

- i Monitor the development of timber procurement policies as well as the supply and demand for legality verified and SFM certified timber and timber products and associated trade flows to improve market transparency to enable tropical timber producers to plan their efforts based on adequate information
- ii Promote convergence and comparability of procurement policies related to tropical timber and timber products through enhanced exchange of information and lessons learned at international level in order to facilitate tropical timber suppliers to meet market requirements for their products
- iii Explore the feasibility to develop a common generic standard or guideline for defining legality applicable in tropical timber producing forests drawing on the accumulated experience

- iv Assist producing member countries to assess implications of TPPs for their production, export, employment, fiscal revenue and the environment, and to develop appropriate sector reform strategies
- v Provide support to capacity building, particularly forest information systems and training, to enable planning and implementation of national timber legality assurance systems
- vi Support development of community forestry through analyses of production chains of certified FMUs and their opportunities in international markets as well as analyses of production and certification costs and means how they could be reduced and financed through market benefits
- vii Facilitate exchange of information and experience between member countries in building up information and verification systems including benchmarking in production and transaction costs of legal and sustainable timber to meet the requirements of timber procurement policies
- viii Develop tools for risk assessment and management to facilitate trade in legality verified/SFM-certified tropical timber and timber products; such tools should be based on clearly defined criteria, verifiable information and transparent processes with full participation of the countries involved.

Governments in Tropical Timber Producing Countries

- i Participate in the consultative processes related to the development of TPPs in importing countries to enhance trade's positive impact on legal compliance and sustainability of the management of tropical forests
- ii Promote voluntary SFM certification and independent legality verification as complementary instruments to government supervision and enforcement and to reduce public sector control costs
- iii Build up reliable TLAS including strengthening of forest information systems, application of advanced technologies, inter-sectoral coordination and cooperation, and institutional improvements in enforcement
- iv Recognize that paper trail-based control systems tend to contain loopholes and weaknesses and therefore embark on piloting and introduction of improved technologies such as RFID in product tracking and tracing
- v Reduce transaction costs for legal production to minimize incentives for illegal operations
- vi When appropriate, review forestry and related legislation to detect and eliminate contradictions and to include new provisions that recognize the new technological environment characterized by digitized information systems
- vii Implement national public procurement policies to promote domestic demand for legal and sustainably produced timber
- viii Provide incentives to community forests and SMEs in the timber production to overcome their barriers to comply with legality verification and SFM certification.
- ix Take proactive measures to gradually integrate the informal sector into the formal sector in order to avoid adverse socio-economic impacts of implementation of legality and sustainability requirements in the timber supply

Governments in Tropical Timber Consuming Countries

- i Consider implications of their procurement policy requirements for tropical timber producing countries and notify their trading partners on their intentions to introduce or amend their central government timber procurement policies
- ii In developing and revising national public procurement policies consider the issue of avoiding unnecessary proliferation of requirements
- iii Promote the adoption of central government procurement policies by sub-national and local governments to make them compatible with the agreed policy objectives of achieving trade of tropical timber from legal and sustainable forest managements and specifically to avoid outright banning of tropical timber use
- iv Provide expanded support programmes to tropical timber producing countries to help them meet the procurement policy requirements to mitigate possible negative socio-economic impacts of their implementation (e.g. through such mechanisms as ITTO's TFLET thematic programme)

Forest Industry and Trade

- i Be prepared to provide transparent and verifiable information on sourcing and production of tropical timber products

- ii Gain understanding on risks and obstacles in purchasing and supplying legally and sustainably produced tropical timber products and be responsive to reduce these barriers and carry out adequate risk assessment in sourcing tropical timber
- iii Engage in legality verification and forest certification as appropriate in local conditions in view of sustainability becoming a baseline requirement in most procurement policies in the future
- iv Develop appropriate codes of conduct to promote legal compliance and sustainability in production and sourcing
- v Seek to harmonize private sector procurement policy requirements with those of the public sector
- vi Support and engage in SFM certification of community forests, smallholders and SMEs through appropriate approaches of group certification.

Abbreviations and Acronyms

ANSI	American National Standards Institute
AF&PA	American Forest & Paper Association
ATFS	American Tree Farm System
ATO	African Timber Organization
BES	BRE Environmental & Sustainability Standard
BRE	Building Research Establishment
BREEAM	BRE Environmental Assessment Method
BRIK	Timber Industry Revitalisation Body (Indonesia)
CBD	Convention on Biological Diversity
CEC	Commission of the European Communities
CEN	European Committee for Standardization
CEF	Caixa Econômica Federal (Brazil)
CEPI	Confederation of the European Paper Industries
CHPS	Collaborative for High Performance Schools
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CoC	Chain of Custody
CPET	Central Point of Expertise on Timber
CSA	Canadian Standards Association
CSAG	Civil Society Advisory Group
DD	Due Diligence
EC	European Commission
EMS	Environmental Management System
EIMI	Economic Information and Market Intelligence
EU	European Community
FAO	Food and Agriculture Organization of the United Nations
FBCIB	Fédération Belge du Commerce d'Importation de Bois (Belgium)
FERN	Forests and European Union Resource Network
FLEGT	Forest Law Enforcement, Governance and Trade
FMP	Forest Management Plan
FMU	Forest management unit
FOB	Free on Board
FSC	Forest Stewardship Council
GBI	Green Building Initiative
GDP	Gross Domestic Product
GFTN	Global Forest & Trade Network
GPA	Government Procurement Agreement
GPP	Green public procurement
GPS	Geographic Positioning System
IAF	International Accreditation Forum
ILO	International Labor Office
IM	Independent Monitor
ISEAL	International Social and Environmental Accreditation and Labelling
ISO	International Standardization Organization
ITTA	International Tropical Timber Agreement
ITTO	International Tropical Timber Organization
LCA	Life-Cycle Analysis
LEED	Leadership in Energy and Environmental Design
LEI	Lembaga Ekolabel Indonesia (Indonesian National Forest Certification and Labeling System)
m ³ (s)	Cubic meter processed product
MC&I	Malaysian Criteria & Indicators for Sustainable Forest Management
MCPFE	Ministerial Conference on the Protection of Forests in Europe
MTCC	Malaysian Timber Certification Council
MTCS	Malaysian Timber Certification System
NGO	Non-Governmental Organization
NPRPPM	non-product-related production processing methods
NYC	New York City
PEFC	Programme for the Endorsement of Forest Certification Schemes

PPM	production processing methods
PRPPM	Product-related production processing methods
REDD	Reduced Emissions from Deforestation and Forest Degradation
RFID	Radio Frequency Identification
RIL	Reduced Impact Logging
RWE	Roundwood equivalent
SFI	Sustainable Forestry Initiative
SFM	sustainable forest management
SGS	Société Générale de Surveillance
SME	Small and medium-sized enterprise
SNIC	Sistema nacional de información y control (National information and control system) (Peru)
SVLK	Wood Legality Verification System (Indonesia)
TAG	Trade Advisory Group
TCHPS	Texas Collaborative for High Performance Schools
TFLET	Tropical Forest Law Enforcement, Governance and Trade Thematic Programme
TFT	Tropical Forest Trust (presently Forest Trust)
TLAS	Timber legality assurance system
TPP	Timber procurement policy
TTAP	Timber Trade Action Plan
TTF	Timber Trade Federation (UK)
UK	United Kingdom
UNCED	United Nations Conference on Environment and Development
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
USD	United States dollar
USGBC	United States Green Building Council
VPA	Voluntary Partnership Agreement
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute
WTO	World Trade Organization
WWF	World Wide Fund for Nature

UN country codes used in Figures 8.1-8.6

Country	Code	Country	Code
Bolivia	BOL	India	IND
Brazil	BRA	Indonesia	IDN
Cambodia	KHM	Liberia	LBR
Cameroon	CMR	Malaysia	MYS
Central African Republic	CAF	Mexico	MEX
China	CHN	Myanmar	MMR
Colombia	COL	Nigeria	NGA
Congo, Dem. Rep.	COD	Panama	PAN
Congo, Rep.	COG	Papua New Guinea	PNG
Côte d'Ivoire	CIV	Peru	PER
Ecuador	ECU	Philippines	PHL
Fiji	FJI	Suriname	SUR
Gabon	GAB	Thailand	THA
Ghana	GHA	Togo	TGO
Guatemala	GTM	Trinidad and Tobago	TTO
Guyana	GUY	Vanuatu	VUT
Honduras	HND	Venezuela	VEN

ACKNOWLEDGEMENTS

This report has been prepared under the close guidance of Amha bin Buang, Assistant Director of Economic Information and Market Intelligence of ITTO.

Several people have kindly assisted the author in the collection of necessary background information. They include Jan Abrahanssen, Michael Adams, Thorsten Arndt, Alhassan Attah, John Bazill, Peter Besseau, Ulrich Blick, Daniel Birchmaier, David Brooks, Joseph Buongiorno, Yati Bun, Rachel Butler, Barney Chan, Alain Chaudron, Roxanne Comeau, John Eyre, Carlos Gonzáles Vicente, Heikki Granholm, James Griffiths, Ben Gunneberg, Flip van Helden, Clotilde Herbillon, Richard Howe, Zuzana Jankovská, Steven Johnson, László Kolozs, Erik Lammerts van Bueren, Christian Lundmark Jensen, Greg Moffat, Chantal Oltramare, Christophe van Orshoven, Tapani Pahkasalo, Ed Pepke, Lizet Quaak, Jean Rennie, Brigid Shea, Hideaki Takai, John Talbot, Lillo Testecca, Jukka Tissari, Ivan Tomaselli, Gen Totani, Taina Veltheim, Lu Wenming and Frank Wolter.

Country case studies were carried out by Dato' Baharuddin Haji Ghazali on Malaysia, Richard Eba'a Atyi on Cameroon and Oscar Perez Contreras on Peru. WWF-Peru provided valuable assistance in the preparation of the case study on Peru.

Ibrahim Favada assisted in the trade analysis and Anna Hyytiäinen in compilation of comparative data on procurement policies. Nicole Roux-Simula played a key role in production of the report.

The author wants to express his sincere thanks to all those who have contributed to the preparation of this study.

1. INTRODUCTION

1.1 Background

Timber procurement policies are being considered and implemented by public agencies, trade associations and private companies in many traditional tropical timber markets. Twelve ITTO member countries (both producers and consumers) are in the process of implementing public procurement policies which establish specific requirements for timber and timber products. Several trade associations and larger private companies which are importers, buyers or users of tropical timber and timber products have also developed procurement policies or codes of conduct. More recently, green building codes adopted in a number of countries define specific requirements for how timber and timber products used for construction have been produced which will be impacting the market and competitiveness of tropical timber.

Timber procurement policies are being introduced principally to address public concerns about the environmental credentials of wood products by adding respective criteria into the decision making process. Many purchasers are demanding that products come from sustainable, or at least legal, sources and that this should be verifiable in order to maintain credibility with public opinion.

As the progress in implementing public procurement policies has been relatively slow, stakeholder concerns about the acceptability of timber and timber products have resulted in regulatory actions in the European Union (EU) and the United States to prevent or limit the access to markets of illegally harvested timber. These initiatives form part of the importing country policy instruments to encourage good governance and sustainable management of forests worldwide. Both procurement policies and regulatory measures have significant implications for tropical timber suppliers; the benefits of these measures should be enhanced and possible adverse impacts mitigated to improve effectiveness in achieving the identified goals.

There is presently a multitude of approaches to procurement policies and related instruments which represents a potential barrier for tropical timber suppliers in responding to the market requirements and tapping eventual opportunities which these instruments may offer. As new developments are occurring rapidly, there is an urgent need for tropical timber product exporters to monitor various initiatives, to assess producers' ability to meet the emerging requirements when they are becoming increasingly adopted, and to explore possible market threats and opportunities presented by these developments. At the same time, there is a need for those parties developing and implementing timber procurement policies to duly consider their significant economic, environmental and social impacts on tropical timber producers.

1.2 Objectives

The purpose of the study is to contribute to the achievement of the following objectives of the Organization as defined in the International Tropical Timber Agreement (ITTA) (2006) Art. 1:

- k) Improving marketing and distribution of tropical timber and timber product exports from sustainably managed and legally harvested sources and which are legally traded, including promoting consumer awareness;*
- o) Encouraging information sharing for a better understanding of voluntary mechanisms such as, inter alia, certification, to promote sustainable management of tropical forests, and assisting members with their efforts in this area;*

More specifically, the study is targeted at assisting the ITTO Committee on Economic Information and Market Intelligence (EIMI) in monitoring of public and private procurement policies for timber and timber products which have influence on the market access and competitiveness of tropical timber producers. The study will attempt to answer the following main questions¹:

1. What are the main drivers, factors and trends related to the development of timber procurement policies?

¹ See the Terms of Reference in Appendix 1.1.

2. What are the impacts of these policies on the competitiveness of tropical timber, the tropical timber industry and the management of tropical forests?
3. What are the main similarities and differences among timber procurement policies and the attendant implications for the procurement of tropical timber?
4. What is the capability of suppliers in ITTO member countries to meet the requirements and costs of timber procurement policies and have access to the opportunities and benefits generated by these policies?
5. What are the key factors affecting the ability of suppliers in ITTO member countries in meeting the requirements and costs of timber procurement policies and what concrete actions and measures should be taken to enhance the ability of suppliers to overcome the constraints and meet the requirements?
6. Is there a need and desirability for and the practicality of promoting convergence, coordination and harmonization among timber procurement policies as a means of facilitating the international trade in tropical timber, and, if so, what action should be taken in this respect?

1.3 Methodology

The work has two main lines of action: (i) review and analysis of the existing procurement policies in the public and private sectors, and (ii) country case studies to assess (a) impacts of the procurement policies, (b) implications of meeting their requirements in three ITTO member countries, and (c) needs for strengthening the capacity of countries and suppliers.

The study was carried out in close cooperation with the ITTO Secretariat. In addition, the Trade Advisory Group (TAG) and the Civil Society Advisory Group (CSAG) provided valuable guidance. The study also benefited from cooperation with FAO and other parties.

1.3.1 Analysis of the Existing Procurement Policies

The study reviews procurement policies both in the public and private sectors both in the ITTO consuming and producing member countries. The emphasis of the study was given to the public sector policies due to their stronger likely impact on the markets for tropical timber. In the private sector, the review covered relevant policies of trade associations in the tropical timber consuming and producing countries as well as those of selected enterprises which are operating internationally and therefore having a broader impact on trade. The current situation on green building initiatives as an emerging instrument is reviewed as they are being applied both in the private and public sectors in a number of tropical timber importing countries. The related standards and requirements can be understood as procurement policies as they often set specific requirements for timber and timber products.

The study also reviews the implications for tropical timber procurement of the EU and US legislation targeted at prohibiting or limiting access to these markets by illegally produced timber and timber products. The regulatory provisions are likely to be used as a reference in some procurement policies and they will also influence how procurement policies are formulated and implemented.

The data on the existing procurement policies was collected from desk and internet research complemented by a survey using a structured short questionnaire sent to representatives of focal public sector agencies in 31 countries. A total of 22 replies were received indicating a high response rate (71%). All the major consuming and producing countries active in public procurement policies replied. In addition, selected trade associations, companies and other organizations were contacted for additional information.

The analysis of similarities and differences of public procurement policies considered the following characteristics: (i) policy objectives, (ii) product scope, (iii) level of obligation, (iv) definitions and criteria for legality and sustainability, (v) criteria for verification/certification systems and alternative evidence, (vi) use of certification systems as a reference, and (vii) implementation aspects. The focus in the analysis is on those aspects of procurement policies that have significant impacts on tropical timber procurement.

1.3.2 Country Case Studies

Country case studies have been recently carried out in several countries in the tropics, many related to the implementation of the EU FLEGT Action Plan². These studies were useful sources for information and can be directly drawn on identifying impacts on the forest and governance. However, further country level studies were deemed necessary to assess market impacts and cost competitiveness as well as financial and human resource requirements due to meeting the requirements of procurement policies. Three case studies were carried out as part of the study (Table 1.1).

Table 1.1 Country Case Studies

Region	Country	Justification
Africa	Cameroon	Certified FMUs, preparatory work carried out to devise improvements in the existing legality assurance system, FMUs include large concessions, municipal and community forests, recent SFM certifications (FSC), high market dependency on the EU
Asia	Malaysia	Certified FMUs (under the national system MTCS and FSC), assessment of the legality assurance system carried out, market dependency on Japan, EU and the United States
Latin America	Peru	Certified FMUs (both large-scale concessions and community forests), recent regulatory changes, market dependency in mahogany and other timber products on the US market

The following methodology was adopted in the case studies:

1. Identification of the dependence on the markets which are subject to procurement policies and relate initiatives (EU, USA, Japan, New Zealand, etc.).
2. Assessment of the capacity and costs to meet the requirements of the timber procurement policies covering legal origin, legal compliance, sustainability of forest management and chain of custody on the forest management unit (FMU) level. A standardized approach was tried to cost assessment but due to major data problems in this area it could only be applied in full in Peru.
3. Assessment of the additional costs of the national monitoring and legality assurance system to upgrade it to a level which can be considered sufficient for "low risk" countries for illegal timber entering the supply chain. This was truly successful only in the case study on Peru.
4. Assessment of potential benefits and other impacts of achieving the legality and sustainability requirements of procurement policies.

2. PROCUREMENT POLICIES AND RELATED INSTRUMENTS AS TOOLS TO PROMOTE LEGALITY AND SUSTAINABILITY OF TROPICAL TIMBER SUPPLIES

2.1 Procurement Policies as Demand-Side Policy Tools

There are several hard and soft policy instruments which can influence the demand for timber and timber products in order to promote legal compliance and sustainability of forest management (Figure 2.1). In the public sector the governments can apply regulatory measures such as mandatory public procurement policies to reduce or eliminate the access to markets for illegal or unsustainably produced timber, or illegal products can be sanctioned. When procurement policies are voluntary they act as soft policy tools. In addition to restrictive action, positive measures can be taken to improve market transparency on illegal/legal and unsustainably/sustainably produced products, to support promotion of legal and sustainable products, or to provide development assistance to producers in developing countries. There is also a recent trend to adopt green building standards which specify

² Indufor (2008) completed an assessment of four case studies when they assessed the impacts of options for regulation on entry of illegal timber to the EU market. This study included a theoretical analysis of cost impacts, not related to a particular country situation. Brown et al. (2008) recently described the situation related to legal timber including descriptive analysis of 12 tropical countries. However, cost and resource requirements are not assessed in this report. Mayers et al. (2008) carried out an analysis of the impacts of the EU FLEGT VPA in Ghana which includes a comprehensive analysis on relevant impacts of meeting the market requirements for legal and sustainable tropical timber.

legality and sustainability requirements for timber and timber products which can be mandatory or voluntary.

Already since the last fifteen years progressive private sector companies have implemented their own procurement policies as tools to mitigate their reputational risks and to make use of the environmentally sensitive market segments for timber and timber products (cf. section 6.1). Individual company actions have included establishment and implementation of procurement policies, strengthening of environmental management systems and control of the supply chain, independent certification and verification, and various means to communicate on improvement in responsible performance in their operations. Green building initiatives have also been introduced as voluntary measures by the private sector in several countries (cf. section 5). Many private organizations have established codes of conduct and in some cases adherence to them has also become a membership condition to enhance their effectiveness in influencing company behavior (cf. section 6.2).

It has also been recognized that public and private sector efforts can be harnessed by partnerships. The Timber Trade Action Plan (www.timbertradeactionplan.info/) or RACEWOOD (www.ifa-association.com/) are examples of partnerships which are targeted at trade development in legal and sustainable timber products. Trade-related partnerships can also involve the civil society of which the Tropical Forest Trust and the Global Forest & Trade Network (GFTN) of WWF are examples. Civil society organizations have also sometimes acted as independent monitors of timber harvesting and transportation.

Voluntary measures such as forest certification and SFM labeling have made relatively slow progress in the tropical countries as they cover only 8% of the world's certified forests (UNECE/FAO 2009). This is probably a key reason why the NGO pressure has shifted to promote more stringent measures such as mandatory public procurement policies and specific regulations to limit the access of illegal products to the market. The overall emphasis is now in targeting at illegal activities rather than in promoting sustainability and this has implications for the behavior of operators and the efforts of producing country governments.

As a conclusion, procurement policies are only one element of the demand-side options and they have close linkages with other regulatory and voluntary measures. For achieving the identified policy goals an optimum mix of the available demand-side instruments is needed and their effectiveness has to be assessed as a whole. It is however emphasized that demand-side measures are not sufficient and only second-best tools to achieve legal compliance and sustainability of tropical forest management.

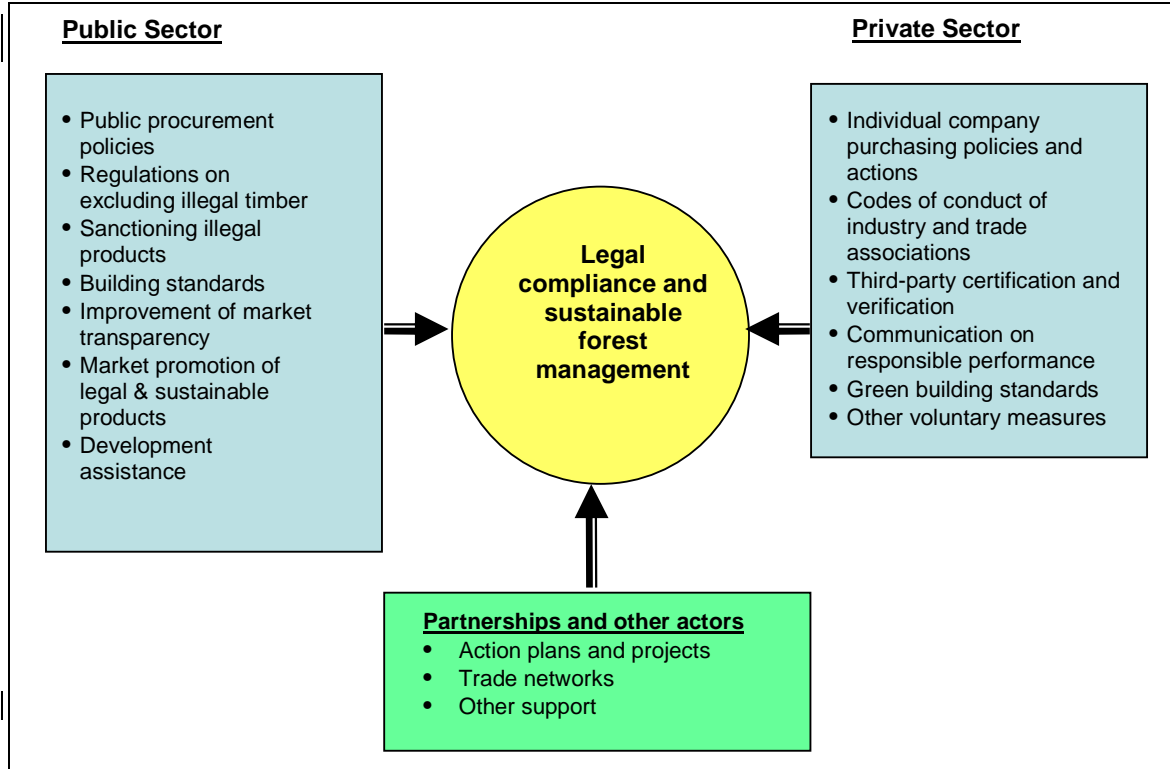
2.2 Purpose and Drivers of Procurement Policies

Green public purchasing policies have been adopted by many governments since the last two decades in order to internalize environmental aspects in government purchasing. Timber procurement policies (TPP) are more recent initiatives which cover only timber and wood fiber-based products with specific objectives to promote improved governance and sustainable forest management (SFM) in producing countries.

Such public sector policies reflect the values of society as a whole. As these values change over time and market transparency improves, inappropriate practices (illegal operations, money laundering, social injustice, etc.) become no more acceptable. With procurement policies the demand for timber products is influenced as purchasing of only acceptable goods is allowed or preference is given to products which meet the predetermined criteria.

There are three main underlying drivers which have led to the development of public timber procurement policies: (i) international commitments (the ITTA (2006), the Non-Legally Binding Instrument on All Types of Forests, regional Forest Law Enforcement and Governance processes, etc.), (ii) general concerns on illegal logging and unsustainable forest practices, particularly to the tropics, and (iii) more recently response to needs for climate change mitigation.

Figure 2.1 Timber Procurement Policies and Other Demand-Side Measures to Promote Legality and Sustainability of Timber Supply



Based on the results of the country survey, NGO pressure has been one of the strongest direct drivers in about a half of the responding countries, particularly in some leading countries in Europe which mainly rely on imports in their supply of timber and timber products. NGO pressures, often involving corporate-targeted campaigns, have also contributed to the development of private sector procurement policies which are one tool to manage reputational risks related to timber and wood fiber supplies. In the forest industries and trade timber supply has become a key area of corporate social responsibility and this is one of the contributing factors to the private sector support to the development of public procurement policies. Responsible companies want to have a level playing field with suppliers who do not bear the costs of legality and sustainability.

Other contributing factors have been grassroot public concerns which have prompted local governments to establish their own procurement policies. Public awareness has also driven various green building initiatives in which timber products are often specifically addressed. All these factors have contributed to the overall political will to make use of public procurement in eliminating illegal and unsustainable timber products from public purchasing.

The country survey showed that there are strong concerns among tropical timber producers that the public timber procurement policies in importing countries have been mounted for reasons of protectionism. Producers in importing countries are expected to have much lower relative costs of compliance with TPP requirements than tropical timber producers giving these a competitive advantage (cf. chapter 7). The country survey has, however, clearly revealed that the drivers of TPPs are more fundamental and not pushed by the forest industry and trade in the importing countries as also their companies have serious concerns on the cost impacts and feasibility of such policies. The private sector has become supportive to appropriate TPPs as it is understood that suppliers in the timber sector have to respond to social responsibility demands by consumers and public buyers of their products.

The key direct objectives related to timber supply of most current procurement policies (public and private) are to ensure that products come from legal sources and the law is respected in the supply chain. Most policies also include sustainable forest management in their minimum requirements or as a preferential criterion for contract award. While originally the objective was to promote legally and sustainably produced products through procurement policies, the emphasis appears to have somewhat shifted to exclusion of illegal and unsustainable products from the market.

Timber procurement policies have also a link with climate change mitigation objectives which are becoming increasingly important both in the public and private sectors (e.g. PriceWaterhouseCoopers 2009). As promotional instruments they contribute to responsible and sustainable forest management and thereby maintenance and enhancement of forest carbon pools. They can also promote the use of wood as a building material increasing carbon sequestration in 'harvested wood products'³ and the use of wood-based bioenergy substituting fossil fuels. These additional benefits are considered ancillary objectives of existing timber procurement policies but they are likely to become strong drivers in the future.

The positive link with public sector TPPs and the climate change objectives rests on the assumption that these policies will not become an obstacle for specifying timber and timber products due to the complexities of their procurement process thereby indirectly encouraging purchasing of substitutes which may be environmentally much more harmful than timber. This lack of comparative assessment of different materials in general green procurement policies remains a cause of concern for the forestry sector.

2.3 Timber Procurement Process and Its Legal Framework

The timber procurement process consists of a number of distinct phases (Figure 2.2). They have to be considered separately as the legal framework specifies how various types of procurement criteria can be introduced in each phase. The critical aspects are

- Defining the subject matter (i.e. timber product)
- Technical requirements which may include provisions for timber harvesting and tracking of the supply chain (contract requirements)
- Need for provision of information on suppliers' track record and sources of supply, and exclusion of suppliers who cannot be pre-qualified (pre-qualification)
- Information on timber supply-related requirements in the tender documentation (invitation to tender)
- Selection of eligible suppliers whose bids show compliance with tender requirements (selection)
- Review and verification of the information provided by suppliers and its consideration in choosing the supplier (awarding the contract)
- Verification of the compliance with the contract performance requirements during contract implementation (contract management)

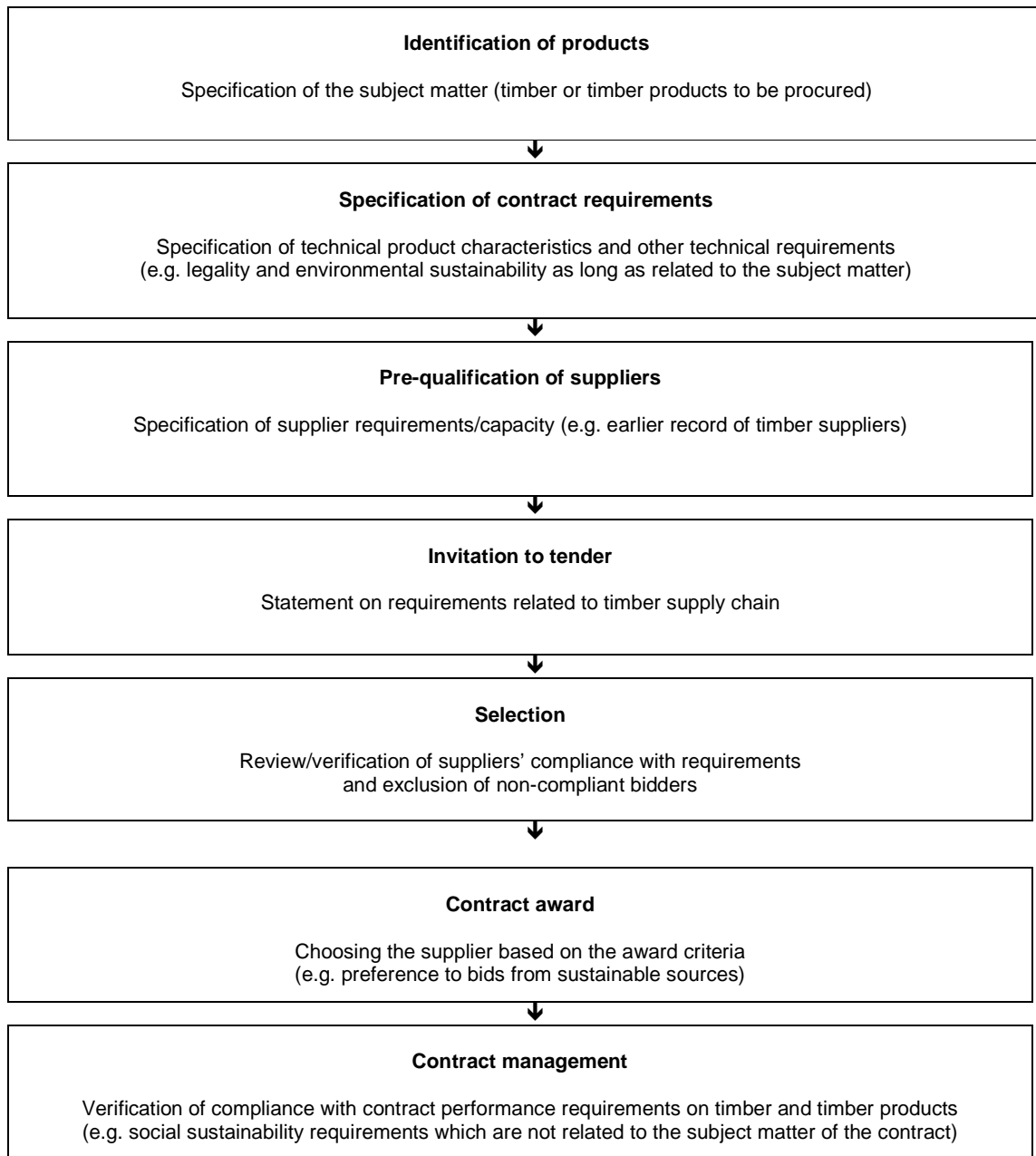
The "subject matter" of a contract is about what product, service or work is to be procured. The international legal framework provided in the Plurilateral Government Procurement Agreement (GPA) requires that all criteria are linked to the subject matter of the contract in order to ensure non-discrimination. The EU has specific legislation for public procurement with the same provision⁴.

When defining the subject matter of a contract, contracting authorities have great freedom to choose what they wish to procure. The subject matter is translated into measurable technical specifications concerning performance or functional requirements. This is a critical stage in the procurement process as it is here where the environmental aspects linked to the product can be defined and where legality can be specified. In addition to basic technical specifications, variants may also be invited which can target at higher than basic requirements.

³ The term used in the UNFCCC negotiations.

⁴ Directive 2004/17/EC and 2004/18/EC.

Figure 2.2 Public Procurement Process for Timber and Timber Products



Source: Adapted from the UK Advisory Note (2009)

Note: This general structured process typically applies in public procurement; in the private sector less formal approaches are applied and there is freedom to apply legality or sustainability criteria in any phase of the process.

In addition to product characteristics, technical specifications may also concern production and processing methods (PPM) which can be product related (PRPPM) or non-product related (NPRPPM). Relevant examples for the PRPPM are specifications related to recycled wood content e.g. in particle board or a particular tree species to be used in a wood product. Legality and sustainability of forest management are typical NPRPPM criteria for timber procurement policies. The difference between the two types of PPM has legal implications.

The core criteria in timber procurement policies are legality and (environmental) sustainability criteria. They are linked to forest management in the source of products and therefore can be interpreted to be related to the subject matter. However, sustainability is a comprehensive concept including environmental, economic and social aspects. Inclusion of social criteria is debatable as their scope is very broad and there are different interpretations on whether they are related to the subject matter and therefore whether they can be applied as part of technical specifications under the international or EU trade rules (Brack 2009b; see section 3.2.3 for further discussion on inclusion of social criteria).

In order to be non-discriminatory and to treat suppliers equally, technical specifications cannot make references to specific sources of timber. If specific certification systems are used as a reference for proofs of meeting the requirements on legality or sustainability, a provision for optional evidence has to be provided. This has led a few countries to define comprehensive requirements for certification systems which can provide acceptable proofs.

For suppliers to comply with the requirements in different phases of the procurement process, it is necessary that the criteria applied are clearly defined to facilitate suppliers to meet them. Clarity is particularly needed for the core criteria of legality and sustainability for which generally agreed definitions do not exist (cf. section 3.2).

Exclusion criteria in the pre-qualification stage express reasons for non-eligibility and the evidence has to be strong. Examples of such criteria can be on-going criminal cases, use of child or forced labor, timber coming from conflict areas, record of grave professional judgment, etc. Exclusion can also happen in the selection phase if a supplier proves to be non-compliant with the specifications of the tender documentation. Abnormally low tenders may also be excluded if it is apparent that adequate implementation of the contract is not possible due to lack of adequate resources.

In awarding the contract conventional criteria (e.g. lowest price, most economically advantageous bid) are typically applied but the minimum requirements have to be met in the selected bid. If preferential award criteria (e.g. sustainability in cases in which it is not a minimum requirement) are applied, they determine the choice between otherwise equal bids.

For contract performance specific conditions can be set which do not have to be related to the subject matter. This provides flexibility for including conditions for e.g. social aspects which may not be allowable as part of technical specifications. In any case contract performance requirements on such aspects must be transparent and not to be mixed with technical specifications or with selection or award criteria.

3. PUBLIC SECTOR PROCUREMENT POLICIES

3.1 Status, Scope and Minimum Requirements

3.1.1 Development and Status of National Policies

A total of twelve countries have presently operational central government public sector procurement policies for timber and timber products. Their development has been particularly active in Europe, partly as a result of guidance and promotion by the European Union (Table 3.1). Six EU member states have operational procurement policies including Belgium, Denmark, France, Germany, the Netherlands and the UK. Outside the EU, China, Japan, Mexico, Norway, New Zealand and Switzerland have operational central government policies. In addition, several other countries are in the planning stage including Ghana which recently announced its plan to establish a public procurement policy for the country⁵ and Vietnam where a preparatory study was recently carried out on the subject⁶. Some important tropical timber consuming countries are missing in the list (the United States, Canada, Australia), but they have taken different approaches to promote public purchasing of legal and sustainable timber through general green procurement policies, local government-level TPPs, green building initiatives and specific actions to reduce illegal logging and trade.

⁵ ITTO (2009)

⁶ Xuang Ty et al. (2009)

Table 3.1 Status, Scope and Minimum Requirements for Legality and Sustainability of Central Government Public Procurement Policies

Country	Status	Product scope	Minimum requirements for timber and timber products	Degree of obligation for central government agencies
Belgium	Operational since 2006; revision expected by end 2009	Wood products ^{a)}	Sustainable sources	Mandatory
Denmark	Operational since 2003; current policy since 2006; revision in process	Wood and paper products ^{b)}	Legal sources minimum; preference for sustainable sources	Voluntary
European Union	Operational since 2004; revision in progress	All products (including wood)	Source demonstrably legal	Guidance to member states
France	Operational since 2004; revision in 2006 and 2008	Wood and paper products ^{c)}	Legal and sustainable sources	Mandatory
Germany	Operational since 2007; review in 2011	Wood and wood products ^{d)}	Legal and sustainable sources ^{e)}	Mandatory
Luxembourg	Planning stage	Wood and paper products	Sustainable sources	
Netherlands	Announced in 2004; several revisions	Wood and paper products	Legal sources minimum, sustainability required if possible	Mandatory
Norway	Operational since 2008 revision by end 2010	Property management, paper products, office furniture ^{f)}	No tropical timber to be used ^{g)}	Voluntary
Switzerland	Operational since 2004 ⁱ⁾	Wood, wood products and paper	Sustainability but if not possible legality	Voluntary
United Kingdom	Operational since 2003 ^{j)} ; latest revision in 2009	Wood and paper products	Legal and sustainable sources or FLEGT licenses or equivalent	Mandatory
New Zealand	Operational since 2004	Wood and paper products	Legal sources minimum, preference to sustainable sources ^{k)}	Mandatory
China	Operational since 2007 ^{l)}	Processed wood products wood flooring, furniture	Environmentally labeled products (national eco-labeling scheme)	Mandatory
Japan	Operational since 2006	Wood and paper products	Legality; sustainability is a criterion of consideration	Mandatory
Mexico	Operational since 2007	Wood and wood products; office paper	Certified legal origin and sustainable forest management ^{m)}	Mandatory
<p>a). Paper products covered by another policy b). Original coverage tropical timber only, expanded to all timbers in 2006 c). Original coverage tropical timber only, expanded to all types of timber in 2005 d). Composite products are covered only if timber is the most significant component e). Recycled products to be preferred over non-recycled f). Priority product groups identified in the policy g). Including materials used during the construction period h). General public procurement policy; assessment on verifying legality and non-controversial sources of any material or product planned i). In 2008 the government issued another recommendation for sustainable construction including a statement on timber products j). Several revisions k). A review was planned for 2008 to make sustainability mandatory. l). Expanded to provincial levels in 2007 and fully implemented since 2008 m). Office paper should contain minimum 50% of recycled fibre</p>				

Sources: Proforest (2007a; 2007b); country survey replies and national policy documents

The development processes of country procurement policies are summarized in Appendix 3.1⁷. The following general observations can be made:

- Specific timber procurement policies are relatively new instruments and many countries are still in early phases of their development or implementation. In the UK voluntary guidelines were issued already in 1997 but the first specific policy was issued by Denmark in 2003.
- Many timber procurement policies are part of, or have evolved from, more general green public procurement policies and initiatives. They are not isolated efforts but part of strategies targeted at overall sustainable production and consumption.
- Stepwise approaches have been adopted starting with legality as the first step and moving towards sustainability. E.g. the UK used in the past as one category “progressing towards sustainability” but it was later dropped due to creating confusion among purchasing agents. With few exceptions like New Zealand such intermediary steps no more appear in the policies and now only a maximum of two levels are identified (legality and sustainability). This is a cause of concern for tropical timber producers who need time to achieve sustainability in their forest operations.
- Relatively ambitious targets have been set and some of them may have to be revised in due course. E.g. France and the Netherlands have planned to achieve 100% from sustainable sources by 2010 which appears impossible in practice.
- The development and revision processes have proved to be time-consuming and reaching a consensus among stakeholders has proved to be sometimes tedious (e.g. Denmark, the Netherlands). The civil society organizations generally pursue highly restrictive requirements which are not acceptable for other stakeholders and may not be possible to meet in practice due to lack of adequate product supply. Another reason for lack of consensus is acceptability of non-FSC certification systems as proofs of legality and sustainability as many NGOs want to promote only FSC..
- Participatory development processes of procurement policies have made them legitimate. On the other hand, the bottom-up processes have contributed to the proliferation of criteria and requirements and slow progress in harmonization. In the absence of international or regional standards, harmonization of requirements has made only limited progress (mainly among Denmark, the Netherlands and the United Kingdom).
- Only in few cases (e.g. Denmark, the UK) specific efforts have been made to engage tropical timber producers in the consultation process on the policy design.
- A need for policy revision has usually been identified in 3-5 years. The experience in Denmark and the Netherlands shows that the revision process may be as time-consuming as the original design phase due to different stakeholder views.
- Formal *ex ante* impact assessments have not been made but in some countries impacts have been assessed during the implementation (Belgium, Denmark, France and the UK).

The EU has a policy to promote green public procurement (GPP) in general. General guidance and strong encouragement are given to Member States for the development of TPPs. In addition to the six member countries mentioned above, several others are in the planning process or considering ways for how to address timber products in broader green procurement policies. The European Commission (EC) is considering options for accelerating progress in green public procurement in which timber products are specifically addressed. Member States are encouraged to develop policies which support and promote international agreements such as the Voluntary Partnership Agreements (VPA) within the framework of the EU Forest Law Enforcement, Governance and Trade (FLEGT) Regulation (CEC 2008b). Belgium, Denmark and the Netherlands are reported to be in the final stages of their policy revision process. The UK is reviewing possibilities to include social criteria in their minimum requirements and the process has involved a broad-based public consultation process this year.

At least Finland, Lithuania, Luxembourg and Spain are planning or considering measures to implement a national TPP. Sweden is also in the process of developing a generic national green public procurement criteria for wood-based products.

⁷ FERN (2009) includes further description of the national processes in six countries.

Norway's policy is quite different from the others as it bluntly rules out the use of tropical timber in public sector building and other construction works (property management). The policy is part of a voluntary action plan and it has not been challenged under the WTO rules in spite of the fact that it refers to the origin of the product.

Canada's green procurement policy also covers wood and wood products but there is no specific national TPP. Individual provinces have issued their own policies which are targeted at promoting wood consumption in building construction but without reference to such criteria as legality and sustainability.

The Mexican policy is provided in the law on public procurement which makes provisions for forest certification and government registered auditors as specified in the forest legislation. This makes its policy different from other countries.

In Brazil general procurement policies include environmental criteria but there have been several practical and legal constraints to include legality and sustainability requirements in procurement at the federal level. However, some states and municipalities have started to include proof of legal sourcing from sustainably managed forests in their requirements (cf. section 3.4).

Ghana's purpose is to promote legal timber in the domestic market with the aim to entirely eliminate the production and use of illegal timber in the country.

Timber procurement policies are relatively new instruments and several countries are in the process of revising their policies. Belgium and Denmark are in the final stages of the adoption of a new policy. Germany's TPP will be reviewed in 2010 as the current policy is valid only until 2011. France will have to revise its policy as the environmental law (the Grenelle I) calls for definition of the criteria for the recognition of forest certification schemes, which represents a departure from the approach of the current policy. Japan is also likely to revise her policy based on the accumulated experience on the implementation of the present one.

3.1.2 Product and Material Coverage

The product coverage of public procurement policies always includes timber/wood and products but varies with regard to paper products as e.g. the Belgian and German policies have not included them. Two policies started with tropical timber only (Denmark and France) but they were soon expanded to cover all types of timber. The overall tendency appears to be towards a comprehensive coverage including also paper and board and products made thereof. The Norwegian policy is an exception as it refers to tropical timber only prohibiting its use in public building construction and renovation projects.

The Danish and UK policies make a special provision for recycled wood. It is defined as recovered wood that has been in previous use but is no longer used for the purpose for which the tree was originally felled (UK). This definition is not practical as it is not necessarily known for which purpose wood will be used when a tree is felled. Three categories of recycled wood are identified in the two policies (i) pre-consumer wood and wood fiber, (ii) post-consumer wood and fiber, and (iii) driftwood⁸.

The issue of recycled wood has not yet been adequately addressed in the majority of TPPs and should be duly considered in their future revision. In general, sawmill co-products should be considered acceptable if sufficient proof of legality and sustainability can be provided. In the case of Denmark sawmill co-products may pass as verified virgin fiber without any verification.

3.1.3 Minimum Requirements

The minimum requirements for timber supplies in the policies refer to legality, sustainability or both. In the EU four countries define sustainability as a minimum (e.g. Belgium, France, Germany, the UK) which goes beyond the guidance of the EU which specifies legality as a core (minimum) criterion (CEC

⁸ Driftwood is wood that has been washed onto a shore or beach of a sea or river by the action of winds, tides, waves or man (www.wikipedia.org).

2008b). The recent UK policy also accepts FLEGT-licensed timber but this is presently a theoretical option as such products are not expected to be available in the market before 2011. However, this may be interpreted so that FLEGT licensed timber is considered in the UK policy close to what is considered sustainable. Acceptance of the FLEGT licenses in the UK is foreseen up to 2015 after which only sustainable timber will be accepted.

While legality is a minimum requirement in Denmark and the Netherlands, sustainable products are preferable in the former case and mandatory in the latter case if possible. In the Japanese and New Zealand policies legality is a minimum requirement and sustainability is a criterion of preference⁹. The Mexican policy defines legal origin and sustainability as minimum requirements.

The Chinese policy specifies only a national recognized eco-label but its criteria for timber supplies could not be reviewed for this study. This approach relying exclusively on one specific eco-label could be challenged under the WTO rules.

The Norwegian policy is different from the others as it species the origin of wood (tropical zone in this case) ruling out the use of tropical timber in the defined end products and applications (property management). This approach excluding tropical timber could be seen as favoring temperate timber products and could therefore be challenged under the WTO rules.

The overall tendency appears to be towards both legality and sustainability as minimum requirements in TPPs. This is a positive trend provided that time is allowed to tropical timber producers to achieve sustainability within realistic time schedules which are however difficult to define on a general level as local situations vary by countries. The availability of SFM certified tropical timber should be considered in setting time-bound targets for full implementation of sustainability as a general minimum requirement in TPPs.

As public procurement policies are applied for timber from all sources, problems can also be seen for the acceptability of domestic products in countries where SFM certification has progressed slowly and where ready government tools do not exist to prove legality of timber supplies. The issue is particularly important for countries with extensive small-scale family forest ownership in Europe and North America as many of these forests have not been certified.

3.1.4 Level of Obligation

All the policies are mandatory for central governments except the Danish, Norwegian and Swiss policies which are voluntary. The mandatory obligation has been expressed in different ways and some flexibility is also allowed in some policies (e.g. "must buy", "must seek to buy", "if available", "if possible", etc.). The Dutch, French and Swiss policies make provision for availability of supply as a condition for policy implementation. In the former case the legality of the product needs in any case to be verified prior to purchasing. This kind of approach is appropriate as it takes a realistic view on the speed of policy implementation by procurement agencies and possible constraints in available supply of tropical timber for specific uses.

The tendency is clearly towards more binding mandatory implementation. However, this is influenced whether the policy is issued as a law or through an advice note, a ministerial policy statement, or similar. As an example of the shifting emphasis, in Denmark a framework contract for "office furniture" was tendered in 2008 for supplying all Danish ministries and central government institutions in 2009 and 2010. In tendering, verifiable legally produced timber was set as a minimum requirement, i.e. as a contract clause and the award criteria included preference for sustainable timber. The law did not oblige the government to specify verifiable legally produced timber as a contract clause but it was included based on an assessment of its feasibility in this particular contract. A number of other product categories are covered by the same procurement mechanism so legality may gradually become a *de facto* minimum requirement in Denmark, particularly when many local governments are adopting the same approach¹⁰.

⁹ The Japanese policy states that legality is a criterion of evaluation and sustainability is a criterion of consideration.

¹⁰ Lundmark Jensen, pers. comm.

3.1.5 Policy Implementation

The United Kingdom has the most detailed guidance for the implementation of the timber procurement policy which consists of the following elements (<http://www.proforest.net/cpet/toolkit>):

- Invitation to tender: track record of potential suppliers in supplying legal and sustainable timber can be considered and those who cannot have the capacity to show evidence on chain of custody can be excluded.
- Contract clauses are provided through model contracts to facilitate procurement agents to integrate the conditions into contracts¹¹. Clauses include stipulations that the contractor must obtain documentary evidence on legality, sustainability or recycled timber before any product delivery. If the evidence is not satisfactory, the contractor has to pay for independent verification.
- Selection of suppliers: bids not meeting the minimum requirements are rejected
- Contract award: the procurement agent has to first select between bids which apply minimum requirements and those with variants (meeting sustainability criteria). If there is a price difference between the variant and standard bids, it must be decided whether the difference is affordable and represents good use of resources. In the positive case, the variant option should be preferred. The contract is then awarded to the party who has submitted the best value for money bid among the bids of the selected group. If none of the bids complies fully with the requirements, it is decided whether to re-tender or to start negotiations.
- Supplier information: the bid statements on capacity to supply evidence for sustainable or legal sourcing is taken at face value when bids are considered and evidence can be requested prior to the invitation or after the contract award.
- Contract performance: The contractor must provide evidence at any time requested. Deliveries of non-compliant products are rejected.

In most other countries the respective guidance is on a more general level and in some cases no specific guidance has been issued as yet. The above UK-type approach with necessary adjustments can serve as a reference for how the situation may evolve in other countries. Detailed guidance is particularly needed in situations where the progress in policy implementation is slow. There are differences between countries as regards at what stage the evidence of legality and sustainability needs to be provided and how it is evaluated or verified. However, implementation of all the policies requires adequate evidence on compliance by the supplier and the products delivered. Sanctions may not be always defined but it is apparent that non-compliant suppliers take significant risks to lose any future business in the public sector market.

Policy implementation has been assessed in Belgium, Denmark and the UK in order to identify barriers and measures to improve effectiveness and similar work is on-going in France. Key constraints appear to be related to limited awareness among purchasing agents and suppliers, inadequate guidance, sometimes confusing definitions, complicated modalities, and lack of effective monitoring and reporting (Proforest 2007c; CPET 2008b; CPET 2009; Rambøll Management 2006). Several other countries are in the process of assessing the implementation of their TPP. Evaluations have usually led to recommendations for simplification of approaches, improvement of the clarity and practicality of procedures and guidance, as well as revision of procurement criteria and requirements for proof of compliance.

3.2 Definitions of Legality and Sustainability

3.2.1 Legality

In public purchasing policies it is important to have clearly defined criteria for the requirements of legality and sustainability to make them operable by purchasers who are not experts in forestry issues. The Danish, Dutch and the UK governments have developed detailed criteria for legality. Japan and New Zealand have short general definitions which leave more scope for interpretation. Other countries have no specific definitions for legality in spite of referring to it. France, Germany and Switzerland have left the task of elaborating definition of legality and sustainability of forest management to certification systems.

¹¹ This is also provided e.g. in the New Zealand policy

The general approach in defining legality is compliance with national laws and international conventions (Box 3.1). As very broad definitions are difficult to apply in practice, several countries have specified which legislation and international conventions are covered by their definition. As regards the latter some policies refer only to those conventions that the country has ratified¹². CITES compliance is specifically mentioned in the Danish, Dutch, French and the UK policies. The Dutch policy is the only one which has an extensive (non-exhaustive) list of international conventions (CBD, CITES, ILO and the UN Declaration on Indigenous Peoples) irrespective of ratification in the country¹³. Compliance and its verification may not always be easy to establish in non-ratified countries.

In general, adequate knowledge on the relevant conventions among forest managers in the tropical countries is limited to advanced larger companies leaving out most operators who should be first trained on the implications of various international conventions for their operations before the respective obligations are known, understood and implemented. Additional capacity building work may be needed to enable forest owners and managers to address compliance particularly with those international conventions that the country has not ratified.

The UK definition of legality includes legal use rights to the forest, compliance with national and local laws on forest management, environment, labour and welfare, health and safety and other parties' tenure and use rights. All relevant royalties and taxes must also be paid and CITES must be complied with. The Danish and the Dutch policies apply essentially the same definition.

The Japanese definition mentions only forest laws. It can also be interpreted to include local level by-laws as, in addition to national laws, it mentions forest laws applied in forest areas. The same approach is adopted in the UK/Danish/Dutch definitions which also refer to local legislation and regulations.

Japan has also an explicit (non-exhaustive) definition of illegal logging which includes, *inter alia*, logging without legitimate permission, logging in prohibited areas and logging prohibited timber species. In the Danish definition the term illegal activity refers to (illegal) exploitation, establishment of land settlements, land use, and initiated fires. The New Zealand policy divides legality into two areas: legal harvesting rights and rights to use the forest which is among the narrowest interpretations.

The Dutch policy is the only one covering enforcement aspects through the need for FMUs to be protected against illegal activities. This is not quite the same as compliance with national or local laws as the FMU could be subject to illegal activities even if the forest organization itself is law-abiding (Brack 2009a). The British and Danish criteria make elsewhere¹⁴ a similarly targeted reference to adequate protection of the forest from unauthorized activities such as illegal logging, mining and encroachment. Protection against illegal activities does not depend on the FMU alone as lack of government enforcement or weak general security in the area is often the reason for external illicit activities. In addition, the interpretation of "sufficient" and "adequate" protection is subject to interpretation in the absence of relevant guidance.

In the EU legality has been defined somewhat differently in various documents issued by the European Commission related to both public procurement and the EU FLEGT Action Plan as can be seen in Box 3.1. In addition the EU guidance on public procurement proposes that verification of legality should require that wood can be traced throughout the whole production chain from the forest to the product.

Parallel to the national efforts in its member states, a generic definition of legality has been developed in the EU Forest Law Enforcement, Governance and Trade (FLEGT) Regulation¹⁵ which was crafted within the framework of the Voluntary Partnership Agreements (VPA). The definition also provides for how to identify through a participatory process which national laws should be included¹⁶. In

¹² Belgium has made no reference to specific conventions.

¹³ This comprehensive approach for the scope of legislation applies to the definition of sustainability only; the Dutch legality definition includes only the conventions ratified by the country.

¹⁴ Item 1.2.5.c on ecosystem health and vitality under the criteria of sustainability.

¹⁵ The EU FLEGT definition of legally produced timber means timber products produced from domestic timber that was legally imported into a partner country in accordance with national laws determined by that partner country as set out in the Partnership Agreement (Council Regulation (EC) No 2173/2005).

¹⁶ The UK policy does not consider this usually necessary.

subsequent briefing notes the following elements are singled out as likely to be included in the practical working definition in partner countries: legal harvesting rights, regulations on permitted harvest levels, environmental and labor legislation, and respect for other parties' tenure rights that may be affected (FLEGT 2005)¹⁷. Two recent documents (the EU legislative proposal on obligations for operators who place timber and timber products to the EU market ("due diligence" regulation) and the EC staff working paper on public procurement) elaborate further what is meant by legality and legally harvested timber. While these EU level definitions are compatible with each other, their different wordings and levels of detail are not helpful for operators who should comply with them and for auditors who should verify this compliance. Differences are apparently due to somewhat different perspectives to the concept of legality in different EU instruments.

The recent EC guidance on public procurement policies (CEC 2008b) is consistent with the FLEGT definition of compliance with national forest law. FLEGT licensing is presented as a system that testifies to the legality of the timber products supplied. It also recommends that EU member states and their contracting authorities stipulate that all wood or wood products are sourced from legally harvested forests among minimum technical specifications and sustainability as part of contract performance clauses for works contracts. The synergy between national procurement policies and the FLEGT Action Plan exists already in the French and UK policies which accept the FLEGT licenses as proof of legality¹⁸. There will also be a linkage with the definition of the due diligence regulation (when approved) as it will be applicable to timber and timber products from all sources (domestic and imported).

The US Lacey Act amendments (cf. section 4.2) include an indicative list of potential illegal activities covered including both "overlying" and "underlying" violations with the broadest definition of (il)legality. This is different from those policies which focus on explicit specification of the relevant legislation to be complied with. The Lacey Act may also extend to less obvious activities, such as the transporting of timber at night in violation of a curfew designed to combat illegal timber trafficking (Brack 2009a). Identification of examples of illegal activities is also included in the Japanese definition and the EU guidance on green public procurement.

As a conclusion, various definitions recognize that trading partner countries have sovereign rights to define legality in their specific conditions. Public procurement policies contain provisions for the scope of relevant national legislation to be covered which can be understood as minimum coverage to qualify for "legality". This can also be implicit like in the case of France, Germany and New Zealand which rely on the definitions of the recognized forest certification schemes.

It is emphasized that for assessment and verification, there should be clarity on which legislation is to be included. There are now differing approaches and wordings to the definitions of legality which leave scope for interpretation. Some of the differences have significant implications for tropical timber producers and should be duly considered in the policy design. For instance, some legality definitions expand the scope of application of international conventions beyond the countries which have ratified them and this has some practical difficulties (e.g. possible conflicts with national legislation). In addition, obligations to protect an FMU against external threats can rule out operators who are law abiding and managing their forests sustainably but helpless to control security or illegal activities beyond the borders of their FMU.

While a degree of flexibility for interpretation is useful to apply external or international definitions of legality in specific country conditions, there is clearly a need for more clarity and consistency between various public procurement policies and related regulatory instruments which refer to legality of timber supplies. In spite of the identified differences in Box 3.1, the overall approaches are largely similar and offer ground for harmonization through e.g. elaboration of a generic definition (or standard) of legality. A common view is emerging among some countries on how legality (or alternatively illegal activities) can be defined based on national legislation and international conventions. Future harmonization efforts could build on this experience

¹⁷ The EU FLEGT VPA regulation includes provision for the development process of specific legality definitions in VPA countries through a participatory process.

¹⁸ This is not the case in the Belgian and German policies as sustainable source is their minimum requirement. The FLEGT license can only provide a partial input to demonstration of sustainability in their case.

Box 3.1 Selected Definitions of Legality

Belgian Procurement Policy (2005)

Forest management respect national laws and international conventions.

Dutch Draft Procurement Criteria (October 2008)

Relevant international, national, and regional/local legislation and regulations shall be respected. To that end the system requires that

- The forest manager holds legal use rights to the forest
- The forest manager complies with all obligations to pay taxes and royalties
- Legal and regulatory obligations that apply to the forest management unit, including international agreements, are fulfilled
- The forest management unit is sufficiently protected against all forms of illegal exploitation, illegal establishment of settlements, illegal land use, illegally initiated fires, and other illegal activities

Guidance: International agreements pertain in particular to the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species (CITES), ILO agreements and the UN Declaration on the Rights of Indigenous Peoples. Irrespective of the fact whether a given country has ratified these agreements, the standard of the Certification system should, where relevant, reflect the intention of these agreements. This part of the definition applies only to sustainable forest management (not to definition of legality).

United Kingdom Timber Procurement Policy (CPET 2009a)/Danish Draft Criteria for Legal and Sustainable Timber and Assessment of Certification Schemes (2007)

Definition of legal

1. The forest owner/manager holds legal use rights to the forest
2. There is compliance by both the forest management organization and any contractors with local and national laws including those relevant to: (i) forest management, (ii) environment and (iii) labor and welfare, and health & safety, and (iv) other parties' tenure and use rights.
3. All relevant royalties and taxes are paid
4. There is compliance with the requirements of CITES

Process for developing the definition:

In most countries it will not be necessary to have any process to define legality as set out above. However, it is now recognised in some countries laws may be unclear or conflicting making clear definition of legality difficult to achieve. The FLEGT process has proposed that in such countries it will be necessary to have or develop a practical working definition of 'legal' or a set of core laws which must be met which has support from major stakeholder groups. This can be done through a national standard-setting process or other appropriate means

Japanese Procurement Policy (2006)

Legal: harvested in a legal manner consistent with procedures in the forest laws of timber producing countries and areas.

New Zealand Procurement Policy (2006)

Legal timber refers to timber or wood products from a forest that has been legally harvested and where the organization or body that felled the trees and provides the timber from the wood is supplied or derived had legal rights to use the forest.

EU FLEGT Regulation (Council Regulation (EC) No 2173/2005)

Legally produced timber means timber products produced from domestic timber that was legally imported into a partner country in accordance with national laws determined by that partner country as set out in the Partnership Agreement (Council Regulation (EC) No 2173/2005).

EU FLEGT (FLEGT Briefing Note 9)

Definitions of legally-produced timber should incorporate laws that address the three pillars of sustainability – i.e., those aimed at economic, environmental and social objectives. These are likely to include:

- Granting of and compliance with rights to harvest timber within legally-gazetted boundaries.
- Compliance with requirements regarding forest management, including compliance with relevant environmental, labour and community welfare legislation
- Compliance with requirements concerning taxes, import and export duties, royalties and fees directly related to timber harvesting and timber trade;
- Respect for tenure or use rights to land and resources that may be affected by timber harvest rights, where such rights exist
- Compliance with requirements for trade and export procedures

The definition of legality should address the “three pillars of sustainability”: namely environmental, economic and socio-cultural sustainability. It should also cover those laws identified by the timber-producing country to be most important in terms of the degree of harm caused by failure to comply with them; for example: environmental harm may be caused by extracting too many trees or damaging water systems; economic harm may result from failure to pay fees on timber, thereby robbing the forest owner (normally the state); and social harm may arise from ignoring local and indigenous communities’ tenure rights. Conversely, failure to comply with some laws, such as road traffic offences may cause relatively little harm or have minimal impact on sustainable forest management.

On this basis, a credible definition is likely to include the following elements:

- logging only where there are legal harvest rights, by the holder of those rights;
- complying with regulations on permitted harvest levels, and with environmental and labour legislation;
- payment of timber royalties and other directly relevant fees;
- respect for other parties’ legal tenure rights that may be affected by timber harvest rights.

Since the harm caused by failure to comply with laws affects different stakeholders in the timber-producing country – government, private sector, the general public, and local and indigenous communities – the process to decide which laws should be included in a definition should generally involve wide consultation.

EU Proposal for a Regulation laying down the obligations of operators who place timber and timber products on the market (CEC 2008a)

Legally harvested means harvested in accordance with the applicable legislation in the country of harvest.

Applicable legislation means the legislation of the country of harvest regulating forest conservation and management and the harvesting of timber as well as legislation on trade in timber or timber products related to forest conservation and management and to the harvesting of timber.

EC Staff Working Paper on Public Procurement for a Better Environment (CEC 2008b)

Legality refers to compliance with national forest law where the latter is consistent and enforceable and supportive of basic sustainable forest management principles. Illegal harvesting may include not only harvesting practices that contravene the regulations, but also using corrupt means to gain harvesting rights, extraction without permission, cutting protected species or extraction of timber in excess of agreed limits. Beyond harvesting, illegal practices may also extend to transport infringements, illegal processing and export, non-payment of taxes or charges, and misdeclaration to customs.

US Lacey Act (Amendment 2008 – sections on plants and plant products) (APHIS 2008)

It is unlawful for any person.

- (1) to import, export, transport, sell, receive, acquire, or purchase any fish or wildlife or plant taken, possessed, transported, or sold in violation of any law, treaty, or regulation of the United States or in violation of any Indian tribal law;
- (2) to import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce **any plant** taken, possessed, transported, or sold in violation of any law or regulation of any State; or any plant
 - i. taken, possessed, transported, or sold in violation of any law or regulation of any State, or any foreign law, that protects plants or that regulates;
 - ii. the theft of plants;
 - iii. the taking of plants from a park, forest reserve, or other officially protected area;
 - iv. the taking of plants from an officially designated area; or
 - v. the taking of plants without, or contrary to, required authorization;
 - vi. taken, possessed, transported, or sold without the payment of appropriate royalties, taxes, or stumpage fees required for the plant by any law or regulation of any State or any foreign law, or
 - vii. taken, possessed, transported, or sold in violation of any limitation under any law or regulation of any State, or under any foreign law, governing the export or transshipment of plants; or
- (3) within the special maritime and territorial jurisdiction of the United States to possess any plant taken, possessed, transported, or sold in violation of any law or regulation of any State; or to possess any plant as specified in para (2) above

3.2.2 Sustainability

Three approaches have been applied in defining sustainability in timber procurement policies: (i) short overarching definitions (Japan) or listing of few key elements of SFM (Belgium), (ii) detailed provisions for various elements of sustainability, largely within the framework of the internationally agreed elements of SFM (Denmark, Netherlands, the UK), and (iii) relying on the definitions of forest certification systems (France, Germany, New Zealand, Switzerland). A summary on the existing definitions appearing in the national policies is given in Box 3.2.

Box 3.2 Selected Definitions of Sustainability

Belgian Policy (2005)

Sustainable: 'the forest management based on internationally accepted principles and criteria (amongst others the Helsinki criteria) that are institutionally and politically adapted to the local situations (Criterion 1). This is further elaborated covering:

- Respect for both national rules and regulations and international treaties¹⁹
- Forest management is targeted, effective and economically viable
- Forest management is based on a highly developed social dialogue and with due respect for indigenous peoples
- There is adequate protection of the environment and social aspects

Danish Policy (2007)

Sustainable forest management is 'consistent with the Forest Principles as set out by UNCED 1992' Standards for sustainable forest management should 'build on relevant broadly recognised international, regional or national guidelines, criteria and indicators defining sustainable forest management at the forest management unit level.'

Standards for sustainable forest management should ensure (i) legal timber production, (ii) minimising harm to ecosystems, (iii) maintenance of forest productivity, (iv) maintenance of forest health and vitality, (v) maintenance of biological diversity, (vi) maintenance of the extent of the forest resources, and (vii) maintenance of socio-economic functions (uphold local peoples' rights and other social issues). The policy includes detailed provisions for each of these aspects²⁰

Dutch Draft Policy (2008)

Sustainability criteria are elaborated for the following elements:

- legislative requirements (requirements of forest manager and illegal activities),
- social aspects covering interests of stakeholders (tenure and use rights, consultation and permission, public availability, dispute resolution and objects of cultural and economic value) and health and labour conditions (health and safety, employment conditions),
- ecological aspects (biodiversity, species and ecosystems,, conversion of forests, plantations, non-timber forest products, hunting and fishing),
- regulation functions (soil, water, ecological cycles, reduced impact logging, forest fires, diseases and pests, chemicals, and waste and litter)
- economic aspects including production function (production capacity) and contribution to local economy (employment, infrastructure),
- management aspects including management system (management cycle, forest management plan, maps, monitoring, knowledge and expertise) and management group or regional association (group or regional association, sustainable forest management requirements)

United Kingdom Timber Procurement Policy (CPET 2009a)

Sustainable timber and wood products must come from a forest which is managed in accordance with a definition of sustainable²¹ that meets the requirements set out below:

1. The definition must be consistent with a widely accepted set of international principles and criteria defining sustainable or responsible forest management at the forest management unit level
2. The definition must be performance-based, meaning that measurable outputs must be included.
3. Management of the forest must ensure that harm to ecosystems is minimised. In order to do this the definition of sustainable must include requirements for (i) appropriate assessment of impacts and planning to minimise impacts; (ii) protection of soil, water and biodiversity; (iii) controlled and appropriate use of chemicals and use of Integrated Pest Management wherever possible; (iv) proper disposal of wastes to minimise any negative impacts.
4. Management of the forest must ensure that productivity of the forest is maintained. In order to achieve this, the definition of sustainable must include requirements for: (i) management planning and implementation of management activities to avoid significant negative impacts on forest productivity; (ii) monitoring which is adequate to check compliance with all requirements, together with review and feedback into planning; (iii)

¹⁹ In the Belgian policy legal compliance is part of SFM.

²⁰ The Danish policy includes a total of 30 individual criteria for sustainability of which 20 are identical with those of the UK, six similar but differently worded and four are additional.

²¹ It should be noted that this definition has been developed to meet procurement requirements and therefore differs from the full definition of sustainable recognized by the UK government.

5. operations and operational procedures which minimise impacts on the range of forest resources and services; (iv) adequate training of all personnel, both employees and contractors; (v) harvest levels that do not exceed the long-term production capacity of the forest, based on adequate inventory and growth and yield data
6. Management of the forest must ensure that forest ecosystem health and vitality is maintained. In order to achieve this the definition of sustainable must include requirements for: (i) management planning which aims to maintain or increase the health and vitality of forest ecosystems; (ii) management of natural processes, fires, pests and diseases; (iii) adequate protection of the forest from unauthorised activities such as illegal logging, mining and encroachment
7. Management of the forest must ensure that biodiversity is maintained. In order to achieve this, the definition of sustainable must include requirements for: (i) implementation of safeguards to protect rare, threatened and endangered species; (ii) the conservation/set-aside of key ecosystems or habitats in their natural state; (iii) the protection of features and species of outstanding or exceptional value

Process for developing the definition²²

The process of defining 'sustainable' must include balanced representation and input from the economic, environmental and social interest categories. The process of defining 'sustainable' should ensure (i) no single interest can dominate the process, and (ii) no decision can be made in the absence of agreement from the majority of an interest category

Japanese Procurement Policy (2006)

Sustainable: 'harvested under sustainable management'

EU Buying Green – A Handbook on Environmental Public Procurement (CEC 2004)

Sustainable forest management implies management with a view to amongst others sustaining biodiversity, productivity and vitality taking into account also social aspects such as worker welfare or the interests of indigenous or forest-dependent people

EC Staff Working Paper on public procurement for a better environment (CEC 2008b)

In Europe, the "sustainability" concept is generally defined at the national level. European and EU processes generally refer to the criteria and indicators endorsed by the Lisbon Ministerial Conference on the Protection of Forests in Europe (2 to 4 June 1998). Outside Europe, reference is made to the criteria of the UNCED Forest Principles (Rio de Janeiro, June 1992) and, where applicable, to the criteria or guidelines for sustainable forest management as adopted under the respective international and regional initiatives (ITTO, Montreal Process, Tarapoto Process, UNEP/FAO Dry-Zone Africa Initiative).

A comparative analysis of the Belgian, Danish²³, Dutch and British criteria has revealed a significant degree of harmonization between the last three, particularly between the British and Danish criteria. The more general eleven Belgian criteria are also compatible with the other three but many aspects are covered only implicitly (Proforest 2008a). There are however also differences some of which can be of importance for tropical timber producing countries. The following examples on the comparison between the four policies illustrate this:

- While the British and Danish criteria for soil and water focus on minimization of harm to ecosystems, the Dutch criteria call for specific requirements for maintenance and improvement (if possible) of soil quality and water balance.
- The Danish criteria include a requirement for assessment of environmental impacts which is not explicit in the British and Dutch criteria. In smaller FMUs this requirement is difficult to justify.
- While the British and Danish criteria call for controlled and appropriate use of chemicals, the Dutch criteria allow use of chemicals if maximum use of ecological processes and sustainable alternatives proves insufficient. Obviously, verification of the latter on the ground is a major challenge and requires scientific data which is rarely available in tropical FMUs.
- Somewhat different approaches are adopted for logging methods: the British and Danish criteria call for use of operations and operational procedures which minimize impacts while the Dutch require the use of the most suitable and available methods and techniques in the prevailing

²² These provisions are relevant only to certification schemes and not to other verification mechanisms.

²³ Denmark is in the process of revising its criteria for sustainability and refers to FSC and PEFC certificates or similar proof as a temporary solution.

- conditions. Identification of the most suitable option can often be difficult in the tropics due to lack of adequate information (e.g. proper comparative analyses between technology options).
- While the British and Danish criteria call for management of fire to maintain forest health and vitality, the Dutch standard permits the use of intentional forest fires only if it is necessary for the achievement of the management goals (fire prevention and suppression capacity are not considered).
 - The Dutch criteria exclude the use of genetically modified organisms which are not mentioned in the British and Danish standard. This aspect is likely to become increasingly relevant for plantation forestry in the tropical countries.
 - The Dutch criteria do not allow conversion of forests in the FMU into other types of land use, including timber plantations, unless in justified exceptional circumstances. A different approach is taken by the Danish criteria which call for aiming to maintain or increase forest and other wooded area and to enhance the various forest values of forest resources. In addition, the Danish criteria ask for more detailed requirements in national or local standards to address e.g. conversion of forests. These provisions can be critical in tropical country situations in which decisions are made e.g. on the alternative uses of badly degraded forests (which are still classified as forests), or when the landowners (smallholder or community) have to convert forest into agricultural fields as allowed by the national legislation because of their livelihood needs. Such general restrictions in external requirements as in the Dutch criteria may be difficult to justify in many tropical forest situations.
 - The Dutch criteria on plantations call for preference of native species and require a relevant share of the total area to be used for regenerating natural forest. The Dutch policy does not accept timber which is coming from plantations established through the conversion of natural forests after 1997. Even though detailed information is not available, there are significant areas in some tropical countries where natural forest (often degraded) has been converted into plantations for industrial purposes or fuelwood production after 1997. Their timber products are ruled out from the Dutch public sector markets. The British and Danish policies do not have such requirements for planted forests.
 - Social criteria are not included in the British policy but they are covered by the Danish and Dutch policies (see section 3.2.3 for further discussion on social criteria).
 - There are also some differences between the criteria for management systems of the Dutch and the British and Danish policies while the latter two are harmonized with each other.
 - In general, SFM standard development should meet the requirements of consultative process and be open to participation by all interested parties, including economic, environmental and social stakeholders. The UK and Dutch policies also have a harmonized approach in this respect but the Dutch policy is more demanding in some aspects.

The sustainability criteria of the four timber procurement policies compared above represent comprehensive sets of detailed unilateral requirements for sustainable forest management to be complied with by all timber product suppliers (domestic and foreign) selling to the public sector market segment in these countries. The level of detail in such requirements, particularly if expressed in prescriptive terms for inputs in forest management, can be problematic as they may not be applicable in specific country situations with varying forest, ecological and socio-economic conditions.

The comparison also reveals that the largely harmonized British and Danish approach to sustainability criteria is more output oriented than the Dutch criteria which have several prescriptions for input measures. From the practical forest management point of view, the former approach is preferable in order to allow flexibility to choose an appropriate way of complying with the identified safeguards in specific local conditions.

Although not explicit in all cases, it is apparent that definitions of sustainability and respective specific requirements for SFM at FMU level draws on the principles and criteria developed in international and regional processes (cf. CEC 2008b; MCPFE 2009). This can offer common ground for harmonization of requirements. However, there should be consistency in referring to various international C&I sets.

The reliance of many procurement policies on recognized forest and CoC certificates as the main tool for proving sustainability is also contributing to harmonized approaches in sustainability. The two international certification schemes play a key role in this as almost all the global certified forest area (325.2 million hectares in May 2009) has been endorsed by the Programme for Endorsement of

Forest Certification (PEFC), which is the largest scheme, or the Forest Stewardship Council (FSC) (UNECE/FAO 2009).²⁴

Significant differences in the detailed SFM and legality requirements between country policies is a cause of concern for tropical timber producers who want to supply several markets. There is a danger that differing definitions will continue to emerge complicating further international trade. Detailed comprehensive sets of requirements for sustainability are likely to lead to a situation where the options for demonstration of compliance will in practice be limited to certificates issued under the acceptable forest certification systems as using alternative means of proof becomes practically impossible (see section 3.3.3). For tropical timber producers it is particularly important that they have feasible, clearly identified alternative options for means of alternative proof. France and Japan have offered such menus.

In public procurement policies there is a clear need for streamlining the use of the concepts of legality and sustainability and their respective verification, as the current non-harmonized approaches can lead to market distortions and additional administrative costs for bidders (CEC 2008b). Box 3.1 and Box 3.2 show that defining legality and sustainability is an evolving discipline. This has created uncertainty among tropical timber producers with regard to constantly moving goalposts set for them. The situation can be improved through intensified exchange of information as past efforts have produced only modest results. Were there an intergovernmental instrument defining appropriate, globally applicable standards for legality and sustainable forest management, these could be relied upon by national procurement authorities. This would remove uncertainties and confusion on how to define and take into account sustainability and legality in public procurement policies of forest products. It would also help tropical timber producing countries meet market requirements on equal footing with other suppliers.

3.2.3 Issue of Social Aspects

By definition social aspects are part of the three-pillar concept of sustainable forest management and this is also explicitly recognized in the international and regional sets of Criteria and Indicators (C&I) for SFM and most certification standards. However, the interpretation of the EU procurement rules have led e.g. the UK to exclude social aspects in their procurement policy while Denmark and the Netherlands have explicitly included them in detailed requirements. Other countries (including the UK itself) have implicitly covered them through references to C&I sets for SFM or recognition of some certification schemes or labels.

Brack (2009b) has carried out an in-depth comparison of the social aspects in timber procurement policies of Belgium, Denmark, the Netherlands and the UK as well as in FSC and PEFC forest certifications systems which are referred to in several other country policies (France, Germany, Japan, New Zealand). The comparison considers four areas: (i) legality (as many social obligations are defined in national laws and regulations), (ii) rights and interests of stakeholders in forest management, (iii) protection of workers' rights and conditions, and (iv) participation in standard setting and certification processes. The main findings of Brack's analysis on the commonalities and differences in the last three areas²⁵ can be summarized as follows:

- The rights and interests of stakeholders in forest management are one of the most contentious issues in forest management as the legal basis of traditional or customary rights is unclear in many countries. Defining the rights in such situations is difficult and can involve time-consuming processes. The Dutch procurement policy contains the most comprehensive explicit treatment of social aspects of SFM covering references to specific international conventions on human rights, labor and indigenous peoples to be respected (independently from country ratification), right to free, prior and informed consent before property or use rights are affected and possibility of compensation for them, transparency of information, protection of cultural and traditional economic values, and contribution to community development. The Danish policy also covers property and land tenure rights as well as legal, customary and traditional rights, and dispute resolution mechanisms which are also identified in the Dutch policy.

²⁴ National schemes which have not been endorsed by PEFC cover relatively small areas. The most important scheme is the Indonesian Eco-labelling Institute (LEI) system under which 1.54 million hectares were certified by the end of 2008.

²⁵ Differences in legality were discussed in section 3.2.1.

- Under protection of workers' rights and conditions health and safety and workers' fundamental rights are covered in the British and Danish policies under legality. The Danish and Dutch policies include additional separate criteria, the former for safe working conditions and guidance and training to be provided by employer. The Dutch policy refers to ILO conventions (155 and 161) to protect the personnel, including contractors and their employees and, where appropriate, the local and indigenous population.
- The right to organize and negotiation of wages are covered by the Danish and Dutch policies with references to the respective ILO core conventions.
- Participation in standard setting and certification processes is covered by all the three policies but there are differences in details. All the three policies cover conformity with international standard setting rules (ISO, ISEAL or equivalent) and all mention balanced representation. The Danish policy provides a specific possibility for situations in which a standard setting process has offered a genuine possibility to participate for any major stakeholder group but a group chooses not to participate, this would not constitute a failure. This is a useful addition to avoid situations where one major group's participation could become conditional to any standard setting work.
- The three policies share three common elements in standard setting processes: no single interest to dominate the process, desirability of consensus, voting if there is no consensus, and no decision to be made in the absence of agreement from any one of the three interest categories. Similar provisions are also shared for transparency of the process and standards.
- There is also a common view on the certification process to be open to the same kind of input as the standard setting process. In addition, the Danish and Dutch policies set out procedures for consultation with, or input from, external stakeholders, access to complaints mechanisms, and the transparency of the process.

The above differences are more related to the level of specificity and detail than to which aspects need to be covered. It is, however, apparent that to some extent the Dutch criteria appear to go beyond what is contained in the Danish policy.

Brack (2009b) also analyzed possible inclusion of social aspects in public timber procurement policies with regard to the WTO and EU procurement rules noting that, in spite of ambiguities on some social criteria being related to the subject matter of timber procurement contracts, it is generally argued that they can be allowed as being an essential part of the concept of sustainability. Even the UK which has excluded social criteria from their requirements has in fact included some of them (e.g. participation in standard setting and certification processes) and other social aspects are implicitly included through the acceptance of forest certification systems which cover social aspects.

The EU guidance on the matter is careful to include social criteria (only) in contract performance clauses due to their lack of direct link with the subject matter of timber procurement contracts (cf. section 2.3). This is weaker than including them in the technical specifications. General references to environmental and social criteria can only be included as long as they are linked to the subject matter of the contract and this is not the case with all of social aspects. The same holds true with the contract award stage in which those sustainability criteria can be applied which are linked to the subject matter. With this approach market access is guaranteed for all legally harvested wood and wood products. Complying with sustainability criteria would not be a pre-condition for entering the market but would give an advantage at the award stage (CEC 2008b).

The other option is to use sustainability as a contract performance clause as this would be non-discriminatory because all suppliers awarded the contract should qualify. This would make sustainability (and social criteria as part of it) a *de facto* exclusion criterion. The downside of this approach however suffers from the fact that issues like social aspects tend to be weakly addressed in contract management. In principle verification of the compliance should be systematically made. Furthermore, the EU rules require that a possibility for equivalent proof to certificates of accepted schemes is offered, but the social issues do not need to be covered in such equivalent evidence (cf. also section 3.3.3).

Due to the variety of social aspects and their broad scope related to forest management, this area is likely to remain subject to debate in spite of the fact that these aspects form the third pillar of the sustainability concept. On the other hand, it cannot be expected that sustainable forest management could solve the underlying social problems in often distant, weakly developed areas in the tropics where FMUs have to operate within the local framework conditions related to the rights and resources

of local stakeholders. Bringing sustainable forest management practices into these areas can make significant contributions to social development but it cannot be the fundamental solution for social problems. Setting stringent social criteria too high for forest operations in importing country procurement policies from the beginning can lead to the risk of ruling out introduction of sustainable operations in areas where the introduction of SFM practices could have the largest impacts leaving them lagging behind in poverty reduction and social and political development.

As SFM certificates are the dominant tool for providing evidence for meeting the procurement criteria, the whole issue of including social aspects explicitly is likely to boil down to which aspects are covered in the recognized certification systems (Brack 2009b). This would be desirable not only because of flexibility but also because certification systems have shown to be responsive to adjust their rules in accordance with public procurement criteria in the key import markets²⁶.

Finally, it needs to be emphasized that social and labor aspects in SFM and its certification have not received the same level of treatment as environmental and economic criteria. This should be addressed in the future revision of existing standards and elaboration of new ones in countries which do not have them as yet²⁷.

3.3 Evidence of Compliance with Policy Requirements

3.3.1 Forest Certification

Public procurement policies apply three main options for evidence of compliance with their requirements: (i) certificates issued under recognized certification systems, (ii) audit statements issued by independent bodies, or (iii) other documentary evidence. The first type of evidence plays a leading role in implementation and therefore a need has arisen to define criteria and methodologies for assessing certification standards and systems, but this should also concern standards and verification systems of legality. Four countries (Belgium, Denmark, the Netherlands and the United Kingdom) have defined minimum requirements for certification systems including definitions of legality, sustainability, standard setting processes, chain of custody and labeling, and structure and operation of these systems. Other countries have directly recognized some certification systems without publishing the basis of assessment (Germany, France) or referred to systems which may be prove adequate evidence without a formal endorsement (Japan, New Zealand, Switzerland). However, at least France has decided to define modalities for the recognition of forest certification schemes.

Yet another variant is the case of Mexico where only certificates issued by bodies complying with respective legal requirements and registered by the government are accepted. This raises the issue of non-discriminatory treatment of imported products as the approach covers only auditing bodies registered in Mexico (i.e. only domestic timber would qualify).

In this section the requirements set for certification systems (apart from legality and sustainability which were already reviewed in section 3.2) are first compared followed by a comparison of which systems have been accepted or recognized in various countries.

Requirements for Certification Systems

In standard setting the Belgian, British, Danish and Dutch policies refer to ISO and ISEAL requirements. The other criteria of these four countries concern participation, decision making process and public availability of standards. There is a considerable degree of commonality between the four policies and in general differences are not significant but can be important in some situations:

- The Dutch policy calls for participation of relevant stakeholders; the British policy requires balanced representation and input from the economic, environmental and social interest groups; the Danish policy encourages participation of all affected parties; and the Belgian policy requires active participation of forest owners and managers.

²⁶ Purbawiyatna & Simula (2008)

²⁷ Ibid.

- In decision making a consensus is targeted in the Danish, Dutch and British policies and voting is a possibility in the first two while the British policy does not allow a decision in the absence of agreement from the majority of an interest category. All the three policies share the rule of avoiding a single interest group to dominate the process.
- Public availability of standards is specified in the Danish and Dutch policies (not mentioned in the UK). The Belgian policy requires complete transparency for stakeholders and the public which incorporates this aspect.
- The Dutch policy includes some additional elements: need to take into account potential limitations for certain groups such as indigenous peoples and small forest owners to provide input, requirements of public consultation, and how comments are handled.

On the certification process there are several common elements in the procurement policies of the three countries such as compliance with ISO Guides, accreditation of certification bodies, consultation with external stakeholders, review of documentation and management system, field audit, as well as complaints and dispute mechanisms. Belgium only specifies independence and accreditation of certification bodies. The Dutch policy has several additional elements for certification body: need to be a legal entity, distribution of responsibilities, composition of decision-making and advisory bodies, and appeals procedures. These can be considered implicit in the British and Danish policies.

There is a common requirement that accreditation bodies can be international or national but they have to fulfill the ISO requirements²⁸. The Dutch policy also requires participation in a peer review process within sister organizations, preferably within the framework of the International Accreditation Forum (IAF).

On chain of custody there is a common requirement for traceability of products up to certified forests. The chain of custody (CoC) must be certified by an accreditation body. All the three policies also allow mixing of certified and non-certified material in products. There are also differences:

- The British and Danish policies require that there is a verifiable system to ensure that the non-certified material is coming from legal sources. The Dutch policy also requires that products are from non-disputed sources without however defining what is meant by disputed source.
- The British policy requires that if the share of non-certified material exceeds 30%, there should be a verifiable system to ensure that it is from sustainable sources. The Danish policy allows reporting a product as certified if the share of certified material is at least 70% on average. The Dutch policy does not have a threshold but requires that reporting is based on the mass balance²⁹ or percentage share of SFM certified material.
- The Belgian policy accepts only certificates for products which have 100% certified raw material. This is confusing for the trade and tends to rule out composite products like particle board and fibreboards.
- If recycled wood is used it can be pre- or post-consumer material. In Denmark and the UK driftwood is also allowed provided that there is a verifiable system in place to prove the type of material. However, these two countries do not allow sawmill co-products (chips and other sawmill residues) while this is not ruled out in the Dutch policy.
- The Dutch policy requires “administrative” or physical separation of timber from verified and non-verified legal sources.

In labeling there is a common requirement for mechanisms controlling all claims and that claims are accurate and that action is taken to prevent false claims. This also includes claims about the certified nature of products (e.g. whether certified and non-certified materials have been used in the same product). The Dutch policy also calls for the use of a copyrighted logo and a registered trademark.

Some of the above differences in requirements for certification systems are marginal and some may seem unimportant but can have specific implications for acceptance of particular certification schemes. Some details in the requirements are unnecessary as they are already covered by the reference documents cited in the policies (ISO Guides). There is also an overlap in some requirements which

²⁸ ISO 17011:2004 Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies.

²⁹ Mass balance claim means that the proportion of the product sold as SFM certified is equal to (or less than) the proportion of SFM material entering a process.

sometimes can lead to confusion due to different wordings. It is also difficult to justify some of the differences from substantive point of view.

As a whole, it appears that more rigorous requirements are set for forest certification systems than in general for certification systems targeted at environmental labeling. This may be explained by the fact that forest certification is a relatively recent instrument, it has to address complex environmental and social environments, and there have been specific stakeholder interests that have pushed for criteria which can lead to the acceptance of only one system (usually FSC).

Acceptance of Certification Systems

Governments have assessed or accepted certification schemes in their own ways. Table 3.2 summarizes how national policies make reference to, or recognize specific certification schemes. It shows that countries have made differing conclusions about the acceptability of individual systems. The UK has already done two assessment rounds and there have been also incremental processes in Denmark and Belgium where additions to the accepted list have been made over time.³⁰ Since September 2009, the Netherlands has accepted FSC, International, PEFC, Germany, PEFC Finland, and PEFC Finland as certification schemes which supply sustainably produced timber. PTCS, PEFC International, PEFC Belgium and PEFC Austria are being assessed.

The Chinese procurement policy makes reference to environmentally labeled goods and a limited number of companies have been identified in each product group which have met such labeling requirements³¹.

The Swiss policy refers to on-product labels by the specified forest certification systems but allows consultations on the acceptability of other labels.

In addition, to the identified schemes, the Belgian and German policies make provision for “equivalent certification.” In the Belgian case it is further stated that it has to be carried out by an independent organization applying internationally recognized criteria which ensure that timber is coming from sustainably managed forests. The equivalence of certification systems can be established when all the criteria of the federal government circular are met. It appears that such assessments have not been carried out.

The German policy specifies that comparable certificates (or individual specifications) are accepted if the bidder can prove that the criteria of FSC or PEFC that apply to the respective country of origin have been met. It is not clear whether this refers to the SFM criteria only or to the full characteristics of these systems.

Table 3.2 demonstrates that most policies recognize both FSC and PEFC certification. Whether PEFC can provide a proof of both legality and sustainability has been subject to intensive criticism by NGOs in the UK. However, as a result of some revisions in the PEFC rules, its acceptance was broadened to cover also sustainability. This remains however an issue as FSC-supporting NGOs continue pursuing the acceptability of FSC only in e.g. Denmark and the Netherlands.

Of the national certification schemes in tropical countries the Brazilian CERFLOR was endorsed in 2005 and the Malaysian MTCS³² only recently. MTCS had been earlier recognized only for legality and progressing towards sustainability in Denmark and the UK. As a result of PEFC endorsement, this issue is no more relevant for MTCS in these two countries.

³⁰ In the case of Belgium, initially only FSC and PEFC Belgium certificates were accepted. After further evaluations by an Expert Committee the list was expanded and two positive lists for PEFC endorsed schemes were established, both were accepted but the first list was to be preferred in contract award. However, this proved to be impractical as differentiation of PEFC national schemes is not suitable. The approach also created confusion among buyers and consumers as such additional information was not included in the label (Proforest 2007c).

³¹ The Chinese policy document lists 9 companies for processed wood products, ten for wooden flooring and 4 for furniture.

³² The earlier name of the scheme was the Malaysian Timber Certification Council (MTCC).

Table 3.2 Certification Systems Referred in National Timber Procurement Policies

Country	FSC	PEFC	SFI	CSA	ATFS	MTCS	LEI	Other
Belgium	X	X ^a						
China								Chinese eco-labeling scheme
Denmark ^b	X	X	X	X		X		
France ^c	X	X						
Germany ^d	X	X						
Japan	X	X	X	X		X	X	SGEC (national scheme)
Netherlands ^e	X	X				^e		
New Zealand ^f	X	X	X	X	X	X		Eco-timber
Switzerland	X	X						Q-Swiss Quality
UK ^g	X	X	X	X		X ^g		

^a Originally only PEFC Belgium was recognized and other PEFC certificates were acceptable provided that their national certification systems fulfilled the criteria of a highly developed social dialogue and respect for the rights of indigenous peoples. This has resulted in two positive PEFC lists: (1) Austria, Czech Republic, Chile, Denmark, Germany, France, Italy, Lithuania, Luxembourg, Norway, Portugal, Slovakia, Spain, Switzerland and the UK; and (2) Australia, Brazil, Canada, Finland, Sweden and USA. In case two equivalent tenders have been submitted, preference should be given FSC, PEFC, Belgium or PEFC systems of the countries in the list (1). This has created confusion among buyers and the substantive basis of the differences between national PEFC systems in terms of Belgian criteria for certification systems is unclear (Proforest 2007c).

^b In 2003 FSC was identified as evidence of sustainable and MTCC (now MTCS) as progressing towards sustainable. Subsequently the list was expanded when the policy was expanded to cover all types of timber and CSA, FSC, MTCC, PEFC, and SFI certificates were considered adequate evidence for legality. In 2008, the temporary guidelines specify that both FSC and PEFC certificates are adequate evidence for legal and sustainable timber.

^c All major international certification schemes are accepted. The Advice Note Circular states that all certification schemes "mentioned" by ITTO and the African Timber Organization (ATO) are acceptable for tropical timber. However, none of these organizations has recognized or endorsed forest certification systems and the ITTO Council has specifically concluded that the Organization cannot endorse or perceived to endorse any particular forest certification scheme.

^d Originally SFI, CSA and ATFS were also mentioned but as these schemes have been endorsed by PEFC, there is no more need to identify them. The acceptance of LEI certificates from Indonesia in Germany is pending for assessment of equivalence with FSC and PEFC requirements and the applicant Indonesian supplier of such timber products should pay for the cost of such an assessment which puts this company at a disadvantage compared to others holding FSC or PEFC certificates.

^e Since September 2009, the Netherlands has accepted FSC International, PEFC Germany, PEFC Finland, and PEFC Sweden as certification schemes which supply sustainably produced timber. MTCS, PEFC International, PEFC Belgium and PEFC Austria are being assessed.

^f These are mentioned in the policy as possible means of evidence, not formally endorsed.

^g MTCS certificates have been accepted as evidence of legality and the other schemes as evidence of sustainability. In the 2008 assessment by CPET it was concluded that MTCS could be accepted as evidence of legality and sustainability once two key requirements were fully implemented: (i) all certified FMUs are certified against the certification standard MC&I (2002); and (ii) revised institutional arrangements for certification and accreditation, whereby forest management and CoC certificates are issued only by certification bodies that have been accredited under the specific accreditation programme for MTCS certification. MTCS has recently been endorsed by PEFC.

The Indonesian LEI has been assessed only in two cases; in 2003 Denmark did not consider it good enough evidence in itself for neither legal nor sustainable timber but considered it as a useful contribution in conjunction with other means of proof for legal and/or sustainable timber.³³ On the other hand, Japan has considered it adequate for sustainability. Non-PEFC endorsed national schemes have clearly specific problems to get accepted in the public procurement policies of export markets as they should be assessed separately from the two international schemes resulting in extra costs to be borne by the timber supplier. From the marketing point of view such independent national schemes have limited value for export customers as their label has no inherent brand value. As FSC

³³ Lundmark Jensen, personal communication

does not recognize other schemes by rule, national schemes like LEI appear to have no other option than to seek PEFC endorsement to gain broad acceptance of LEI-labeled Indonesian products in the main export markets. Promotion of LEI's own branding would be prohibitively costly.

The situation is different in Mexico where the national procurement policy is apparently targeted at domestic wood products. The policy does not identify any particular system but it refers to certificates issued by competent bodies registered by the Ministry of Environment, Natural Resources and Tourism. Voluntary forest certifications in the country have been carried out only under the FSC system but the Mexican forest law also makes a provision for preventive technical audits by independent registered bodies. It is not clear which sustainability criteria would be applied in Mexico to make certificates acceptable for products procured by government agencies.

The differing criteria sets for certification systems at national level are a cause of concern for timber trade. Several attempts have been made to develop common approaches but they have not been adopted beyond the organizations which have promoted them. Examples include CEPI (undated) and more recently the World Bank/WWF Alliance for Forest Conservation and Sustainable Use (2006), the latter due to the fact that it was devised in such a way that at present it can lead to the acceptance of FSC only.

Differences in the acceptability of certification systems in national timber procurement policies is a cause of concern for trade as it has created confusion among trading partners and stakeholders. This situation is due to different assessment criteria which are not transparent in all cases (e.g. Germany). In practice, the situation is moving towards a situation where the two international certification schemes dominate and which are broadly accepted. This would reduce the importance of differences in assessment criteria as the certificates of the two systems are the main means of proving legal compliance and sustainability as pointed out by Brack (2009a). However, frictions are likely to arise if only one of the international schemes (i.e. FSC) is accepted. There are strong NGO pressures towards such an outcome, particularly in the Netherlands and Denmark. This would have significant market implications in those countries as FSC certified timber is not sufficiently available to meet the market demand.

3.3.2 Other Evidence

As the EU procurement rules do not allow using references to specific certification schemes, a possibility for other evidence must be provided. This approach has also been adopted by Japan, New Zealand and, in a way, Switzerland. There are different approaches on what alternative evidence can be accepted.

The Belgian policy makes a provision for "equivalent certification" which has been carried out by an independent organization applying internationally recognized criteria which ensure that timber is coming from sustainably managed forests. The equivalence of such certification systems is established by an Expert Committee when all the criteria of the federal government circular are met.

Germany has a similar approach but equivalence is required with FSC or PEFC standards in the country of origin. This is likely to be problematic in those tropical timber producing countries which have no national forest certification standards endorsed by FSC or PEFC. In the former case, the generic FSC standard should be used as the basis of interpretation by the certification body for the concerned FMU³⁴.

In Denmark it is recommended that alternative documentation be submitted for independent third party assessment. Guidance for possible such documentation includes other certification schemes, export permits, certificates of origin and other declarations by government authorities, concession agreements, documented eco-management system, standards and guidelines used in forest management and respective criteria and indicators, and documented compliance monitoring system. No single case has tried to make use of this option.

³⁴ See Purbawiyatna & Simula (2008) for discussion on FSC generic standards.

The UK procurement policy accepts FLEGT licenses as proof of legality (cf. section 4.1). Other evidence than recognized forest certificates falls in the UK under Category B evidence for which an extensive checklist has been developed covering information on forest resources and their management, supply chain, legal compliance and sustainability. The criteria for these individual elements are largely the same as for certification systems (Category A evidence). Category B is applicable in situations with no certificate, broken chain of custody or proving legal origin in countries with low risk. The risk of illegal (or unsustainable) timber entering the supply chain determines the level of verification requirements, i.e. whether first party, second party or third party verification is needed. The guidance refers to a number of private schemes offering verification of legality which are evaluated on a case-by-case basis (Tind Nielsen 2008). The Netherlands will prepare its own rules for the acceptance of alternative evidence to the recognized forest certification schemes..

In France, alternative evidence for Category I products (logs, sawnwood, veneer and plywood) includes independently verified legality license, attestation of management plan, compliance with industry or trade association's code of conduct, as well as customs documents qualifying legal or sustainable products. The latter element foresees the use of FLEGT licenses as proofs of legality in the country. For Category II products (all other products based on wood) eco-labels are accepted. This apparently refers to such schemes as EU Flower or national eco-labels but it is unclear whether this can also refer to single-issue labels of national forest certification schemes which have not been endorsed by PEFC such as LEI.

As alternative evidence the Japanese policy identifies compliance with voluntary codes of conduct of wood industry associations (if mandatory for membership) including verification of legality and sustainability, as well as chain of custody for which a number of requirements have been identified. In this case verification is made by private enterprises authorized by the respective industry association. In addition, the policy accepts companies' own procedures (self-verification) which cover the same features as the voluntary codes of conduct. All these options are available to declare products as "Goho-wood" meeting the requirements of the government's green procurement policy. The Japanese policy does not require third party verification of alternative evidence which is considered a baseline requirement elsewhere. This approach has led to a fairly fast adoption of the scheme in spite of the fact that central government public procurement is estimated to account for only 2-3% of total national consumption of wood and wood products (Ohashi 2009) which is considerably less than e.g. in most European countries.

The New Zealand policy includes (i) proof of certification from a stepwise certification scheme (such as TFT) together with CoC information showing the origin which should be a legally harvested and managed forest, (ii) proof of legality verification scheme (e.g. SGS), and (iii) a supplier declaration on legal compliance in the supply sources but evidence to verify this information must be provided upon request.

There is a considerable variation concerning the alternative evidence in national procurement policies. In the UK, the Netherlands, Belgium and Germany the respective requirements cover the same elements as those for certification systems which means that meeting them would be difficult for tropical timber producers and therefore these options have hardly been used in practice. If the alternative documentation route is offered, it should be a realistic practical option, not only for circumventing the international trade rules. At present, this does not seem to be the case and the only option for tropical timber producers appears to be to use certification (or independently verified legality) to comply with procurement criteria.

France, New Zealand and Japan have provided more flexibility. The Japanese policy has allowed its rapid adoption as it is reported that 80% of the plywood imported by the members of the Japan Lumber Importers Association is already compliant with the policy requirements involving 7,400 companies involved already in the process. This offers a good basis for further development when the industry is already broadly engaged in handling legally verified timber and timber products in compliance with the government procurement policy.

The above review of the situation mostly concerns documentary evidence on sustainability. Apart from FLEGT licenses there are no standardized tools to provide evidence on legality. Several private sector organizations (Appendix 3.2) have started to provide services for verification of legality (legal origin and legal compliance). These services (often offered by the same companies which provide forest

certification services) have a wider scope than in verification of legality as part of SFM certification. Legality verification can include compliance with a range of specified laws, documentary requirements under national regulations, identification and controls in the field, traceability of the roundwood and products, and data registration and compilation of reports. There are however no common rules for what should be considered 'recognized' timber legality verification.

The international forest certification systems have included provisions in their requirements to avoid illegal timber entering certified supply chains. FSC has developed standards for controlled wood³⁵ and its certification bodies provide respective auditing services. In the PEFC system where the company is using the percentage-based or mass balance model, it must have in place a mechanism to ensure that non-certified raw material does not originate from controversial sources, defined as "illegal forest practices". Such a mechanism covers requirements for suppliers' self-declaration and a risk assessment resulting in classification of sources into "high" and "low" risk categories. For the high risk sources, the company must implement a 2nd or 3rd party verification programme.

As a conclusion, the private sector is taking initiatives to meet the customer demands for providing verified documentary evidence on the legality of timber. However, there is a lack of common framework for these efforts which could facilitate the implementation of timber procurement policies worldwide. The FLEGT VPA license will be a targeted instrument for demonstrating legality in those countries that will enter into a VPA with the EU. Which other instruments can be used is still an evolving issue.

3.4 Local Government Policies

3.4.1 Tropical Timber Consuming Countries

In addition to national-level procurement policies, many regional and local governments have established their own, often more restrictive rules for their own procurement contracts. This kind of initiatives focusing on tropical timber were particularly active in 1990s in the United States and some European countries. They were driven by civil society and media campaigns based on the public perception that such restrictions would be effective in combating deforestation in developing countries. In the US there is now probably less interest in developing new local government TPPs due to possible conflicts with state-level general procurement rules and the attention has shifted to other instruments like green building initiatives. In addition, specific targeted efforts have emerged to limit the consumption of tropical timber in public works. An illustrative example of these worrying initiatives from the perspective of tropical timber producers is the Tropical Hardwood Reduction Plan of the City of New York (Box 3.3).

Italy has no central government public procurement policy for timber but several regional and local governments have been active in this field. Their policies are strongly influenced by environmental campaigns and focus on sourcing FSC-certified wood products (Oliver 2009).

Typically the public procurement policies on wood and wood products refer to central government departments, agencies or institutions. Several policies encourage local governments to apply the same principles. As an example, the French policy makes a specific reference to encouragement of local authorities (*collectivités locales*) to implement the same procedures. In Denmark the federations of regional and local governments have made an agreement with the Ministry of Environment to develop green procurement policies and to collaborate in their implementation. These also concern timber procurement. In Belgium the designated organizations to implement the policy include federal public services, federal programming services and public interest organizations. Such a broader approach may be considered in the future by other countries as well.

Policies of local governments have often been defined under local pressures driven by environmental groups and they are not bound by considerations related to international trade rules. Local-level policies have not always duly considered what is being applied by the central government in the country. This has resulted in differences between national and local procurement policies. In the

³⁵ FSC standard for Forest Management Enterprises supplying controlled wood (FSC-STD-30-010) and FSC standard for Company Evaluation of Controlled Wood (FSC-STD-40-005).

longer run, it can however be expected that national and local policies will gradually converge. In Germany, examples include the Federal States of Baden Wuerttemberg and Bavaria, the city government of Hamburg, the state railway company Deutsche Bahn and the Federal Agency for Technical Relief as well as several municipal governments and public institutions which have aligned their own policies with the national TPP. Further harmonization between the national and state and municipal-level criteria is expected to continue in Germany and such a development would be desirable in other countries as well.

Local government initiatives in the USA have been mainly implemented through various legislative instruments. Most of them have focused on rules and regulations related to building and construction and they are therefore discussed in chapter 5.

In general, at the local level it is easy for advocacy groups to insist on a high level of standards as the market implications may appear to remain limited. The diversity of forestry situations and the full implications and limitations of the proposed policies are usually not duly considered. With well-intentioned initiatives with overly ambitious or restrictive standards, the effectiveness of sub-national level public procurement policies is often undermined due to lack of coherence with national requirements creating confusion both among suppliers and purchasing agents.

Box 3.3 Tropical Hardwood Reduction Plan of the City of New York

New York City (NYC) utilizes large amounts of tropical hardwoods in broadwalks, benches, ferry piers, marine transfer stations and the Brooklyn Bridge promenade. The annual expenditure on tropical hardwoods in large-scale projects and infrastructure amounts to about USD 1 million. Concern related to tropical timber has led to trials with alternatives but in order to make a comprehensive effort, a reduction plan was designed in 2008. The objective is a 20% immediate reduction in tropical timber consumption and in the long term to eliminate its use entirely.

The New York State Finance Law 165 already prohibits the use of some tropical hardwood species such as teak and ebony. The law provides a number of exceptions, including ones based on cost and absence of acceptable alternatives. The main species used are ipe, cumaru, greenheart and garapa but also some jatoba, Spanish cedar and mahogany are used, all sourced from Latin America.

The identified alternatives include recycled plastic lumber, domestic and other non-tropical hardwoods and softwoods, bamboo, steel, concrete, and clay stone pavers none of which can easily substitute tropical hardwoods in specific applications.

The City has found that certified woods (like under FSC) can be subject to availability and supply issues and cost approximately 20-30% more than non-certified products. Specifying certified timber has been problematic as sustainably and unsustainably produced products do not differ from each other. Specifying certified wood is not possible according to New York State General Municipal Law 103 which has been interpreted to prohibit municipalities from using the procurement process to advance "social goals".

The NYC Tropical Hardwood Reduction Plan is based on detailed analysis by each end use of tropical hardwoods in terms of evaluation of alternative designs and materials, identification of short-term measures, long-term plan and analysis of cost implications. However, the cost analysis appears to be focusing on savings of not procuring tropical hardwoods without considering the life-cycle use cost of alternatives due to lack of adequate information. Further studies and piloting with alternatives to tropical timber are part of the Plan.

Source: Aggarwala (2008)

3.4.2 Tropical Timber Producing Countries

Local government efforts to promote legal and sustainable products are not limited to tropical timber consuming countries. Brazil is a good example as, particularly in the southern part of the country, there is considerable consumer awareness of the problems of deforestation and illegal logging in the Amazon. The first initiatives to influence trade and consumption were taken by NGOs and progressive private companies. More recently state governments and individual public agencies have taken action through procurement policies (Box 3.4).

Box 3.4 Public Sector Timber Procurement and Financing Policies in Brazil

In Brazil, some federal government financing agencies are including requirements for evidence on timber legality for project financing. Since January 2009 Caixa Econômica Federal (CEF), a major government bank oriented to the sustainable development requires from the real estate sector (mainly construction companies) proofs of legality of timber used in buildings before financing can be approved. A specific clause in contracts makes it mandatory to provide Forest Origin Documents (DOF) of timber to be used in CEF-financed building projects.

Some state governments and municipalities have adhered to an initiative called Rede Amigos da Amazônia, coordinated by Escola de Administração de Empresas de São Paulo of Fundação Getúlio Vargas, with a purpose to establish a public-private sector network aimed at eliminating the consumption of timber from illegal logging. There are three specific programmes: (i) Cidade Amiga da Amazônia (City Friend of the Amazon); (ii) Estado Amigo da Amazônia (State Friend of the Amazon), and (iii) Empresa Amiga da Amazônia (Company Friend of the Amazon). Nine states and 37 cities have committed to this initiative. The cities are issuing local laws to eliminate illegal timber in their public purchases and the states are controlling and checking the flow and trade of timber from native forests. As an example the São Paulo State has issued specific legislation on timber procurement, including a decree (2005) establishing environmental control for the utilization of timber products and by-products originating from native forests in civil works contracted by the state government. The municipal government of the city of São Paulo has issued a similar decree at the same time.

As the state of São Paulo is the main destination of native woods from the Amazon region, further measures have been felt necessary. In June 2008 the State Government issued a decree establishing Cadmadeira, a joint platform involving several forest sector associations and stakeholders. The decree also specifies that after July 2009 timber suppliers can only participate as bidders for government construction projects if they join Cadmadeira which also means that their operations are subject to local audits. The supplier register of Cadmadeira is designed to provide information and submit evidence on the legal or certified origin of forest products and by-products from the Brazilian native forests which are traded and used in civil works and building construction by the government of the State of São Paulo. The main purposes of the register are: (a) to make public which companies are trading forest products and by-products from Brazilian native forests, especially those to be used in civil works and public building construction; (b) to improve the effectiveness of the control of the São Paulo State on the origin of forest products and by-products traded in the state territory; and (c) to guide and regulate actions of the state government in the implementation of its public procurement policy. A "legal wood" label will be awarded by the Environmental Secretary of the São Paulo State to the registered companies in order to distinguish them from others also for consumers.

Sources: Garlipp, pers. comm.; www.caixa.gov.br/imprensa; www.ces.fgvsp.br, www.raa.org.br; www.sigam.ambiente.sp.gov.br/Sigam2/Default.aspx?idPagina=1317

4. REGULATORY MEASURES ON ILLEGAL TRADE

4.1 European Union

4.1.1 FLEGT Voluntary Partnership Agreements

Voluntary partnership agreements (VPA) are being established between the EU and timber producing countries where illegal logging is a problem. A key feature of such agreements is a timber licensing scheme under which each country that enters a voluntary agreement (a "partner country") will implement a system to verify that its wood product exports to the EU had been legally produced. The EU's border control authorities would allow imports only of licensed products from partner countries. For partner countries, two elements are necessary: (i) to reach a common interpretation of 'legality' (under the country's prevailing laws and policies) in timber production and trade, and (ii) adequacy of the existing timber legality assurance system (TLAS) to provide credible evidence that the products in question had been produced in compliance with the specified laws. The basic elements of TLAS are:

- A definition of legally-produced timber that sets out all the laws and regulations that must be complied with in the production process.
- A secure chain of custody that tracks timber from the forest where it was harvested through different owners and stages in processing to the point of export.
- A verification system to provide reasonable assurance that the requirements of the definition have been met for each export consignment.
- The issuance of licenses to validate the results of legality verification and chain of custody.
- Independent monitoring of the whole system to assure its credibility and to provide transparency.

Continuous legality verification auditing is carried out by a partner country's designated state authorities or by appropriately qualified verification organizations. FLEGT licenses will be issued on the basis of evidence that all the requirements of a partner country's legality definition have been met for a consignment of timber. Such evidence is typically provided through regular audits of activities in forest management units and, where the definition requires it, at processing facilities. Verification is also needed to assure that timber products or components from unverified, and possibly illegal, operations are not issued with licenses. Overall system performance is assessed through independent third-party monitoring undertaken by appropriately qualified monitoring organizations.

FLEGT licenses will be issued by a designated state authority on the basis of evidence provided through verification of legal forest operations and chain of custody. Independent monitoring aims to ensure the effectiveness and credibility of the licensing scheme by introducing a third party to monitor and report on its implementation.

An essential element of VPAs is financial and technical support to help the partner country improve forest governance, policy reform, capacity building and community-based forest management.

FLEGT licenses issued under VPAs will be a tool to provide proof of legality of tropical timber supplies. Three countries (Cameroon, Congo, and Ghana) have already signed a VPA and six more countries are negotiating or in pre-negotiation consultations with the EU (Indonesia, Malaysia, Vietnam, Central African Republic, Gabon and Liberia)³⁶ and several others have signaled interest. The impact of VPAs is actually broader than on the export to the EU market as e.g. the TLAS in those countries that have concluded a VPA with the EU will cover the entire timber production.. FLEGT licenses are already referred to in the UK and French procurement policies, and their specifications are likely to be used in other EU countries' TPPs in the future.

The key concerns from tropical timber producers' perspective have been uncertain market benefits, continuing competition with illegal timber from non-VPA countries, additional costs both for the government and the private sector, uncertain market benefits, limited product scope (logs, sawnwood, plywood and veneer), unrealistically tight time-schedules, and limited effectiveness of TLAS implementation in reducing illegal logging and thereby unfair competition. Inclusion of FLEGT-licensed timber in the minimum requirements of the central government policies of two EU countries may provide only a temporary market benefit for tropical timber producing VPA countries if legality becomes a regulatory requirement as explained in the next section.

4.1.2 Due Diligence Regulation

As the progress to combat illegal logging and trade on a multilateral level has been relatively slow, and the fact that not all timber supplying countries will find it feasible to sign a VPA, the EU is planning to adopt additional measures to fight illegal logging at the global level. These measures include legislation to prevent imports of illegally harvested timber into the EU. This is targeted at timber suppliers in those countries which have not signed a VPA but it also covers domestic timber production in the EU member states. The current legislative proposal (CEC 2008b) is based on the due diligence (DD) principle requiring the operators to apply a system (due diligence system) which minimizes the risk of placing illegally harvested timber and timber products on the Community market. The DD system should include measures and procedures which enable operators to track the timber and timber products, to have access to information concerning compliance with the applicable legislation, and to manage the related risk.

DD systems aim at deterring operators from supplying timber and timber products without having a reasonable assurance as regards their legality³⁷ and the burden of proof is placed onto the operator which place timber first time on the EU market. DD systems also provide buyers and consumers with the assurance that by buying timber and timber products they do not contribute to the problem of illegal logging and associated trade.

If the draft regulation is approved, due diligence becomes a legal requirement for a proactive behavior by suppliers and buyers to show prudence, judgment and positive action in ascertaining the legality of

³⁶ Situation in June 2009 (http://ec.europa.eu/development/policies/9interventionareas/environment/forest/flegt_en.cfm)

³⁷ See the respective definition of legality in Box 3.1.

the timber and timber products that enter their supply chain in order to minimize the risk of placing illegally harvested timber and timber products on the Community market. Timber and timber products covered by a FLEGT license or a CITES permit are considered to have been legally harvested, i.e. no DD would be required.

Member states should ensure that infringements of the Regulation are punished by effective, proportionate and dissuasive penalties. In particular the Commission would be empowered to adopt detailed rules for the application of the due diligence system and, in particular, criteria for assessing the risk of placing illegally harvested timber and timber products on the market. Criteria for the recognition of due diligence systems used by monitoring organizations still have to be developed.

The mandatory due diligence system is planned to provide:

- a) access to the following information on timber and timber products placed on the market by the operator: (i) product description; (ii) country of harvest; (iii) volume and/or weight; (iv) where applicable, name and address of the operator who has supplied timber or timber products; and (v) information on compliance with the requirements of the applicable legislation;
- b) a risk management procedure; and
- c) audits to ensure effective application of the due diligence system.

Competent authorities would recognize monitoring organizations based on the following criteria: (a) existence of a due diligence system which contains the elements set out in the regulation, (b) obligation of certified operators to use due diligence systems; (c) existence of a monitoring mechanism to ensure that the due diligence systems are used by the operators; and (d) provisions for appropriate disciplinary measures against any failures by certified operators. Operators can also develop a system on their own or rely on a recognized DD system which allows an element of flexibility to meet the requirements of the regulation.

Both the VPAs and the DD regulation (when approved) will have significant impacts on tropical timber producing countries trading with the EU. Markets, supply, competitiveness, employment and equity will be impacted (cf. chapter 8). The DD regulation expands the geographical scope of application of EU trade policy instruments to all countries exporting timber to the EU. In addition, the regulation will also cover the EU countries' domestic production as its application is mandatory for all the actors placing timber and timber products for the first time to the Community market. First placing in this context means either the act of importation or the act of first sale of domestically produced timber.

For those EU countries which specify legality in the requirements of their public procurement policies, FLEGT licenses and the DD requirements will likely serve as references for verification of legality. For tropical timber suppliers it will be necessary to have in place management and information systems which can provide the necessary information on legality of their operations for their EU buyers' DD systems.

The regulation is still a draft and it has been criticized from different perspectives for being vague, failing to prohibit the entry of illegal timber to the EU market, limited product coverage, lacking clear common sanctions to institute penalties, and leading to increased bureaucracy and unnecessary costs (e.g. EIA (undated)). Furthermore, in several countries part of the problem lies outside the national territory when the processing industry uses imported raw materials. If legality becomes a minimum requirement for selling timber in the EU then there is no more point in stipulating legality in TPPs. This would be another factor in shifting the emphasis in procurement policies towards sustainability.

4.2 US Lacey Act

The USA has recently amended the Lacey Act aimed at combating illegal logging and expanding anti-trafficking protection to a broader set of plants and plant products. The Act has made it unlawful to import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce any plants or products made from plants that were harvested or taken in violation of a domestic or foreign law. The Act gives the government the power to fine and jail individuals and companies that import timber products harvested, transported or sold in violation of the laws of the country in which the timber was originally harvested. In any prosecution, the burden of proof is on the government to

demonstrate that the violators knew or should have known of the underlying violation. The Lacey Act extends the reach of foreign laws and regulations by making it a violation of United States law to traffic in products made from wood that was harvested, transported or sold in violation of foreign laws. Unlike in the case of the EU due diligence regulation, the Lacey Act places the burden of proof of illegality onto the US government and it covers all types of wood-based products (including pulp, paper and furniture).

The amended Act includes new import declaration requirements that require information on

- (A) the scientific name of any plant (including the genus and species of the plant) contained in the importation;
- (B) a description of (i) the value of the importation; and (ii) the quantity, including the unit of measure, of the plant; and
- (C) the name of the country from which the plant was taken.

In the case in which the species of plant used to produce the plant product that is the subject of the importation varies, and the species used to produce the plant product is unknown, information should contain the name of each species of plant that may have been used to produce the plant product. In case the product is composed of parts taken from more than one country, and the country from which the plant was taken and used to produce the plant product is unknown, the information should contain the name of each country from which the plant may have been taken. The law does allow, at least initially, for exporters to list multiple likely countries of origin and/or possible species of the wood, if that information is unknown. Shipments of wood products that are not accompanied by the required declaration at the time of entry into the United States would be deemed inadmissible.

Importers have to seek the above information from their suppliers and to encourage the use of methods that provide them assurance that, when buying tropical timber products, they will not be at risk for prosecution. In order to provide the necessary information on a regular basis, the suppliers will need to have adequate management systems and external verification may also be required to provide assurance to buyers. Significant penalties can be imposed on individuals and companies who have not understood that their wood is tainted. Penalties include civil administrative penalties, forfeiture of the trafficked goods, criminal fines or imprisonment. A Lacey Act violation may also trigger charges of smuggling or money laundering. The Act affects all tropical timber suppliers to the US market as it covers all types of timber and timber products.

As regards wood-based products, the implementation of the declaration requirement is being phased in by product groups as follows: (a) logs, sawnwood, and builders' joinery by September 30 2009, (b) wood-based panels and packing cases by March 31, 2010, and (c) furniture by September 30, 2010.³⁸

Prosecution under the Lacey Act requires proof of two violations, an "underlying" violation and an "overlying" violation. The "underlying" violation would be a breach of a foreign or U.S. state law that regulates the taking, possession, importation, exportation, transportation, or sale of fish or wildlife or plants. The "overlying" violation would be the breach of the Lacey Act ban on importing, exporting, transportation, sale, acquisition or purchase of the tainted goods. The prosecution must take place within five years after the Lacey Act violation. The penalties for a Lacey Act trafficking violation depend on the defendant's knowledge regarding the underlying violation of foreign law, i.e. the higher penalties are imposed the more the actor knows or should have known anything about the illegalities in sourcing their timber and timber products.

The new legislative measures in the USA and the EU, and a number of similar instruments currently under discussion in countries such as Switzerland, Norway, and New Zealand will provide a robust incentive for tropical timber producers and exporters to stamp out illegal practices in forest management and timber trade and encourage them to make rapid progress towards the demonstration of legal compliance. The US and the EU regulations represent different approaches but are likely to have similar impacts for all exporters to these markets. Tropical timber producers will have to build up adequate management systems and means of proof that buyers can adequately assess the risks and avoid possible penalties due to buying illegal products. From the perspective of public procurement policies the EU and US regulations set clear baselines for legal timber and it can be questioned whether in these two markets TPPs have to refer to legality any more.

³⁸ See APHIS (2009) for detailed listing of customs codes.

As part of due diligence systems, risk analysis will be applied as one tool to assist in ensuring that the requirements of procurement policies are met. The private sector in the United States has already carried out a risk analysis of the likelihood of illegal domestic timber in the supply chain. Some NGOs are reported to started to work on categorizing supplier countries of wood and wood products in terms of level of risk for illegal timber sourcing. Such risk ratings would have implications for individual tropical timber producing countries where the burden of evidence on low risk is greater than in developed countries. There is a need to consider appropriate common tools for risk analysis through cooperative efforts rather than through individual initiatives which may be partly driven by specific agendas.

5. GREEN BUILDING STANDARDS AND RELATED INITIATIVES

Green building initiatives (GBI) have been under active development for a number of years in several countries. The purpose is to minimize construction impacts on the environment, use less resources, particularly energy, and minimize waste during the whole life cycle of the building. Energy efficiency has been the focus of green building initiatives in most countries and climate change mitigation as a new driver is closely associated with it (Spirandelli 2008).

Targeted schemes are reported in nine countries and several international initiatives are also on-going, some by intergovernmental organizations, others by the private sector and civil society organizations (Box 5.1). The situation in the USA and the UK is reviewed below as these two countries have pioneered several specific initiatives. Several other countries have also developed specific green building standards or initiative while many others have mainstreamed improved practices in the construction sector otherwise.

In the United States state and local governments have been actively introducing legislation, incentives and programmes to promote green building with a focus on energy efficiency and environmental protection. Based on an internet search, it can be estimated that there are about 150 public sector initiatives which are in different stages of process. The most common policy instruments are tax credits for households or businesses, rules for government building construction and renovation work, implementation of standards, rating systems and rules, grants and low-interest loans, support to design costs of green building, and expedited processing of applications for green building permits. Some or these initiatives are small and may even refer to a single building while others can be state-wide mandatory rules for public building construction.

Box 5.1 Selected Green Building Initiatives

National	
Australia	Green Star, Green Building Council of Australia
Austria	ECOPASS
Canada	LEED, SBTtool
France	Démarche HQE, Maisons de Qualité, Habitat et Environnement, EFFIENERGIE
Germany	Passivhaus Green Building Programme
Japan	Comprehensive Assessment System for Building Environmental Efficiency
Spain	Verde
Switzerland	MINERGIE ECO and P
United Kingdom	Building Research Establishment Environmental Assessment Method (BREEAM)
USA	Leadership in Energy & Environmental Design (LEED) of the US Green Building Council, Green Building Initiative (GBI), Green Globes (ANSI Standard), Energy Star
International	
ISO	Standardization of Sustainable Construction, Standards for Intelligent and Sustainable Buildings
UNEP	Sustainable Buildings and Construction Initiative
WBCSD	Energy Efficiency in Buildings
WWF	One Planet Living
Earth Day Network, Green Schools	

Sources: Joyce (2008), IUCN (2008)

Two thirds of the US public sector initiatives refer to the building standards of Leadership in Energy and Environmental Design (LEED) Green Building Rating System of the US Green Building Council (USGBC), 30% to the Green Globe standards, and about 10% mention equivalent standards with one of the two or both systems. A few apply the Energy Star rating system, National Green Building Program standards and EarthCraft while four states also refer to their own state-level standards (Florida, Michigan, Minnesota and Texas). Examples of state-level policies with specific provisions for timber and timber products are given in Box 5.2³⁹.

Box 5.2 US State-level Green Building Regulations and Legislative Initiatives with Specific Reference to Wood Products

Minnesota

A legislative initiative (MN S.B. 2078) is in the process since May 2009 which would authorize bonds for green building projects. To qualify, green building projects must have at least 75 percent of the square footage of commercial buildings registered with a recognized green building rating system, including Minnesota's b3 standards or the USGBC's LEED certification, or in the case of residential buildings, Minnesota Green Star rating, and must be reasonably expected to receive the certification.

Minnesota Green Star standard specifies the following:

- Remodelling work: All imported hardwood and softwood, except from Canada, must have full FSC certification
- New buildings: Depending on the share of FSC certified products in each timber product group, different scores are obtained in the rating system. The product categories are (i) plywood, OSB or other sheathing, (ii) framing lumber, (iii) roof sheathing and (iv) roof framing lumber. The FSC certified share can be 50-89%, or 90%, or more in the other product groups except in the first group where panel products have to be 90% or more FSC certified (only).

(<https://www.revisor.leg.state.mn.us/bin/bldbill.php?bill=S2078.4.html&session=ls86>)

New Jersey

A legislative initiative (NJ S.B. 1077) is in the process since 2008 which would provide tax credits for design and construction of a green building (<http://www.njleg.state.nj.us/bills/BillView.asp>). The act would require Department of Community Affairs in consultation with the Department of Environmental Protection to adopt green building standards, which should be based on the LEED Green Building Rating System and the LEED Residential Green Building Rating System, as well as the Energy Star program. Also, the act would specify requirements to minimize wood use in wood-framed houses and prohibits use of old growth timber and tropical hardwood.

New York State

A legislative initiative (NY S.B. 4991) is in the process since April 2009 which would create the "NY Healthy and Green Procurement Act" to provide criteria for sustainable resource procurement practices. It would also require all state-funded building projects costing over USD 2 million should be constructed in compliance with USGBC's LEED silver standard. (<http://open.nysenate.gov/openleg/api/html/bill/S4991>).

Texas

A legislative initiative (TX H.B. 2337) is in the process since March 2009 which would provide increased funding for new school construction or renovation that is highly rated under an approved environmental efficiency rating system, such as LEED, Green Globes, or the Texas Collaborative for High Performance Schools (TCHPS).

TCHPS specifies use of a minimum of 50% of wood-based materials certified in accordance with FSC or SFI guidelines for wood building components. This includes, but is not limited to, framing, flooring, finishes and built-in cabinetry. (<http://www.statesurge.com/bills/511564-hb-2337-texas>).

Colorado

The state has adopted CHPS criteria for school building which gives credits for wood as follows:

- Use of a minimum of 50% of wood based materials certified in accordance with FSC, CSA, SFI, ATFS or PEFC certification programmes. This includes, but is not limited to, framing, flooring, finishes and built in cabinetry (1 credit point).

(http://www.chps.net/manual/documents/Criteria/TX_CHPS_Criteria_2009.pdf)

- Use of a minimum of 25% of blue stained wood (1 credit point)

³⁹ On the national level a national green building standard for all residential construction work in the US including single-family homes, apartments and condos, land development and remodelling and renovation has been recently approved by the American National Standards Institute (ANSI). It is the first green building rating system approved by ANSI, making it the benchmark for the sector. (<http://www.nahbgreen.org/Guidelines/ansistandard.aspx>).

The latter requirement is targeted at promoting demand for timber from forests infested by mountain beetles threatening to wipe out lodgepole pine.

Virginia

The state law (VA S.B. 174) in force since since July 2008 classifies energy-efficient buildings as a separate class of real property for tax purposes. The law defines energy-efficient building as one that meets Green Globes standards, US Green Building Council's LEED standard, the EarthCraft House Program, or is Energy Star certified. (<http://leg1.state.va.us/cgi-bin/legp504.exe?081+sum+SB174>)

According to the EarthCraft House Guidelines the house shall be constructed of at least 50% lumber that meets criteria for sustainable harvesting as set by FSC. The lumber shall come from forests that are managed to maintain ecological health and biodiversity. Builder must present documentation that the lumber meets the criteria of a sustainable harvest. (<http://www.earthcrafthouse.com/>)

LEED appears to become the *de facto* standard for “smart” building and environmentally responsible design and construction in the USA. The number of LEED registered projects already exceeds 30,000 (both commercial and residential). The environmental performance under LEED covers, inter alia, energy efficiency and materials selection. The system has a set of minimum requirements and performance benchmarks based on which credits are accounted (Box 5.3). Due to a variety of reasons, particularly the limited availability of FSC-certified wood and lack of recognition of alternative similar schemes, LEED is in the process of considering to revise its policy on acceptable forest certification systems and how to deal with non-certified wood (Yale Forest Program 2008). In addition, forest certification has no specific role in demonstrating outstanding or innovative use of wood as sustainability of forest management have no direct link with the quality of wood as it is an issue of production method.

The Green Globes environmental assessment includes among other areas energy, resources, and environmental management. The environmental areas of a project are assessed on a 1000 point-scale. Within the Green Globes assessment wood usage is considered under the area of resources and building materials which as a whole counts for 10 percent of the total score and one to four points can be granted depending on the score. Wood usage could score points under the criteria that deal with (i) the proportion of bio-based materials, such as green insulation, natural fibers and natural structural materials, and (ii) the proportion of solid lumber and timber panel products that originate from sustainable sources that are third-party certified. The Green Globes system recognizes SFI, CSA, FSC and ATFS having a broader acceptance of certification systems than LEED.

Collaborative for High Performance Schools (CHPS) is a partnership to promote high performance environmental design, construction and operation of high performance schools in the USA. The CHPS criteria which specify that 50% of the wood used has to be certified in order to earn one credit point (the maximum total is 85 credit points and the minimum acceptable is 32 credit points) (<http://www.chps.net/manual/index.htm#score>). The CHPS criteria have already been adapted for Washington, Massachusetts, New York and the New England states. Texas and Colorado have elaborated them further with regard to acceptability of certification systems (Box 5.2).

Apart from LEED, the market impacts of the US green building initiatives have still been fairly limited in spite of the large number of individual initiatives. This may however change in the longer run when experience is accumulated, climate change mitigation becomes an increasingly important objective and the constraints in the policy rules are removed. For instance, the limited supply of FSC certified timber is a constraint for LEED's broader application from the viewpoint of wood usage in construction.

In the United Kingdom green building standards are increasingly used. The Building Research Establishment (BRE) has developed an Environmental Assessment Method (BREEAM) which has become the *de facto* measure used to describe a building's environmental performance in the country. BREEAM is also used internationally elsewhere. The recently approved BREEAM Code for Sustainable Homes (2007) will be used in assessing all homes when issuing a certificate which must be supplied to buyers⁴⁰ (Box 5.4).

Responsible sourcing of materials in the various US systems and BREEAM is claimed to be based on the fundamental principles of life-cycle stewardship. However, in the case of timber and timber

⁴⁰ If an assessment has not been done, the home is assumed to have zero rating.

products, apart from recycled timber use which plays a marginal role in other products than reconstituted wood-based panels, the focus is on two specific issues, i.e. legality and sustainability of wood procurement. There is no consideration e.g. on the renewability of the timber products⁴¹.

Box 5.3 LEED Requirements and Rating System for Certified Wood (North America)

Intent

To encourage environmentally responsible forest management.

Requirements

Use of a minimum of 50% (based on cost) of wood-based materials and products that are certified in accordance with FSC's principles and criteria, for wood building components. These components include at a minimum, structural framing and general dimensional framing, flooring, sub-flooring, wood doors and finishes.

Only materials permanently installed in the project are included. Wood products purchased for temporary use on the project (e.g., formwork, bracing, scaffolding, sidewalk protection, and guard rails) may be included in the calculation at the project team's discretion. If any such materials are included, all such materials must be included in the calculation. If such materials are purchased for use on multiple projects, the applicant may include these materials for only one project, at its discretion. Furniture may be included if consistently with other provisions of the LEED requirements.

Rating system

Projects are awarded Certified, Silver, Gold, or Platinum certification depending on the number of credits (maximum 100). Wood usage can earn LEED credits from (i) the use of wood products that were grown and harvested in an environmentally and socially responsible manner (1 credit point); and (ii) the demonstration of innovation in the design, construction, operations and maintenance of a building project. In the LEED system forest certification can (a) provide evidence of environmentally and socially responsible wood production, (b) be used to demonstrate that the wood used is "renewable" material, and (c) help identify outstanding and innovative use of wood. At present the FSC is the only certification system recognized for LEED forest certification credits.

Source: USGBC (2008)

Box 5.4 BREAA Code for Sustainable Homes (United Kingdom)

The Code for Sustainable Homes provides a comprehensive measure of the sustainability of new homes resulting in real improvements in key areas such as carbon dioxide emissions and water use. The UK Government's ambition for the Code is that it becomes the single national standard for the design and construction of sustainable homes, and that it drives improvements in home building practice.

The Code has a scoring system of six levels. The different levels are made up by achieving both the appropriate mandatory minimum standards together with a proportion of the 'flexible' standards. Apart from the minimum requirements, the Code is completely flexible; developers can choose which and how many standards they implement to obtain 'credits' in order to achieve a higher sustainability rating.

Requirements for timber are given under the group "use of materials" for which two main aspects are identified: environmental impact of materials and responsible sourcing. There are no mandatory elements. There are four tier levels for timber (in descending order):

1. Legality and responsible sourcing (3 credit points); evidence by certification schemes; the compliant schemes are e.g. FSC, CSA, SFI (with CoC), PEFC, reused materials, schemes independently certified against BES 6001:2008 standard (or similar) very good/good ratings.
2. Legality and responsible sourcing (2 credit points); evidence by certification schemes; the compliant schemes are independently certified against BES 6001:2008 standard (or similar) good and pass ratings
3. Legality and responsible sourcing (1.5 credit points); evidence by certification schemes/EMS; MTCC, verified SGS, TFT
4. Legality and responsible sourcing (1 credit point); certified EMS for key processes

There is a strong incentive in the system to apply forest certification as a proof as more points are gained for certified products. However, for instance, a timber product with 50% recycled timber and 50% legally sourced new timber does not comply with the criteria and is not awarded any credit points.

Source: Department for Communities and Local Government (2009)

⁴¹ In Canada two provinces (Quebec and British Columbia) have implemented pro-wood procurement policies/strategies but they do not specify forest certification or legality as requirements. These pro-wood procurement policies promote the use of wood as the green building material of choice in public buildings in order to mitigate greenhouse gases. A number of other countries have similar strategies or programmes.

From the perspective of timber usage this is a major general concern related to green building standards and initiatives. At present, they do not adequately consider LCA results in material specification and this puts timber at a disadvantage: the carbon storage role of wood is not considered, the renewability of forests as a source of timber is not recognized, and no legality and sustainability criteria are applied to other materials⁴². Another issue is that the current credit systems may not provide a sufficient incentive for increased consumption of wood. Limiting the credit points to timber certified under a particular system is another constraint limiting the effectiveness of the green building initiatives in promotion of legally and sustainably produced timber products.

A comprehensive review of the existing green building standards is beyond the scope of this study. The chosen examples show that there is a common element in many of them, i.e. using forest certification as a proof for sustainability; it is not usually a mandatory element but it contributes to credit points. Legality is not always a minimum requirement in the USA as in the UK but it is likely to become broadly applied over time. There is therefore a high degree of convergence between public timber procurement policies and green building standards. Where the policies and standards appear to differ is the acceptance of individual certification systems as proofs of sustainability and legality. Further convergence would therefore be desirable, particularly within countries with differing local government rules. In Europe the CEN Technical Committee 350 on the sustainability of buildings is developing a harmonized framework for product declarations and assessment which has potential to contribute to a more consistent approach among European countries.⁴³

6. PRIVATE SECTOR PROCUREMENT POLICIES

6.1 Corporate Policies

WRI/WBCSD (2009) reviewed selected corporate procurement policies and standards referring to wood products revealing that in many cases sustainable procurement practices are determined by a company's general business practices, codes, values, principles and standards. This was part of a joint effort to assist public and private sector customers to understand, select and use relevant existing responsible procurement approaches. The WRI/WBCSD sustainable procurement guide for wood and paper-based products focuses on ten key issues (Box 6.1)⁴⁴ ..

The WRI/WBCSD review revealed that many sustainable procurement policies do not necessarily single out wood and paper-based products but several companies operating in the forestry sector and sectors which are major users or traders of forest products do have specific procurement principles or criteria for wood and wood-based products. The following elements are present in these requirements (Appendix 6.1):

- Accuracy and credibility of information on timber supplies, often associated with third party verification (96% of the total of 24 corporations in the sample)
- Sustainability of forest management (96%)
- Legality of production (79%)
- Knowledge of origin of products (75%)

Other frequently appearing elements were protection of special places (including sensitive ecosystems) (50%) and addressing the needs of local communities and indigenous peoples (42%). Other less frequent elements included appropriate use of recycled fiber and other resources, and climate change.

There are some differences between sectors: construction companies do not generally identify other elements than origin of products, information accuracy⁴⁵, legality and sustainability. Forestry and retailing companies have the broadest scope in their requirements covering all the above mentioned elements at least to some extent. Furniture companies did not specifically identify climate change,

⁴² Cf. Eastin (2008)

⁴³ <http://www.cen.eu/CENORM/Sectors/TechnicalCommitteesWorkshops/CENTechnicalCommittees/WP.asp?param=481830&title=CEN/TC+350>

⁴⁴ This guide is updated annually (www.SustainableForestProds.org)

⁴⁵ This is often linked with certification or independent auditing.

environmental protection control, or local communities and indigenous peoples in their policies. These may, however, be covered by their concept of sustainability.

Detailed reviews of selected policies have shown that there are differences in how the various concepts are expressed and detailed criteria also vary (Purbawiyatna & Simula 2008). This makes it difficult for tropical timber producers to provide proofs of performance if they are supplying several buyers who have different procurement criteria.

Box 6.1 Key Issues Related to Private Sector Sustainable Procurement of Wood and Paper

Sourcing and legality aspects

- Origin: Where do the products come from?
- Information accuracy: Is the information about the products credible?
- Legality: Have the products been legally produced?

Environmental aspects

- Sustainability: Have forests been sustainably managed?
- Special places: Have special places, including sensitive ecosystems, been protected?
- Climate change: Have climate change issues been addressed?
- Environmental protection: Have appropriate environmental controls been applied?
- Recycled fiber: Has recycled fiber been used appropriately?
- Other resources: Have other resources been used appropriately?

Social aspects

- Local communities and indigenous peoples: Have the needs of local communities or indigenous peoples been addressed?

Source: WRI/EBCSD 2009

6.2 Trade and Industry Associations⁴⁶

At least in twelve countries in Europe and North America timber trade and industry associations and their federations are reported to have purchasing policies or codes of conduct related to wood supply. The principle of trading minimum with legality verified timber is inherent in most cases together with preference to be given to sustainable supplies whenever possible. Seven codes of conducts are binding for all members of the organization (Belgium, Canada, Denmark, France, Germany, Netherlands, Spain, the UK, and AF&PA in the USA).

Consequently, there is a clear trend towards encouraging member companies to actively seek evidence on legal and sustainable product origin. Eleven associations have codes of conduct that have the common objective of members trading in legal and progressing towards sustainable timber only. This raises the issue of how progress is demonstrated. An increasing number of codes specify continuous improvement by members towards verifiable legal and sustainable timber only which requires effective monitoring mechanisms.

The Dutch and French associations have set time-bound targets for their members complying with the objectives of the codes of conduct. In Belgium FBCIB members require all suppliers to sign a statement affirming the legality of the product. In Canada similar measures are applied, including auditing members complying with the purchasing policy.

Four purchasing policies establish a mechanism of monitoring members' compliance to the code of conduct, including third party assessments (Canada, France, Netherlands, and the UK). These policies include performance-based indicators and the French, Dutch, and UK policies require continuous improvement towards members buying only demonstrably sustainable timber. The Canadian, French, Dutch, and UK associations have established systematic means of monitoring members and identifying 'bad performers'. The Italian association is identifying and challenging 'bad performers'. The French and UK approaches apply a well-defined set of procedures and requirements.⁴⁷ In the UK a due diligence process has become a mandatory requirement for membership.

⁴⁶ The data in this section is based on Hentschel (2008)

⁴⁷ LCB's Environmental Charter in France and TTF's Responsible Purchasing Policy (RPP) in the UK.

Risk analysis is a common tool in codes of conduct. The UK approach is to gradually eliminate high risk areas from the supply chain through rapid assessments. The Dutch association focuses on traceability linking it with risk levels assigned to individual countries or regions. The French association considers the risk of all tropical sources so high that they should provide certificates of legality. This may be explained by the high reliance of the French imports on Africa which as a region is generally considered a high risk source.

Most codes are evolving and subject to periodic improvements. In some cases this is caused by external influences, such as changes in legislation and trade regulations (e.g. the US Lacey Act). However, in general, continuous needs for revision reflect complexities associated with trade and industry associations influencing the behavior of their members towards more transparent and verifiable supply chains.

Few programs exist to support companies seeking credible evidence for legal timber in the producer countries. However, the EU Timber Trade Action Plan (TTAP) and WWF Global Forest & Trade Network (GFTN) are providing guidance to the private sector for improving transparency and traceability throughout the supply chains.

The codes of conduct and procurement policies of forest industry and timber trade associations are a powerful instrument as it is estimated that the members usually account for about 60 to 80% of the total national imports of timber and timber products depending on the country. In spite of the common goals and similar basic approaches in purchasing policies, there are significant differences between them in terms of formulation of commitments, degree of obligation and specific requirements for operations of suppliers and member companies.

Trade and industry associations largely agree on the need to develop harmonized purchasing policies. Mechanisms towards this objective include exchange of information and experience.⁴⁸ Mutual recognition of each other's policies would be another option but it has received only limited interest. It is possible that regulatory requirements will harmonize some private sector policy provisions in the EU and USA demonstrating the importance of the governments' role in this kind of issues.

7. COSTS AND CAPACITY OF TROPICAL TIMBER PRODUCING COUNTRIES TO MEET PROCUREMENT POLICY REQUIREMENTS

In general, most procurement policies will mean that suppliers in the tropical timber producing countries are in the long run expected to provide, through appropriate means, adequate evidence on the legal origin of their products, legal compliance of their operations and sustainability of forest management in areas where timber was harvested. There are two main non-exclusive options for how such evidence can be provided:

1. Government implemented assurance system for legality: this is likely to be applicable in countries where the size of the timber sector is sufficient to justify necessary public investment in setting up such a system in the short or medium term.
2. Private sector implemented auditing/certification or other due diligence systems which typically involve independent audits meeting the requirements of the procurement policies. This option is generally applicable for sustainability requirements but also for legality verification in situations where the government-operated control and supervision system cannot (yet) provide necessary assurance on legal compliance.

It appears that both systems will be applied in parallel in the short and medium term. In countries with a robust government-operated control system in place, the incidence of illegal timber entering the supply chain may be on such a low level that the system provides a satisfactory proof for meeting the procurement policy requirement on legality. However, initial experience on strengthening of the existing monitoring and control systems in countries which have signed, or entered a negotiation process to sign, a Voluntary Partnership Agreement with the EU has shown that a considerable effort

⁴⁸ The cooperation with North American and tropical producer countries' associations and federations has recently improved significantly and there is now a regular exchange of information via TTAP.

is often needed before the national timber legality assurance system (TLAS)⁴⁹ can be deemed robust enough by trading partners. The following assessment of the cost and capacity implications of timber procurement policies is based on the country case studies in Cameroon, Malaysia and Peru as well as separate studies carried out in Ghana and Indonesia.

7.1 Public Sector: Enforcement Systems and Associated Needs

Necessary measures to strengthen national enforcement systems in tropical timber producing countries depend on their current performance level. Situations vary extensively between countries: in some cases smaller improvements in the control systems would be sufficient but in some others major legal and institutional reforms may be necessary which are time consuming and costly to implement. Needs for institutional strengthening are not limited to the forestry sector, as effective elimination of illegal logging often requires improvement in the functioning of the judicial system as well.

The case study on Peru included a detailed examination of the needs for improvement of the existing forest and timber control system. The country has recently experienced a series of successive changes in improving the forest sector legal framework and the enforcement system to ensure that the 584 forest concessions covering a total area of 7.6 million ha (average size 13,000 ha) are compliant. At present, the forest authority is in the process of transferring to regional governments the management and administration of concessions and harvesting permits in community forests. OSINFOR (Organismo Supervisor de los Recursos Forestales y de Fauna Silvestre), the national body reporting directly to the Ministry of Presidency, supervises and controls the compliance of concession agreements and permits as well as CITES implementation.

In the past the administration and control systems have suffered from several problems including poor quality of annual operational plans of FMUs, quantity and quality of human resources in field-level inspections, inadequate staffing of control posts in timber transportation, and inadequate quality of information on timber usage by industrial plants. The administrative costs of the forest administration in 2008 were USD 7.4 million (USD 2.10/m³). In 2005-2008 OSINFOR⁵⁰ was able to supervise 31% of the FMUs which would mean that this approach would have taken 9.7 years to cover the whole production area under concessions in the country. In 2008, OSINFOR's budget was only USD 0.5 million which did not allow its proper functioning.

The improved system as implied by the new forest law and the Forestry Annex of the US-Peru Free Trade Agreement include the following components:

- a) National system of forestry information and control (including forest fauna) (SNIC) covering management and utilization of forest resources, primary and secondary transportation, industrial processing and commercialization of forest products
- b) Adequately equipped control institution (OSINFOR)

The investment cost of the SNIC is estimated at USD 14.3 million (including USD 4.2 million for forest inventory of new concessions) and its annual operational cost would be USD 4.2 million. The system would produce to the forestry administration and OSINFOR digitized and geo-referenced information for the monitoring and control of the production chain up to the final destination (domestic or export market). The strengthening of OSINFOR would require additional other investment of about USD 1.4 million and operational costs of USD 2.7 million. Considering the share of OSINFOR and SNIC activities related to timber production, these figures would translate into USD 4.8/m³ for investment and USD 3.9/m³ for annual operational costs. Significant additional budgetary and staff resources would be required to improve the Peruvian enforcement system.

In Cameroon the responsibility for forest law enforcement is vested with the Ministry of Forestry and Fauna (MINFOF) checking the legality of harvesting, transportation, processing exports of timber conducted by private companies. Individuals, municipal councils and forest communities. Monitoring is both routine and in response to requests by stakeholders. Internal auditing ensures the functioning of the system. Since 2000 an Independent Monitor (IM) has complemented the MINFOF verification function with donor support. The system relies on three computerized databases. (i) Forest Information

⁴⁹ TLAS as a term was developed in the context of EU FLEGT VPAs. It is used here as a generic term for government implemented control and supervision systems to demonstrate legality.

⁵⁰ Then under the Ministry of Agriculture.

System, (ii) a database on forest revenue and taxes, and (iii) forest infractions and information management system. Needs for improvement for an effective TLAS include (a) integrated effective product tracking system which is not provided by the three existing non-integrated systems; (b) improvement of the forest infractions information system, and (c) associated capacity building to effectively operate the various components of the information system. The investment cost of the improved information system is estimated at USD 1.47 million, New staff would not be required but further training of existing officers would be necessary and is included in the estimate. The Cameroonian investment cost in the TLAS would be only 10% of that in Peru.

In Malaysia the agencies responsible for implementing SFM are the State Forestry Departments in Peninsular Malaysia, Sabah and Sarawak, and the Sarawak Forestry Corporation. TPPs put emphasis on three key aspects in forest management: (i) the forest manager must confine harvesting within the limits of the forest's capacity to produce commercial timber (i.e. volume control); (ii) there has to be consistency in determining the annual coupe (the extent of area allowed for felling each year) (i.e. area control); and effective forest protection through regimented harvesting controls to maintain viability to the next harvest.

In terms of compliance with the law, good operators by far outnumber the bad, in this industry. The main problem lies in importation of illegal timber rather than in domestic illegal logging, and the 'cleaning up' process will be enhanced by enforcement measures under the renewed control system. Legality verifications may take place at any stage of production and product flow from timber felling, its extraction and transportation to the mill, and finally to the market, in the form of processed timber. TLAS is also founded on the existing system of collecting royalties and other forest charges. TLAS draws on procedures of verifying the legality of logs and timber products at critical points along the supply chain starting from the tree stumps to the log yards in the licensed areas, forest checking stations, inspections during transit, mill stock yards, and export and import points for logs or processed products. All the states presently use paper-based control system with routine overseeing of harvest practices, issuance of removal passes, periodic auditing reports of District Forest Officers, and returns from license holders.

Sabah commits itself to implementing similar system and trials on the use of RFID technology have been initiated. In this case the main function would be to ensure the accountability of log tracking from the stumps to processing mills or the port. Meanwhile, Sarawak has introduced conventional 100% tagging and set up a network system for asset tracking at the key stages of the logistic chain. However, it is unlikely to offer a long-term solution to legality assurance.

Improvement of the TLAS in Malaysia is necessary. There is a general move towards applying RFID (radio frequency identification) technology with the attendant use of advanced database software and mobile technologies for practical tasks in the field. The system would provide a network of communication link-ups between the field and the office through the use of hand-held computers, between the different states, and between the states and the Forest Department Headquarters in the Peninsular Malaysia. The main need is better reconciliation of data on inflows and outflows of timber and products at key points in the supply chain. By including GPS features and active RFID chips, it may be possible to detect wayward logging in licensed areas by tracking the movements in the forest, of machinery and equipment registered with the Department⁵¹. Forest harvesting rules require each license holder not only to register workers they engage but also each equipment and vehicle they use for logging within the licensed area. Logging license holders will be required to ensure that RFID chips that the Department has fitted to the equipment will remain secured to each unit of machinery and equipment. Any departure from this ruling will be tantamount to violating the conditions of the licence. The costs of setting up the entire system on the national level will be a massive investment for which no estimate has been prepared as yet.

The Indufor (2008) impact assessment of the options of potential measures to prevent the importation or placing on the EU market of illegally harvested timber included a theoretical example of cost assessment of setting up an adequate TLAS in specified country conditions⁵² which concluded that the additional costs of improving the existing government control system would be about USD 0.30/m³ RWE but if the state-of-the-art tracking technologies are used the costs would be about USD 2.60/m³.

⁵¹ Bar-coding is another possible technology for this purpose.

⁵² Log production of 3 million m³/yr, 40 logging enterprises, 20 sawmills with a total output of 1.2 million m³/yr and 20 further processing units.

The government share of the costs in the latter case would be about USD 0.90/m³ RWE while the bulk of the burden would be borne by the private sector (USD 1.70/m³). In case the existing systems would be improved, the government share of the additional costs would be only USD 0.23/m³ and the private sector would bear the balance USD 0.07/m³.⁵³

The above examples show that the challenge to improve existing TLAS in tropical timber producing countries is a complex, country-specific exercise which requires resources and time to implement. In spite of their higher apparent costs, introduction of advanced technologies should often be favored as Malaysia intends to do because computerized systems can eliminate the loopholes of paper trail-based systems which do not allow for easy reconciliation of data over the supply chain even if they were improved. In the short term many countries are likely to opt for improved existing systems due to the significance of the cost difference.

7.2 Private Sector and Community Forests

The case studies showed differing country situations in terms of strategies and needs of the private sector. In Cameroon the costs of legal compliance in FMUs is estimated to vary between USD 4.7 to 5.2 per ha (Table 7.1). The highest costs would occur in municipal forests which have the same legal requirements but cannot enjoy the same economies of scale as large concessions (Appendix 7.1). The high costs in municipal forests are also explained by the law which requires double sampling intensity in FMUs less than 50,000 ha. The compliance costs are lowest in community forests as only simple management plans are required but their auditing costs are highest (USD 1.25/ha) due to the small size of these FMUs.

The largest individual cost item is preparation of forest management plan (FMP) which in a typical FMU costs about USD 295,000 in concession forests, USD 144,000 in municipal forests but only USD 12,000 in community forests. Other compliance costs are mainly due to meeting of the requirements of international conventions ratified by Cameroon which are not well known by FMUs. The regulations are targeted at promoting community forestry but they also clearly put municipal forests at a disadvantage compared to the other FMU types.

The additional costs of sustainability certification due to compliance with the certification standard (including biodiversity studies, environmental assessment and social studies) and auditing adds another USD 0.8 to 1.7 per ha in concession forests (Table 7.2). Were community forests certified individually, their auditing costs would become very high (USD 9.3/ha) putting these FMUs at a disadvantage compared to the others. Various group certification approaches should be promoted to keep direct external auditing costs low as they make it impossible for community forests to access certification in the absence of external support.

In aggregate, it would cost the timber producers of Cameroon about USD 35.6 million to meet legality requirements as implied by the VPA and another USD 17.3 million⁵⁴ to satisfy the sustainability requirements of the procurement policies in export markets. About 80% of the total additional costs (USD 53 million) would have to be borne by industrial enterprises managing concessions. It seems unlikely that the local communities and the municipal councils will be able to pay their respective costs (USD 9.3 and 1.3 million, respectively) given their weak financial capacities and the level of poverty in forest areas. External support is needed to allow these producers to continue and expand their role in the international markets for tropical timber products.

By way of comparison, the costs of independent verification of legality can be much higher than indicated above if third-party verification is used. One of the companies offering such services

⁵³ These estimates are based on a government control system by consignment. Were the control system based on operators, significant savings could be created for the government in both cases.

⁵⁴ Including USD 16.8 million for forest certification and USD 0.5 million for chain of custody certification for 93 industrial enterprises involved in timber product exports.

Table 7.1 Cost of Legality Compliance for Average-size Forest Management Unit by Type in Cameroon

Type of FMU	Unit cost USD /ha				Total cost in the FMU USD			
	Forest management plan	Other ^a	Independent verification	Total	Forest management plan	Other ^a	Independent verification	Total
Concessions	5.00	0.10	0.13	5.23	294 855	5 897	7 666	308 418
Municipal forests	6.25	0.11	0.25	6.61	143 750	2 530	5 750	152 030
Community forests	3.28	0.15	1.25	4.68	11 716	535	4 465	16 716

^aCosts of compliance with international agreements and conventions signed by Cameroon

Table 7.2 Additional Costs of Forest Certification for Average-size Forest Management Unit by Type in Cameroon

Type of FMU	Unit cost USD /ha					Total cost in the FMU USD				
	Forest management planning ^a	Other compliance with certification standard ^b	Total compliance cost	Certification cost	Total	Forest management	Other compliance with certification standard	Total compliance cost	Certification cost ³	Total
Concessions	0.50	0.34	0.84	0.83	1,67	29 485	20 050	49 535	48 945	98 481
Municipal forests	0.55	0.37	0.92	1.66	2,58	12 650	8 510	21 160	38 180	59 340
Community forests	0.40	0.37	0.77	9.26	10,03	1 428	1 321	2 750	35 827	38 577

^aAdditional biodiversity studies, environmental impact assessment, additional social studies on indigenous people

^bEstablishment of permanent sample plots, additional support for community development

^cPre-audit and initial audit

including the verification of the source, product tracking with improved technology and control of the volume and quality of the product quotes 2-6% of the FOB value of the product which in the Congo Basin conditions could amount to USD 5-15/m³ RWE in the case of sawnwood representing a high transaction cost for the industry⁵⁵.

In the Peruvian case study it was not deemed relevant to estimate the private sector costs of legal compliance as it was assumed that the national TLAS can ensure meeting the legality requirements of the procurement policies and the analysis focused on the costs of meeting sustainability requirements. In addition to the 584 private timber concessions, there are about 100 community forests with an average size of 10,000 ha covering a total area of about one million hectares. Unlike in Cameroon, Peru has already experience on different forms of certifying community forests as a group through a common forest manager or a purchasing industry enterprise which acts as the "group manager" for certification⁵⁶.

The cost assessment was based on three typical actual cases representing large, medium and small FMUs for a period of five years which is the validity period of forest certificates (Table 7.3). The total first-year costs were about USD 93,000 in the large FMU, about USD 64,000 in the medium-sized and about USD 35,000 in the small FMU. The cumulative operational costs for the subsequent four-year period were about USD 38,000, 26,000, and 11,000, respectively, suggesting strong economies of scale with steep increase in costs when the FMU size falls to about 10,000 ha (Figure 7.1).

Table 7.3 Cost of Certified Sustainable Forest Management by Size of Forest Management Unit in Peru

Component	Large (47 580 ha)		Medium (24 372 ha)		Small (8 316 ha)	
	Investment (first year)	Annual operational	Investment (first year)	Annual operational	Investment (first year)	Annual operational
Compliance costs						
- forest and environmental management	60 380	27 620	39 680	16 710	20 550	6 620
- social aspects	6 000	3 370	3 500	2 070	3 000	1 570
- management systems	7 500	1 070	5 850	620	5 600	570
Sub-total	73 880	32 060	49 030	19 400	29 150	8 760
Direct costs of certification	18 900	6 400	14 900	6 400	5 580	2 060
Grand total	92 780	38 460	63 930	25 800	34 730	10 820
- USD/ha	1.95	0.81	2.62	1.06	4.18	1.30
- USD /m ³	4.69	1.94	5.09	2.05	10.39	3.24
Notes: Investment cost = first year costs Operational cost during subsequent four years						

Source: Country case study on Peru

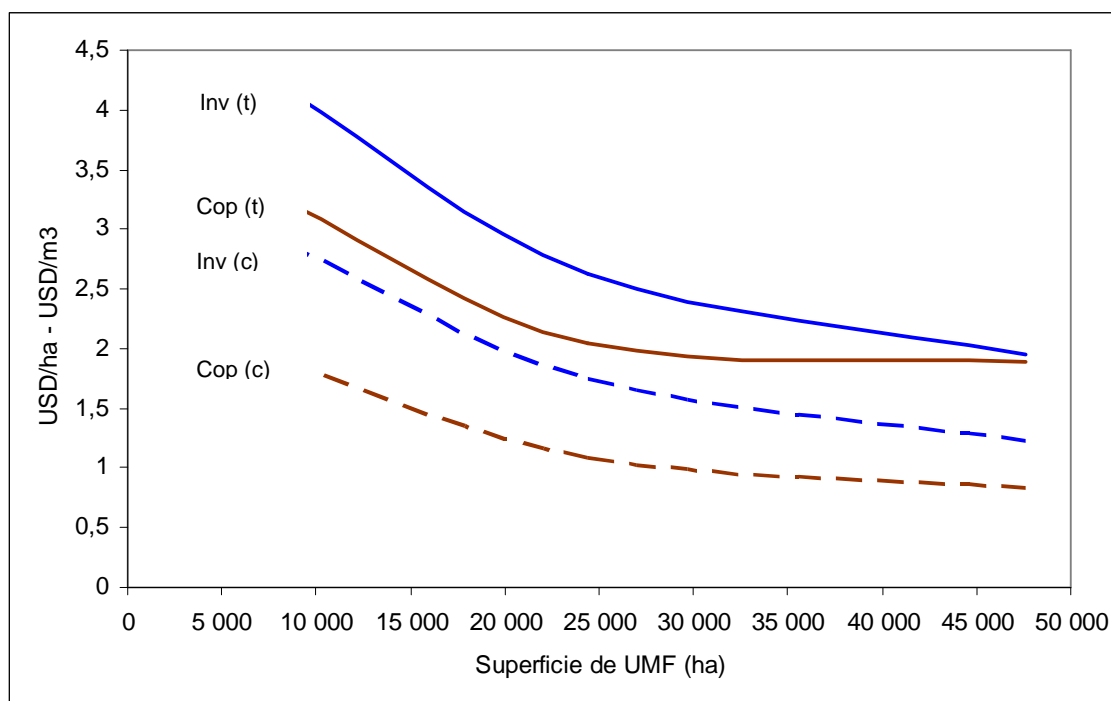
The total additional costs would be in the range of USD 250,000 for large FMUs, USD 170,000 for medium-sized FMUs and USD 80,000 for small FMUs. The unit costs during the five-year period would vary from USD 5.3 to 9.6 per hectare and USD 2.5 and 4.8 per m³. However, it is noted that these estimates refer to FMUs which operate in special conditions; their social costs are very low as a result of good relations with local indigenous communities and their involvement in joint ventures, as well as accumulated experience in export marketing of timber products. In average Peruvian conditions it can be estimated that 25% higher costs would accrue due to need for improvements in control and supervision

⁵⁵ Assuming an average sawnwood FOB price of USD 530/m³(s)

⁵⁶ The country has received extensive external support to promote SFM and its certification based on which the estimation of costs was carried out.

within the FMU. In spite of somewhat different approaches in estimation, the Peruvian total costs in different FMU classes appear to be in the same range as in the case of Cameroon.

Figure 7.1 Unit Costs of Certified Sustainable Forest Management as a Function of the Size of FMU in Peru



Note: Inv- investment costs, Cop – operational costs; (t)- total costs, (c)- excluding the costs of FMP, annual operational plan and delimitation of the FMU

Source: Country case study on Peru

In Peru the main cost component of the compliance costs is forest and environmental management which includes the elaboration of the FMP and enumeration of commercial trees, which represent more than a third of the first year total costs. The specific problems that large-scale concession forests have to face include lack of their technical and economic capacity to implement SFM, insufficient integration of indigenous population in the management of the forest enterprise, and needs for re-elaboration of FMPs and annual operational plans due to irregularities in the inventories. The same problems but with compounded relative impacts are also typically encountered in medium and small-sized FMUs. The former are often owned by private individuals with limited knowledge on systematic forest management and the latter typically managed by communities with little experience on formal procedures in production.

At the national level, the total costs of SFM implementation by all FMUs is estimated at USD 27.6 million in the five-year period which in practice would be phased over a longer period in accordance with the gradually increasing number of participating FMUs (Table 7.4). About USD 23.4 million would accrue to concession forests and USD 4.2 million to community forests. The compliance costs would account for 80% of the total while the rest (USD 5.9 million) would have to be paid to certification bodies⁵⁷.

The costs of chain-of-custody certification in a typical small-scale sawmill are estimated at about USD 150,000 over the period of five years (Table 7.5). For an annual capacity of 4,500 m³(s) the additional unit costs per m³ of sawnwood would be USD 6.61 with USD 1.13 needed for direct costs of certification and the rest for indirect costs, mainly due to additional staff needed for recording, monitoring and reporting, and improvement of information systems. Apart from the present 17 CoC certified companies, few others have adequate management systems which meet the certification requirements. The sawmill case in Table 7.5 does not represent an average situation for which another 25% should be

⁵⁷ For the time being almost all certifications in the country are carried out by SmartWood.

added for compliance costs. It is further estimated that a 10 percent price premium in sales prices would be needed to make certification an economic case for Peruvian sawmills. Lower premiums tend to disappear in the supply chain without any benefit to the primary processor of rough sawn lumber.

Table 7.4 Additional National Level Costs of Certified Sustainable Forest Management in Peru

Type of cost ^a	Forest concessions	Community forests	Total
	USD million		
SFM implementation costs	18.5	3.3	21.8
Direct costs of certification	5.0	0.9	5.9
Total	23.4	4.2	27.6

^a Aggregated cost for the five years to certify all the non-certified forest concessions and community forests in the country

Source: Country case study on Peru

Table 7.5 Costs of Chain-of-Custody Certification of a Sawmill in Peru

Type of cost (Mill capacity 4,500 m ³ /yr)	First year	Years 2-5	Total
	USD		
Standard compliance implementation costs ^a	31,800	91,560	123,460
Direct costs of certification	6,200	19,200	25,400
Total	38,000	110,760	148,760

^a The main cost factor (73% of the total) is additional staff and organizational costs to meet the audit requirements of the CoC standard.

Source: Country case study on Peru

In Malaysia the comparison between the compliance cost with the national certification standard (MC&I) and conventional approach revealed that SFM is two thirds more expensive to implement than the past practice (Table 7.6). Significant increases are due to improved standards of road construction, pre-felling activities and felling operations. Reduced Impact Logging (RIL) is imperative in the country which means that it is a baseline requirement for all operators. The high share of taxation could act as an incentive for illegal logging in other countries but, due to improved enforcement and increased penalties, the rate of illegal logging is estimated to be low and decreasing in Malaysia. This is a strong competitive advantage for the country's producers in view of meeting the timber procurement criteria in export markets.

Table 7.6 Average Costs of Sustainable Forest Management in Malaysia

Activity	MC&I Compliance		Conventional practices	
	USD/m ³	%	USD/m ³	%
Management plan	0.33	0.59	0.07	0.21
Pre-felling activities	5.08	8.91	1.34	3.99
Road construction	9.65	16.91	1.11	3.30
Felling, transportation and related operations	22.60	39.61	15.83	47.07
Taxation	19.30	33.84	15.28	45.43
Additional training	0.08	0.15	-	-
TOTAL	55.90	100.00	33.64	100.00

Source: Country case study on Malaysia

The Cameroonian and Peruvian auditing costs are considerably higher than in Malaysia, partly due to the fact that the Malaysian certified FMUs are very large and the auditing work is carried out by national bodies (Table 7.7). There is a strong need to develop group certification for small-scale FMUs in countries like Cameroon and local certification capacity in all timber producing countries to keep auditing costs at reasonable level. It is also critical that market benefits can be larger than the costs of SFM implementation and its certification.

Table 7.7 Direct Costs of Forest Certification in the Case Study Countries

Country	SFM certification	CoC certification
	USD/ha	USD/enterprise
Cameroon	0.83-9.26	..
Malaysia	0.26	1,720
Peru ⁵⁸	0.94-1.66	25,400

Source: Country case studies

External support would be needed in producer countries in several areas. For instance, in Malaysia three main areas have been identified (i) process support to include institutional redevelopment especially in capacity building; (ii) research as well as technical assistance, to strengthen security of asset and other control (e.g. chain of custody auditing); and (iii) information and communication support to enhance marketability of the Malaysian timber. Short-term capacity building needs have been estimated at cost some USD 1.6 million.⁵⁹ In addition, the Forestry Headquarters have planned institutional restructuring costing about USD 4 million, focusing on law enforcement. Additional inputs would be required in the states to increase manpower and facilities for the enforcement teams, as well as recruitment of forensic science specialists.

Substantial support packages are provided by the EU to countries which will sign VPAs covering strengthening of information systems, TLAS, forest governance and community forestry, among others. The USA has also provided extensive support to countries in promotion of SFM and its certification. ITTO, together with other international organizations, particularly FAO, has supported strengthening of forest governance, legal compliance, information systems, market transparency and related activities. The ITTO-CITES support programme has laid down a basis for further improvement in participating countries. However, as it is explained in chapter 8 there is a need to scale up these programmes through such initiatives like ITTO's Thematic Programmes, particularly the Tropical Forest Law Enforcement, Governance and Trade (TFLET).

8. IMPACTS OF TIMBER PROCUREMENT POLICIES

8.1 Market Impacts

8.1.1 Demand

Timber procurement policies have a significant influence on demand for tropical timber products but the impacts vary by type of instrument and market segment:

1. Public procurement policies create demand for legally and sustainably produced timber in government purchasing which is estimated to cover 3 to 20% of the total timber consumption depending on the importing country and market segment. The average of central government purchasing of the total GDP is probably in the range of 10% and, if local government purchasing is included, the figure could be in the range of 15-20% depending on the country's administrative structure (cf. Brack 2008a).
2. Green building initiatives have a potential to influence a major share of timber consumption but they are still in most cases in initial phases of implementation. However, due to the climate change linkage GBIs are likely to be mainstreamed in many countries which will expand their impact on timber consumption, including in the private sector. The additional impact of these policies will be felt in the medium term (in 3 to 5 years) and could add another 5 to 15% to the market share of products meeting the requirements for legality and sustainability depending on the country.
3. Private sector policies (both individual companies and timber trade and industry associations) already cover 60-80% of the total imports of tropical timber in many major markets but with a wide national variation. These policies have not yet had their full impact due to the fact that their implementation is phased in by stages. These policies will be less effective in the SME sector

⁵⁸ Representing the average situation in the country

⁵⁹ Related to the fulfilment of VPA requirements in the country.

than for large enterprises in the importing countries and therefore their additional medium-term impact on the demand for legally and sustainably produced timber may be in the range of 10-20%.

Based on these rough guesstimates, a total of 25 to 40% of the total demand for tropical timber in the major import markets could perhaps be expected to be potentially subject to legality and sustainability verification depending on the country in the medium term. In addition, such a large market share would have a significant leverage impact on other purchasing for logistical reasons. Most of the wood for end users and buyers who would require proofs of legality and sustainability would in fact be purchased by wholesalers, retailers, contractors and furniture manufacturers who always aim at minimizing their stocking costs and thereby the number of individual products stocked.⁶⁰

The public sector is also a very large and diversified enterprise in developing countries and its purchasing policies can have a major impact on the domestic demand for timber. For instance in Vietnam 45–65 per cent of the government budget is spent on procurement. However, implementing a timber procurement policy in these countries is not a simple affair as a number of hurdles would need to be addressed including appropriateness of the legal framework, required changes in procurement practices, capacity and resources of procurement agents, and supply availability of acceptable products (cf. Xiang Ty et al. 2009).

The public sector, together with progressive companies seeking their own commercial interest in sustainably produced timber products, acts as a standard setter and example for the entire private sector (cf. chapter 6). The direct impact of public TPPs in the tropical timber consuming countries will be strongest first in timber products used for office furniture and building construction and civil works, particularly applications where tropical timber has an established position like marine construction (Simula 2006). The market segment least affected by the public TPPs is likely to be home furnishing. The private sector policies have already had a major impact on imported garden furniture of tropical origin as these products are already SFM-certified to a significant extent in Europe.

In the EU-25 the total market size of wood products from tropical saw and veneer logs is estimated about 10.3 million m³ RWE and another 15.0 million m³ comes from countries with both tropical and non-tropical forests ('mixed zones') (Oliver 2009). The six EU countries with public procurement policies account for two thirds of the total EU-25 imports of wood products derived from tropical saw and veneer logs totaling 6.9 million m³. Appendix 8.1 illustrates the size of the markets in the key EU countries.

The short-term demand induced by the public procurement policies in the six countries with operational TPPs alone for legal and sustainable tropical timber is estimated at about 1.8-2.0 mill m³ RWE per year.⁶¹ In the longer run, the amount is expected to increase when more countries introduce TPPs and their implementation in general becomes more systematic.

The number of CoC certificates in major tropical timber importing countries serves as an indication on where the demand for legally and sustainably produced timber by the private sector is currently located. These certificates⁶² are heavily concentrated on a few countries reflecting their market size and the intensity of market drivers (UNECE/FAO 2009). The main markets for the certified products are the USA, the UK, Germany, France, Japan, Canada and China accounting for almost two thirds of the total number of CoC certificates issued in the world.

For the time being, the impact on demand of public TPPs appears still to have been relatively modest even though it remains unknown due to lack of reliable information⁶³. The country survey revealed that TPPs have increased the awareness among procurement agents on the need to specify legality and sustainability. In Denmark, Switzerland and the UK it has become clear that the supply of at least

⁶⁰ Parallel stocking of non-verified/non-certified and verified/certified products would add to their costs of working capital and increase the need for storage space which would encourage traders and users to keep only one type of products (certified/verified) in stock although not all end customers would specifically ask for them. This could be expected to change broader purchasing behaviors in the market provided that such products can be made available at competitive prices.

⁶¹ Calculated based on (i) 20% of total imports of Belgium, Denmark, Germany, France, Netherlands and the UK of wood products derived from saw and veneer logs from tropical producing countries and (ii) 6.7% of total imports from mixed zones (Appendix 8.1).

⁶² The total number of FSC and PEFC certificates was about 17,800 in May 2009 (UNECE/FAO 2009).

⁶³ The UK has carried out a pilot study on the construction industry (CPET 2009) and France is in the process of carrying out a study on the volume of procured timber products. An earlier study has been carried out in Denmark.

temperate timber can respond to such demands. This is associated with the increasing share of certified timber products in the supply to the European market. In the tropical timber markets the situation is different as in some countries and market segments certified supply does not meet the demand.

The blunt regulatory measures targeted at eradicating illegal timber products from international trade will have a much broader impact on the demand as non-complying actors will be gradually ruled out from the supply chain. The present and planned regulations in the EU and the USA would impact 49% of the total imports of tropical timber and timber products⁶⁴ from the ITTO producer countries and China combined (Appendix 8.4). They would also enhance the effectiveness of targeted instruments such as the EU FLEGT VPAs which, without this kind of accompanying trade regulation, would have a much more limited impact on trade flows and would risk to adversely impact the market shares of VPA partner countries in the EU due to competition from non-VPA participating countries which could still export illegal tropical timber to this market.

8.1.2 Supply

In the EU-25 market about 25% of timber imports is estimated to be certified for sustainability or verified for legality (Oliver 2009). In Japan more than 80% of plywood imports by the member companies of the Japan Lumber Importers Association has been reported to be legality verified meeting the minimum requirement of the country's public procurement policy. Respective information on other markets is not available.

The global certified area was estimated at about 321.2 million ha in May 2009 or almost the same amount as a year before (Appendix 8.2). The share of developing regions of the global area declined in 2009 to 6.1% of the world total from 7.2% a year before due to reduction in Latin America. However, at the same time the certified area in Africa almost doubled reaching 1.7 million ha (UNECE/FAO 2009). The three developing regions accounted for only one percent of the total global supply of roundwood from certified forests with their combined estimated output of 4.1 million m³ in 2009. This demonstrates the slow response from tropical timber suppliers to the demand for certified products.

Based on the global figures the certified production in the developing countries would appear to be sufficient to meet the short-term demand for sustainably produced tropical timber and timber products induced by the public and private procurement policies. However, in practice, this would not be the case due to different product and geographic patterns between demand and supply, complexity of supply chains, and the fact that part of the certified production is not sold as certified.

In the case of legality verified products there is no systematic information available on the potential supply from the tropical timber producing countries⁶⁵. Several private commercial companies and a few non-profit organizations (Appendix 3.2) provide auditing or support services to tropical timber producers but systematic quantitative information on the forest area or timber production covered has not been compiled. A brief summary of the situation in key ITTO producing member countries is given in Box 8.1

From the export market supply point of view, national timber legality assurance systems and private sector forest certification and due diligence systems will determine whether the market requirements for legal tropical timber can be met. Several ITTO producer countries are in the process of strengthening their forest and timber control systems but it is apparent that in many cases the current efforts are likely to be insufficient to eliminate illegal logging and deliver proof of legality in the short and medium term due to the extent and structural nature of the problem. The impact of procurement policies on timber supply is likely to be less significant than that of the US Lacey Act and the planned EU due diligence regulation which will put a strong pressure on tropical timber producers as they would be the biggest market losers if their exports cannot comply with legality requirements. At least in the short run, losses in the market share of tropical timber appear likely

⁶⁴ Logs, sawnwood, veneer, plywood, wood-based panels, joinery products and furniture.

⁶⁵ Beyond the information on certified areas which are assumed to be also legal.

8.1.3 Prices and Trade

The available market information indicates that at present significant price premiums can be obtained for some tropical timber species and products. For instance, in Europe independently legality-verified timber from Asia may be sold with a 3 to 15% premium (UNECE/FAO 2009). High-end FCS-certified products from Africa and Brazil can catch 20 to 50% premiums and certified temperate hardwood from the USA 5 to 10% (Oliver 2009). Price premiums of this magnitude appear to be mainly in niche markets and cannot be generalized. Furthermore, how such price premiums are shared between various phases of the supply chain is however unclear. The interviews with suppliers in Africa for this study reported only occasional price premiums for FSC-certified products only in the range of 5 to 10%.

Box 8.1 Supply Situation of Legality and Sustainability Verified Tropical Timber in Selected Countries

Congo Basin	The current FSC-certified area is 2.9 million ha which is estimated to reach 4.0 million by the end of 2009 and further to 10 million ha in 2012 according to IFIA. With the recent endorsement of PEFC-Gabon additional areas may be certified under PEFC. The verified legal area is about 10 million ha which is projected to reach 15 mil. ha by end of 2009. Verified areas are mainly concessions owned by European companies. National TLASs are being strengthened in the Republic of Congo and Cameroon as part of the VPA processes.
Ghana	There are no certified forests; the TLAS is being improved as part of the VPA obligations.
Cambodia	Forest Crime Baseline Reassessment is being undertaken.
China	The current FSC certified area is 1.2 million ha. The national certification scheme is expected to become operational in the near future with six pilot areas already audited. GFTN is supporting step-wise certification processes in companies covering 1.7 mill ha already considered to supply verified legal timber. These efforts have however only a marginal impact on Chinese exports as 30-50% of the raw materials are imported, some from high risk countries.
Malaysia	The forests of Peninsular Malaysia have been certified under MTCS. Two concessions in Sarawak have been MTCS certified (156,000 ha) and one FMU in Sabah under FSC. The national TLAS is being strengthened as part of the VPA process.
Indonesia	The FSC certified area is about 900,000 ha and the LEI certified area is 1.5 million ha (partly overlapping). A new national Wood Legality Verification System (SVLK) is under preparation and should cover the whole country. The earlier system (BRIK) was accepted under the Japanese procurement policy for proof of legal. BRIK will be replaced by SVLK.
Philippines	Multi-Sectoral Forest Protection Committees have been established for monitoring of illegal logging to complement government enforcement.
Brazil	The certified area for timber production in the Amazon is only 1.2 million ha (under FSC). The national timber control system is being strengthened. Certification is not a precondition for concession agreements in national forests, but if the concessionaire obtains a forest management certification under a recognized scheme, it can have a reduction in the wood price to be paid to the government.
Bolivia	Out of the total production forest area of 7 million ha, 2.3 million ha has been certified under FSC.
Peru	The area of FSC certified forest is 713,380 ha and the target by end 2009 is 919,000 ha. The national TLAS is being strengthened as part of the ITTO-supported process to strengthen CITES compliance and the implementation of the US-Peru bilateral free trade agreement.
Guyana	The only forest certification (FSC) has been suspended.

Sources: Based on Oliver (2009); Bird et al. (undated); country case studies

In Peru certified FMUs do not in general receive any premium for certified products. Only in some minor cases in the European markets price increases of 5-10% have been obtained and in the USA less than 5%. The situation varies extensively by country, control of the supply chain, market segment and individual customer.

Large European-owned integrated certified companies operating in Africa appear to be successful in controlling the supply of certified tropical timber from the region in Europe; the available supply is kept short on purpose. The certified companies provide certified products only when customers are prepared to pay for the premium while the rest of production is sold without reference to certification. In this way the certified supply is maintained (artificially) short keeping the premiums high for the time being (Oliver 2009). This situation can last only as long as certified supply from other sources is not significantly increased.

Ri et al. (2008) have estimated the volume and price impacts of the situation with no illegal logging in the world⁶⁶ which is targeted at by timber procurement policies and the regulatory trade measures in the EU and the USA. With gradual elimination of illegal logging, industrial roundwood production in developing countries would decrease from 2007 to 2020 by up to 8% and world prices would rise 1.5 to 3.5% for industrial roundwood and 0.5 to 2% for processed products. International trade would be impacted more than production levels (3 to 5% depending on the country's illegal logging rate).

Almost a half of the estimated drop in developing country production would take place in three Asian countries (China, Indonesia and Malaysia) and 38% in Brazil while the impact in Africa would be significantly less (only about 4% of the total projected reduction in developing country production)⁶⁷.

The results by Ri et al. clearly demonstrate that winners would be countries which have low rates of illegal logging, mostly in the northern hemisphere, and losers would be developing countries where illegal logging rates are high. A more nuanced analysis would be required to analyze the impacts on tropical timber and timber products by country but the general results can be considered plausible.

It is also evident that timber prices would significantly rise if there is a concerted international move to eradicate illegal logging. Success in these efforts will mean eliminating from the market, trade in stolen timber and timber products with price advantages due to avoidance of compliance costs. Price increases will benefit most tropical timber producing countries that already have effective controls in place.

8.1.4 Substitution

Substitution with other materials would be influenced by the general price increase in legally produced timber and cross-price elasticities between tropical timber and competing materials. However, such information is not available to make an assessment but it is obvious that the impact on tropical timber demand will be negative. Furthermore, it is possible that barriers in procuring timber due to sustainability and legality requirements which are not faced by other materials are likely to have a stronger impact on substitution than cross-price elasticities.

On the other hand, in some consuming countries there are expectations that in the long run wood may gain an advantageous position in the future, as it is the only material for which credible systems to prove legality and sustainability have been established meeting the Corporate Social Responsibility requirements of the private sector. It may take a significant time and effort for the other sectors reach the same status. Only time will show whether such expectations are well founded.

There will be substitution effects between tropical and other types of timber, particularly temperate hardwoods. The US temperate hardwood sector has developed a successful large-scale export activity operating globally which furnishes largely the same market segments as tropical timber. A recent American Hardwood Export Council study found that the risk of illegal timber entering this supply chain is very low. It was further concluded that the need for traceability, independent chain of custody and/or controlled wood certification to demonstrate legality should not be a crucial consideration for sourcing of US hardwood products. (Seneca Creek 2008). Buyers in the USA and elsewhere would therefore have no reason to ask for specific proofs of legality as will be the case with tropical timber. With regard to sustainability the situation would be different. In Europe a large share of domestic hardwood production is already certified (mostly under the PEFC system) unlike in the USA where small-scale landowners are the mainstay of the hardwood log supply and their certification is still at initial stages. Therefore US temperate hardwood suppliers may not be capable for providing proof of SFM in the TPP markets in the short term.

In the hardwood trade, public procurement policies specifying sustainability would provide a competitive advantage to European suppliers who are likely to be winners thanks to their active participation in certification processes⁶⁸. In the case of US suppliers the impact on substitution between temperate and tropical hardwoods would depend on the extent to which small-scale landowners can be certified.

⁶⁶ The analysis was based on the Global Forest Products Model which is a dynamic spatial equilibrium model which predicts production, imports, exports and prices of main forest products in 180 countries (Buongiorno et al. 2003).

⁶⁷ The analysis by Ri et al. (2008) is based on rough estimates of illegal logging rates in individual countries and therefore detailed results need to be interpreted with care.

⁶⁸ This not however the case in all European countries.

However, in the long run tropical timber is likely to be a loser against both sources of temperate hardwoods due to higher relative costs of achieving sustainability and its certification.

8.1.5 Trade Impacts on ITTO Producing Countries

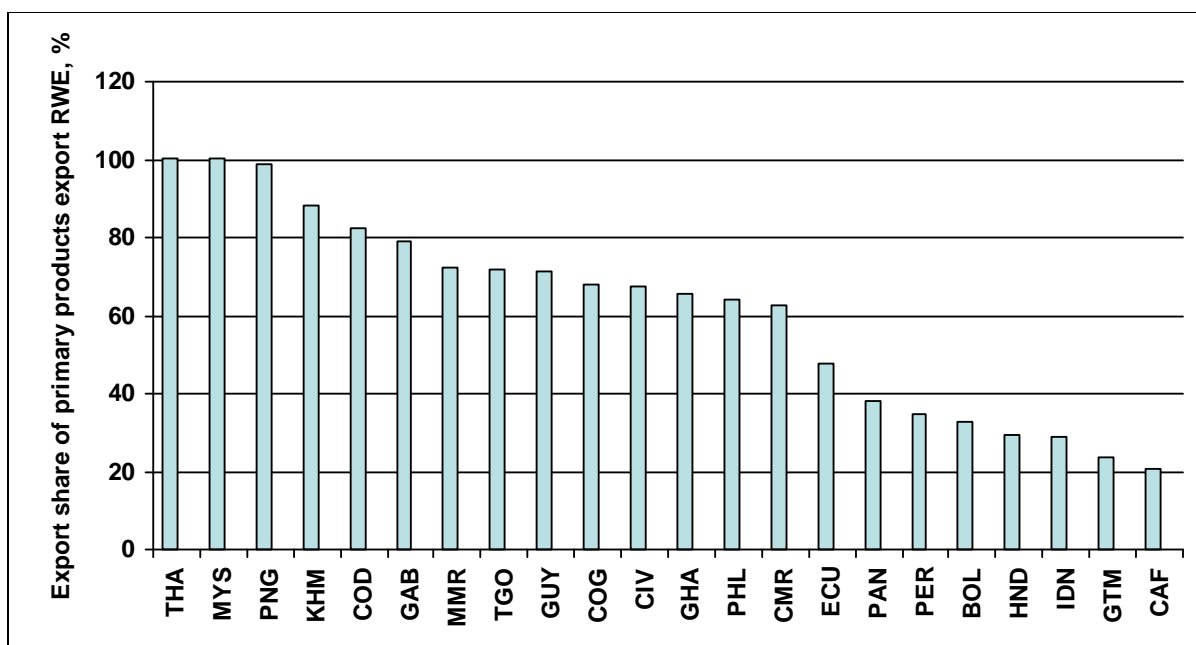
In addition to the level of illegal logging (on which reliable data is lacking) and costs of compliance with legality and sustainability requirements, the trade impacts on individual ITTO producing countries will depend on their

- (a) dependence on the total value of exports and the share of exports in production
- (b) dependence on country exports on markets with procurement policies and related instruments

In primary products (logs, sawnwood, veneer and plywood) highest dependency on export trade is found in Thailand, Malaysia and PNG followed by Cambodia, Côte d'Ivoire, and Gabon (Figure 8.1)⁶⁹.

In absolute terms the potentially most impacted country among the ITTO member countries with tropical forests is China which accounts for 47% of the total combined exports of USD 42.8 billion in logs, sawnwood, veneer and plywood, other wood-based panels, builders' woodwork and furniture (Figure 8.2; Appendix 8.3). China is followed by Malaysia (14%), Indonesia (10%), Brazil (8%), Thailand (4%), the Philippines (3%), Myanmar (2%) and Mexico (2%). The share of other producer countries of the total ITTO producers+China exports is less than one per cent each. These eight countries account for 91% of the total exports of the group.

Figure 8.1 Export Dependency of the Primary Processing Timber Sector in the ITTO Producing Countries



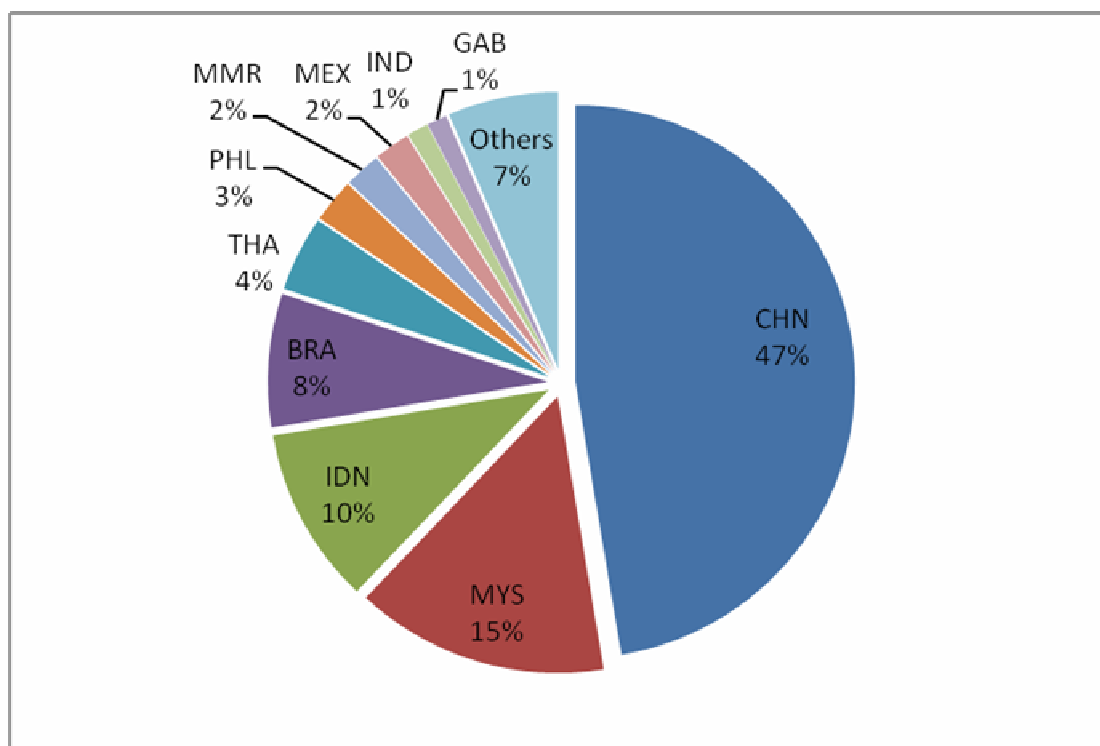
Note. Products covered are logs, sawnwood, veneer and plywood
 Source: Elaborated based on ITTO statistics, Appendix 8.1

⁶⁹ Note that in countries which are large importers of logs the calculated share can become very high like in Thailand and is not directly comparable with other countries relying on their domestic raw material supply.

UN country codes used in Figures 8.1-8.6

Country	Code	Country	Code
Bolivia	BOL	India	IND
Brazil	BRA	Indonesia	IDN
Cambodia	KHM	Liberia	LBR
Cameroon	CMR	Malaysia	MYS
Central African Republic	CAF	Mexico	MEX
China	CHN	Myanmar	MMR
Colombia	COL	Nigeria	NGA
Congo, Dem. Rep.	COD	Panama	PAN
Congo, Rep.	COG	Papua New Guinea	PNG
Côte d'Ivoire	CIV	Peru	PER
Ecuador	ECU	Philippines	PHL
Fiji	FJI	Suriname	SUR
Gabon	GAB	Thailand	THA
Ghana	GHA	Togo	TGO
Guatemala	GTM	Trinidad and Tobago	TTO
Guyana	GUY	Vanuatu	VUT
Honduras	HND	Venezuela	VEN

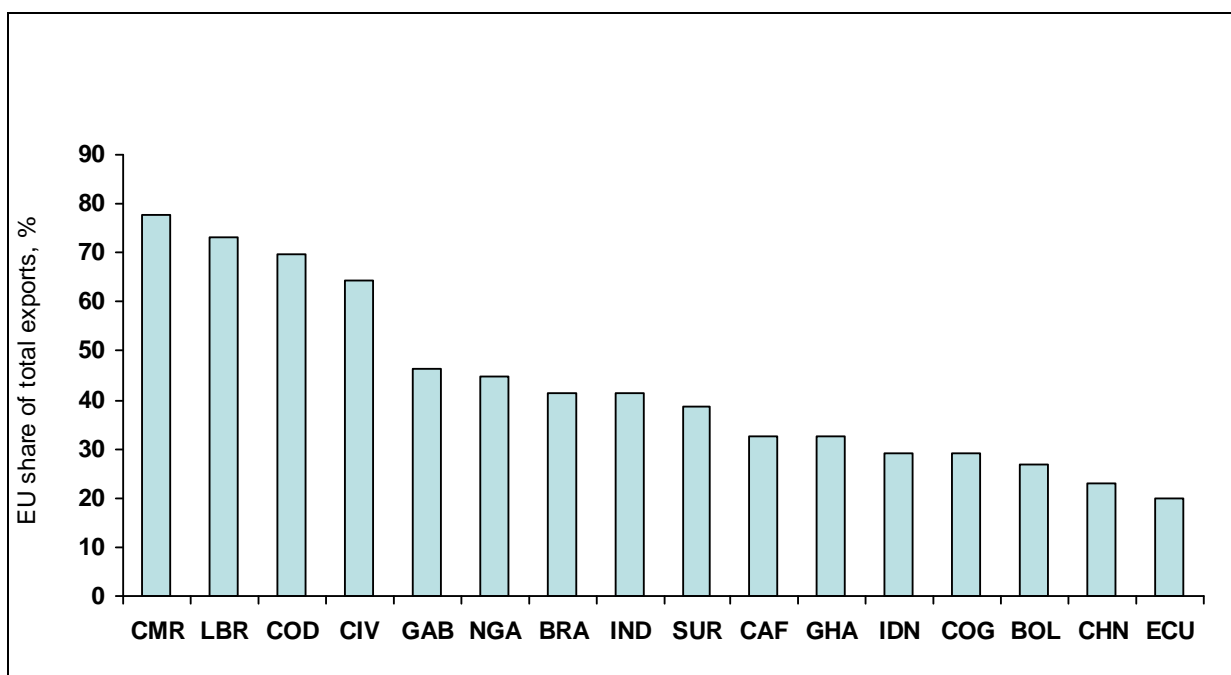
Figure 8.2 Main Exporters of Tropical Timber and Timber Products among ITTO Producing Countries and China



Note: Products covered are logs, sawnwood, veneer and plywood, other wood-based panels, builders' woodwork and furniture.
Source: Appendix 8.5

The dependency on procurement policy markets varies extensively. The countries which will be most impacted in relative terms have high shares of their exports⁷⁰ going to the EU market (Figure 8.3)⁷¹. These include Liberia, DRC, Cote d'Ivoire, and Cameroon followed by Brazil, Suriname, the Republic of Congo, Ghana and Indonesia (Appendix 8.4). Significant impacts would also be felt in Malaysia, Thailand, Bolivia, Ecuador with marginal impacts in Peru, Guatemala and Honduras.

Figure 8.3 Export Dependency of Selected ITTO Producing Countries and China on the European Union Market



Note: Products covered are logs, sawnwood, veneer and plywood, other wood-based panels, builders' woodwork and furniture.
Source: Appendix 8.4

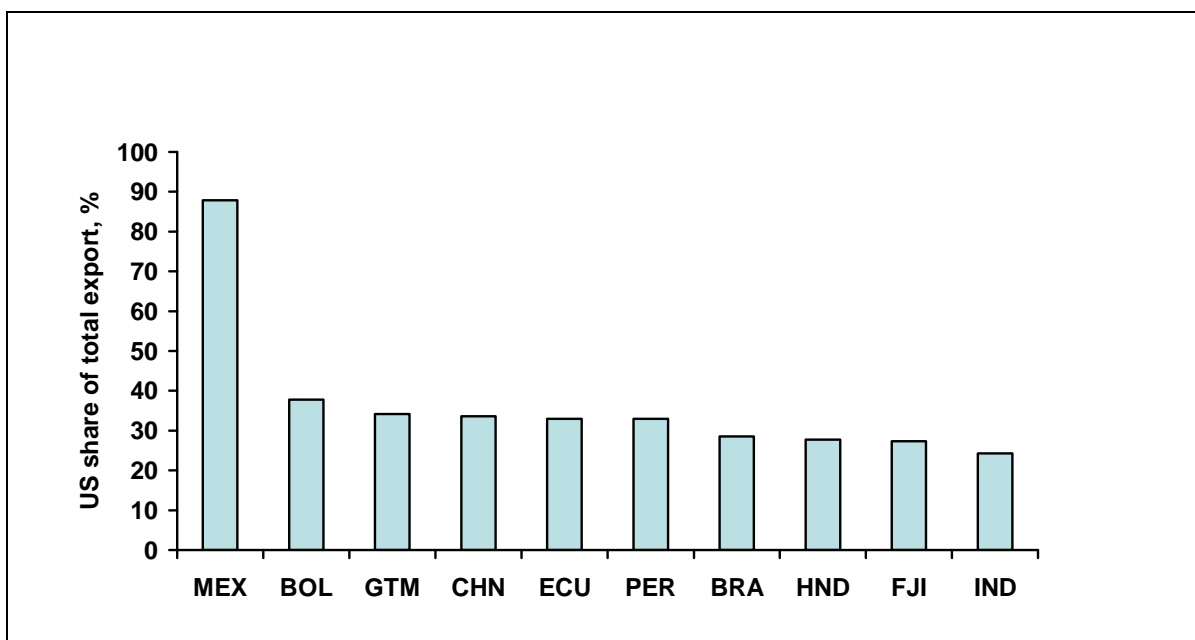
The dependency on the US market (and thereby also subject to potential impacts of the Lacey Act) would have strongest relative impacts on exports of Mexico (88% of total exports to the USA), Bolivia, Honduras, Guatemala, Peru, Ecuador, Brazil and Fiji. Significant but weaker impacts in relative terms would be felt by Ghana, Liberia, Côte d'Ivoire in Africa, Malaysia, the Philippines, Thailand and Indonesia in Asia, and Colombia, Guyana, Panama Suriname and Venezuela in Latin America (Figure 8.4).

The Japanese procurement policy has strongest relative impacts in the Philippines (82% of total exports to this market), Malaysia, Indonesia, Thailand and PNG.

⁷⁰ Including logs, sawnwood, veneer, and plywood, wood-based panels, joinery products and furniture

⁷¹ The EU market is here taken as a whole in spite of the fact that at present only six countries have central government public procurement policies, all of them being major tropical timber importers. It is anticipated that more EU countries will develop their own policies. Private sector procurement policies have an impact on most EU countries either directly or indirectly. If the due diligence regulation is approved, then the legality requirement would become relevant for all the EU countries.

Figure 8.4 Export Dependency of Selected ITTO Producing Countries and China on the US Market

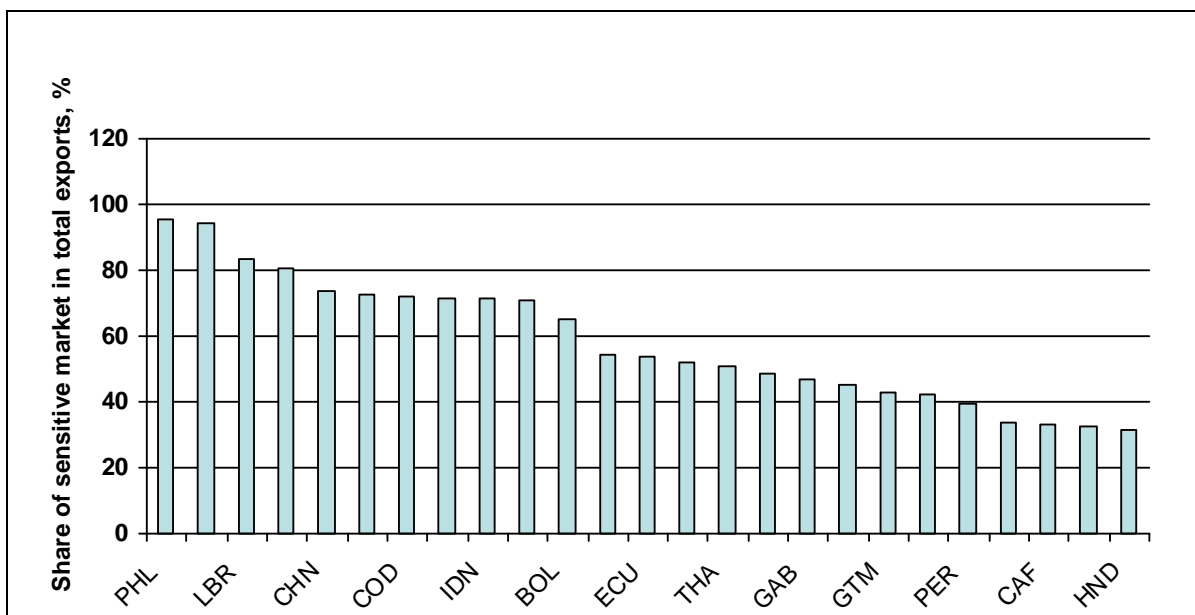


Note: Products covered are logs, sawnwood, veneer and plywood, other wood-based panels, builders' woodwork and furniture.
Source: Appendix 8.4

The combined dependency on the EU, US and Japanese markets is illustrated by Figure 8.5 which shows the cumulative shares of the three markets with timber procurement policies in the exports of selected ITTO producers and China which have more than two thirds of total exports depending on the sensitive destinations. The highest dependency in this case is found in the Philippines and Mexico, followed by Liberia and Cameroon. Of particular interest is China's strong dependency on sensitive markets which account for more than two thirds of her total exports in timber products, particularly further processed products and wood-based panels.

On a regional level, the timber procurement policies in consuming countries will have strongest direct impacts in Africa due to the high dependence on the exports to the EU (53% of the total for all ITTO producers in the region). Significant impacts will also be felt in Latin America but the US Lacey Act may have a stronger role in this region as the US share of the total regional exports is higher (39%) than that of the EU (21%) and the intra-regional trade is more important than in Africa. In Asia, the USA takes a quarter of the total regional exports, followed by EU (21%) and Japan (15%) (Appendix 8.4).

Figure 8.5 Export Dependency of Selected ITTO Producing Countries and China on the “Sensitive” Markets with Legality and Sustainability Requirements

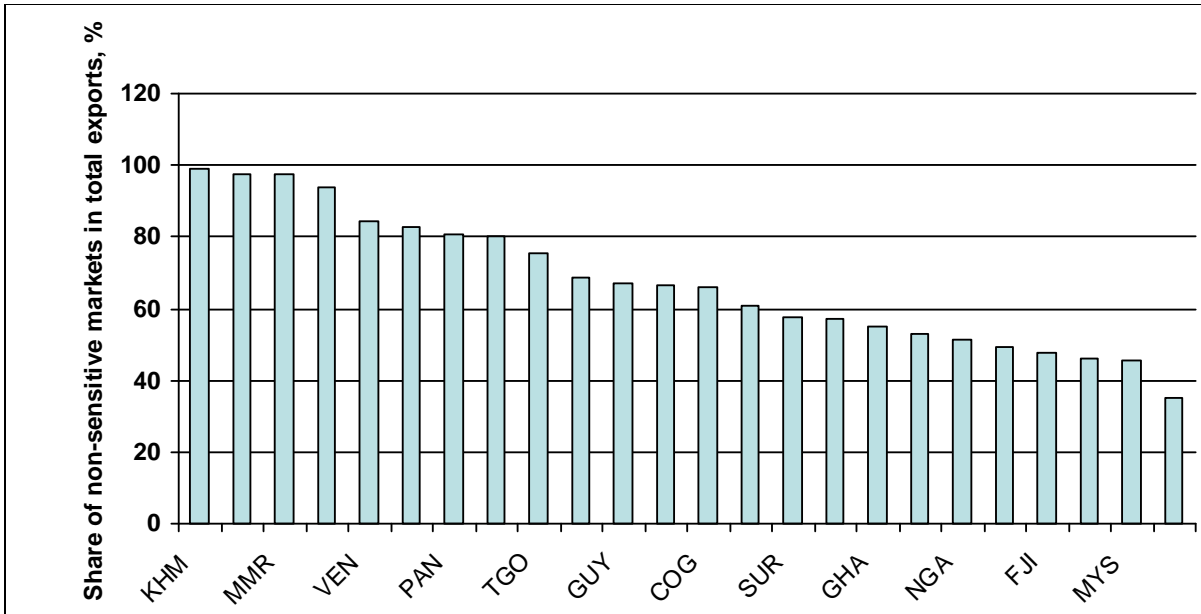


Note: Products covered are logs, sawnwood, veneer and plywood, other wood-based panels, builders' woodwork and furniture.
 Source: Appendix 8.4

The tropical timber exports to other countries (including within the developing regions) with no TPP pressure being felt for the time being is becoming increasingly important. For instance, the exports of Myanmar, PNG, Colombia, Peru, Trinidad & Tobago and Venezuela are almost exclusively with such countries (more than 80% of the total exports) (Figure 8.6). It is particularly the Chinese imports which have impacted the trade patterns of tropical timber. In fact, the trade impacts of TPPs will largely depend on how effectively the sustainability and legality requirements can be effectively met by China and other in-transit producer countries.

Future country-level impacts will also be influenced by the perceived risk of illegal or unsustainable products entering the supply chain. Risk assessment will be an essential element of the due diligence systems of importers of tropical timber. Suppliers in high risk countries will therefore face a competitive disadvantage. It is important that country risk assessments are made based on clearly defined criteria, verifiable information and transparent processes with full participation of the countries involved to avoid biased results.

Figure 8.6 Export Dependency of Selected ITTO Producing Countries and China on the “Non-sensitive” Markets



Note: Products covered are logs, sawnwood, veneer and plywood, other wood-based panels, builders' woodwork and furniture.
Source: Appendix 8.4

8.2 Forest Sector Impacts

The impacts of achieving legal and sustainable timber trade within short target periods may be dramatic for tropical timber producing countries even in cases where significant progress has been made towards SFM. Ghana is a case in point as the timber harvest, industry turnover and employment can be drastically reduced as a result of rapid implementation of legality requirements in her exports (Box 8.2).

In countries where the legal framework is adequate and a sound institutional set-up is in place there will be limited needs for adjustment due to demonstration of legality to foreign buyers. For instance, all the three case countries have adequate legal frameworks for operators to achieve legal compliance. Problems arise in cases where there are inconsistent laws which may conflict with each other. This is a key issue for countries which have made incremental changes in individual laws without addressing necessary implications elsewhere in legislation or other regulations. The problem is not necessarily the forest legislation itself but more often the lack of instruments and resources to implement it.

Institutional strengthening for implementing an adequate TLAS appears to be necessary in almost all tropical timber producing countries. It is crucial to separate control and implementation functions in forest administration during the decentralization process as the example of Peru (among others) has shown. This is not always easy due to weak status and limited resources assigned to forestry in the government structure. In Peru implementation of TLAS improvements risks remain ineffective due to budgetary constraints if the status of the sector administration cannot be raised. The ITTO Diagnostic Mission to the country noted the low political priority given to the forestry sector as a key constraint (ITTO 2003). Similar problems are common also in other countries, often associated with strong vested interests.

Another critical issue is the coordination and cooperation between central government and sub-national forestry institutions in countries with federal structure or decentralization. Different parts of the country are likely to proceed with their own speed as the Malaysian example in certification has shown. Failure to make progress in enforcement in one part of the national territory may put the whole country into the jeopardy of being classified as a high risk source.

Box 8.2**Assessment of Forest Sector Impacts of Legitimizing of Timber Exports in Ghana**

As part of the VPA process in Ghana, an assessment of potential impact on forest governance was carried out which drew on a comparison between three scenarios (i) the current situation as a baseline, (ii) legitimate timber scenario, and (iii) sector reform scenario with transit to improved forest governance. The comparison below between the two first scenarios is relevant here as the third scenario contains elements which are beyond the direct impacts of TPPs in exporting countries.

The main components of the legitimate timber scenario were: (i) national legality standard, (ii) chain of custody system (wood tracking), (iii) verification of legality system (licensing by a new timber validation entity), (iv) piloting of the legal assurance system, and (v) independent monitoring. In addition, a number of further measures were included to make progress in governance improvement including (vi) support to recognized chainsaw/mobile mill groups, (vii) off-reserve enumeration of trees, allocations and spot checks, (viii) domestic market monitoring, (ix) collaboration with export market monitoring, (x) establishment of public procurement policy, (xi) public disclosure of timber rights holdings and performance, (xii) awareness campaign, (xiii) facilitated stakeholder engagement, (xiv) mitigation of some key negative impacts, and (xv) capacity building.

The main findings of the assessment of the impacts of the legitimate scenario were:

- The national timber harvest would drop by about 20% in the short run (by 2012) but and still further until 2020 (by more than 50% compared to the present level).
- The share of formal sector in the total harvest would increase in the long run.
- Forest industry turnover would drop by about a half by 2012 and still somewhat further by 2020.
- Collection of official forest fees and taxes would first increase as a result of effective collection but drop in the longer run due to output decrease.
- The timber economic rent (full economic timber value of the growing stock) would reduce only slightly (less than 10%).
- Employment in primary processing would drop by more than 50%.
- The cost-benefit impact of this scenario would imply a negative balance amounting to about USD 20 million in 2020.

The assessment concludes that the Legitimate Timber Scenario contains only modest measures to avoid negative impacts creating a generally positive but fragile improvement in the long run because the business as usual would lead to more radical negative impacts in the long run. Considerable expectations are placed on the capacity of a broader sector reform to provide a "soft landing" for Ghana's timber sector. Log imports, plantation development, logging of submerged timber in the Lake Volta dam area and financing from reduced emissions from deforestation and forest degradation (REDD) were seen as additional potential positive factors to generate revenue which is projected to be lost with "legitimizing" of Ghana's timber exports.

Source: Mayers et al. (2008)

Voluntary certification is in the interest of governments as the need for control of certified FMUs can be reduced. A number of countries are already taking advantage of this in a way or another (reduced auditing, conditionality of concession agreement, tax breaks, etc.). Examples include Bolivia, Brazil, Costa Rica, Guatemala, Peru and the Republic of South Africa (Purbawiyatna & Simula 2008).

There has been considerable progress in recent years to move towards SFM in the management of forest concessions. For instance, in Cameroon, no forest concession was managed according to an approved forest management plan in 2003; in 2008 the number of concessions covered with approved FMPs was up to 65 covering a total forest area of 4.2 million ha. Moreover, a number of logging enterprises selling their products to EU markets have voluntarily applied for FSC forest certification or legality verification. Interviews with government officials suggest that there has been a sharp decrease in forest infractions registered which was also confirmed by Cerutti & Fomete (2008). The government has engaged itself in a number of initiatives to improve governance in the forestry sector including the appointment of international NGOs as independent monitors of forest law enforcement and the signature of a VPA.

Similar trends in illegal logging are also observed in Malaysia presumably partly as a result of increasing sanctions. However, a bigger challenge lies in the control of cross-border movement of stolen timber. Whereas there are indications that unrecorded cross-border trade took place on a large scale during the 1990s, illegal logging and exports have dropped significantly as a result of increased Indonesian enforcement efforts. As pointed out in section 7.1 the country will need to make considerable investments

on manpower, technical expertise and time to build up the necessary more effective monitoring and control system.

The impact on fiscal revenue depends on country situations. The government of Cameroon is presently collecting about USD 52 million of forest taxes annually. Tax recovery has been substantially improved since 2004 (World Bank, 2008) as illegal activities are decreasing. Meeting the requirements of the procurement policies either on legality or on sustainability would consolidate and secure the tax revenues from the forestry sector for the government of Cameroon.

On the other hand, the short-term impact on fiscal revenue of reduced illegal logging is found somewhat limited in Ghana and Indonesia as in both countries the volume of legal logging is curtailed by regulations (Mayers e al. 2008; EU-Indonesia... 2008). "Lost" illegal output cannot be compensated by legal production for this reason and the same limitation is found in many other tropical timber producing countries. However, in the long run there is potential for increased collection of forest taxes and royalties.

The various forest sector impact assessments – even though exploratory by nature – suggest that addressing legality needs more comprehensive measures, often major sector reforms to counteract the negative impacts of downsizing of the often excessive processing capacity. The problem from the TPP implementation point of view is that many of the factors driving illegal activities are systemic and not limited to the forest sector. The EU-Indonesia VPA impact assessment (2008) states this clearly:

As free riders, the illegal loggers' activities could actually be controlled if firm and immediate actions were taken, because one of the characteristics of the free riders is that they have high capability in developing strategic alliances with parties they can influence if no action is taken against their free riding activities. The habit of overlooking such conducts in the past is now yielding its fruit that is the difficulty to eradicate illegal logging because the strategic alliances with law enforcement officials, politicians, bureaucrats, forestry officials, and even communities have been firmly established and deeply rooted. In the social life system, the strategic alliances developed by the illegal financial backers have damaged the social capital. It is often seen that the communities view the illegal financial backers as heroes (Robinhoodism phenomenon). The losses resulting from the damage to the social capital are actually of the same magnitude as the other losses from illegal logging.

8.3 Forest Industry

While the forest industry needs to pay the costs of legal and SFM compliance and their independent verification/certification depending on the case (cf. section 7.2), they can also receive benefits through (i) reduced costs for more effective planning and control of their own operations, (ii) continuous access to markets with procurement policies and avoidance of loss of sales including through organized networks searching for certified timber products, (iii) eventual price premiums depending on the demand-supply situation, (iv) opportunities offered by branding of certified products under international schemes, (v) improved image, and (vi) improved risk management which may facilitate access to, and reduce the cost of external financing.

Supply chain management in forest industry is commonly practised in industrialized countries. Large timber concessionaires require a good control of their supply chain to avoid timber losses through carelessness or pilferage. In Cameroon, the forest industry enterprises engaged in certification have improved the efficiency of their field operations and have established internal auditing systems to monitor the whole production process.

In competitive production systems managers need to know where their wood comes from, where it is at any point in time, where it is intended to go, and when it is scheduled to arrive there. To close the loop they also require information on whether the wood arrived at its intended destination, when it arrived, and its condition at the time of arrival. Although such information can prevent or expose log theft and can thwart efforts to add illegal logs to the wood mix, its primary use is to enable cost-effective management of the supply chain itself. Forest managers require similar information to meet contractual obligations for wood supply and also to sustainably manage the forest itself (Dykstra et al. 2002). Improved information on forests, terrain conditions and harvestable trees has a major potential to rationalize planning of forest

roads and skidding trails and to significantly reduce harvesting costs. The benefits of having a systematic supply chain management through electronic methods of monitoring and control are that there will be time saving through computerized stock taking, and minimal loss of timber attributed to carelessness, errors in stock-keeping, or pilferage⁷².

There are also other potential benefits for the industry. The importance of potential sales revenue impacts is illustrated by a simulation example in Peru (Table 8.1). The least remunerative markets for the country are the two largest export outlets, China and Mexico, while significantly higher prices are obtained from the USA and the EU. Could a part of the exports (23% in the example) to the low-priced markets have been directed to the EU in 2007 which has been a marginal market for Peruvian exports (partly due to concerns on legality and sustainability), the country's timber export revenue would have increased by 16% (USD 14.6 million). This example is of course simplistic as an increase of this magnitude in the Peruvian market share in the EU imports would have also required strong marketing efforts, changes in companies' marketing strategy and improving the product quality and competitiveness. However, it can serve for illustrative purposes and each tropical timber producing country should consider alternative scenarios for their exports in terms of market distribution and value added of production.

Table 8.1 Potential Impact on Export Revenues of New Market Opportunities Offered by Meeting the Requirements of Procurement Policies – Theoretical Simulation with Peruvian Exports in 2007

Market	Actual exports		Simulated exports	
	Volume m ³	Value USD 1000	Volume m ³	Value USD 1000
China	48,781	16,488.0	37 635	12,720.7
Mexico	90,000	46,710.0	69,436	36,037.5
USA	35,961	29,164.4	35,961	29,164.4
EU	890	814.4	32,599	29,828.5
Total	175,632	93,176.7	175,632	107,751.0

Source: Country case study on Peru

Finally, it is recognized that tropical timber producers will face a new type of risk, loss of revenue due to forfeiture of goods under the US Lacey Act or eventual sanctions of the planned EU due diligence regulation. Meeting the legality and sustainability requirements and providing a credible proof of it contributes to business risk management of forest industry companies and is likely to positively influence their investment costs. Several financing institutions participating in the Equator Principles Financing Institutions initiative are already paying attention to legality and sustainability aspects of their lenders and the perceived risk influences the access to, and cost of, financing⁷³.

The above discussion concerns mainly the impact of procurement policies on log trade and primary processing. Implications for further processing are probably largely similar. Increasing further processing in tropical timber producing countries will be one important strategy in the adjustment of the production structure to counter possible negative impacts of market requirements for legality and sustainability. For instance in Ghana, this was identified as a key element of the sector reform scenario to counteract the impacts of the downsizing of the primary processing industry as its capacity exceeds the supply potential of the country's permanent forest estate. A complementary element of the future will be development of planted forests (Box 8.1). Similar situation is found in many other ITTO producing member countries.

8.4 Other Development and Social Impacts

In many countries impacts on poverty reduction of TPPs can be negative in the short run but their long-term effects are likely to be positive if necessary sector reforms can be implemented (e.g. Mayers et al. 2008). In countries where the primary processing capacity has to be downsized significantly, the social

⁷² This view is reported to prevail among forest managers in the Malaysian country case study.

⁷³ <http://www.equator-principles.com/principles.shtml>

costs are likely to be highest. Any positive future scenarios in the sector will depend on the possibility to shift to alternative raw materials, usually plantation wood, and to build up competitive further processing sector.

The contribution of the forestry sector to the tax revenues in Cameroon has improved since verification of legality started. For example, in 2007, the central government transferred a total of USD 13.3 million to local councils of the forest zone representing 50% of the area based forest tax collected. These funds are to be directly used for local development and poverty alleviation.

The country case studies on Cameroon and Peru showed that community forestry can benefit from legality and sustainability requirements if necessary external support can be mobilized. However, in Cameroon, no impact on community forests of procurement policies has been observed as yet because most of their products are destined to the local markets. In the long run forest communities should become increasing participants in timber trade when their number increases and their capacity is improved. However, in the short run it is feared that, if the procurement policies are widely applied; most community forests will go out of business because the costs of legality verification and sustainability certification are too high for them.

Currently, timber production from community forests is not monitored by the forestry administration and is part of the informal sector. Therefore if community forests are abandoned because it is too expensive for them to meet the costs related to legality verification, more than 25,000 poor people could go jobless, and even the domestic supply of construction timber would face problems.

It is estimated that the formal forestry sector employs 13,000 people in Cameroon and about 8,000 of these jobs are located in the remotest parts of the country where the government is not able to open and maintain roads. The salaries of the employees of the forestry sector constitute the main financial sources on which local economies run in such regions. At the same time the contribution of forest enterprises to the maintenance of public roads is essential. If Cameroon does not implement the VPA, local development in these landlocked regions will receive a drastic setback.

Similar problems are also expected elsewhere. For instance, in Indonesia the legal operations employ about 118,300 people and illegal operations 123,000-177,000 people (EU-Indonesia... 2008). If the latter become unemployed and alternatives cannot be offered in plantation-based activities, social forestry or other activities, significant social unrest could emerge in forest areas.

The most worrying impacts concern the informal timber products sector in Cameroon which meets most of the national demand for timber products and which is estimated to employ about 150,000 people (Lescuyer et al. 2009). About 20% of the total timber production of the informal sector comes from community forests but the remaining 80% come from other forest titles for which the administration has no effective monitoring capacity, and from unregulated/illegal sources such as trees felled in individual farms (cf. Appendix 7.1). The informal sector's social benefits are significant and "legalizing" their operations in the short run is unrealistic and unfeasible for political, economic and social reasons. In addition, the forestry administration is not able to monitor the activities of the informal sector. It seems more realistic to design procedures that would allow operators in the informal sector to progressively enter the formal sector and temporarily exclude the national market from the VPA until 2015 at least. Otherwise, the VPA may have a perverse impact of increasing poverty instead of reducing it.

Adequate assistance to local communities would be needed in meeting the VPA requirements to cover their financial and capacity needs (see Table 7.2). As part of the informal sector, community forests seem to be the easiest to monitor because the land allocation is already documented. In spite of the specific provisions in the legislation to promote community forestry like in Cameroon, its economic viability is far from clear and the procurement policy requirements are likely to put this segment at a disadvantage if necessary external support cannot be provided. However, in the long run community forests should be economically self-standing. There is potential for that as Table 8.1 on Peru shows but moving to downstream timber processing would be needed. To build up technical and managerial capacity for timber processing at community level is an additional challenge to what is needed for sustainable forest management, particularly if more value added is targeted at than can be obtained from rough sawn air-dried lumber.

The certified community forests in Peru (16 FMUs) have all undergone a group certification process in which a “forest manager” has acted as group organizer. Together with external aid⁷⁴, this has brought the necessary financial support and technical skills as well as ensured markets for the certified FMUs. In addition to economic and employment benefits, certification has also effectively protected the FMU from external illegal encroachment which is common in their areas. Furthermore, indigenous communities have got organized for forest production which has also reduced conflicts related to the use of forests which have been common in Peru during the last few years. Strengthened community organization would be also necessary for entering sawmilling resulting in significantly expanded economic benefits for community members as shown in Table 8.2. This experience suggests that support programmes to community forestry, at least in the case of Peru, would greatly benefit if SFM implementation and its certification is part of the support strategy. Joint ventures between forest communities and forest industry or private investors with experience on international marketing of timber can result in significant benefits to both parties.

Table 8.2 Economic Opportunities of Community Forests in Peru

Item	Unit	Stumpage sales	Log sales (delivered)	Sawnwood sales
Volume	m ³	17,809	17,809	9 759
Revenue	USD	28,053	770,018	2,462,620 ^{a)}
Net profit	USD	18,807	83,615	287,394
Revenue per capita	USD/yr	63	281	964
Community employment	Workers	2	24	26 ^{b)}
<p>a) Average sales price in the case of community enterprise is USD 252/m³. The average export price FOB in Peru was in 2007 USD 915/m³; the difference being explained by lower product quality, different species mix and high transportation costs to export ports in the case of community sawmill.</p> <p>b) Only two additional staff are needed for monitoring and control as sawmilling is contracted to a private sawmill.</p>				

Source: Country case study on Peru

8.5 Environmental Services

The beneficial impacts of sustainably managed tropical forests on biodiversity, soil and water as well as forest health and vitality are well known and do not need to be elaborated here. Improved governance, demarcated FMUs whose borders are effectively protected, and systematic forest management within the SFM framework would bring significant potential positive environmental impacts. In addition, improved forest governance would provide the necessary preconditions for forest owners to participate in the emerging payment mechanisms for environmental services, including mitigation of climate change. Implementation of effective TLAS and FMU legality verification/SFM certification may also reduce the investor risk in forest carbon offsets and may therefore have a direct positive impact on potential carbon revenue (Elson 2009).

Compliance with SFM certification standards requires studies on forest fauna, identification and monitoring of areas with special conservation values, reduced impact harvesting methods and good relationships with local populations. These factors bring intangible values for the certified FMU which can open up opportunities for financing from global environmental initiatives related to climate change, biodiversity and desertification. For instance, in the largest certified FMU in Peru studies revealed that the carbon stock of the area was 83 million tCO₂. This offered a basis to develop a REDD project to raise additional funding for additional activities needed for effective control of the area, protection of the endemic forest fauna and flora, and conservation of special areas within the FMU.

⁷⁴ In this case from USAID and ITTO.

9. CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusions

In spite of the difficulties and obstacles of tropical timber producers to meet the emerging requirements of public and private sector timber procurement policies in major import markets, it needs to be recognized that these instruments are 'soft' policy tools. The market pressures towards legal and sustainable trade are strong and increasing, and the timber sector worldwide has to adjust. TPPs can be taken to represent a compromise between the market pressures and what is possible to achieve by producers and governments. Market pressures for sustainability are not new and they have influenced the tropical timber trade already for almost twenty years. They are expected to become stronger in the future, not least because of the introduction of such 'hard' regulatory instruments as the US Lacey Act Amendment and the planned EU due diligence regulation. It is time for the timber sector at large to shift emphasis from resistance to proactive measures and the current situation shows that this can pay off.

The gloomy picture painted in this report on possible impacts on the tropical timber producers of public and private sector procurement policies did not duly recognize the fact that many tropical timber products have unique characteristics offering them an inherent market advantage against temperate wood. The sector's growth in the tropics will have to be increasingly generated through development of further processing and alternative raw materials for timber produced in natural forests. Eradicating illegal logging and trade will not only be necessary for meeting the current market requirements but also enabling the industry to adjust its operations domestically on sustainable levels.

The review of the public and private sector TPPs revealed that there is a lot of scope for their improvement in terms of definitions of legality and sustainability, procurement criteria, time-schedules and implementation arrangements in order to make these policies more effective in contributing to the identified objectives. The impacts on tropical timber producing countries can be drastic and create serious political problems for their governments if they lead to large job cuts. Such outcomes would neither be in the interests of importing countries.

Free riding by illegal loggers and traders cannot continue if the forest sector is going to be socially acceptable both in timber producing and consuming countries. Sustainable forest industry can only be based on a level playing field for responsible operators.

Importing countries should take necessary measures to help tropical timber producers in meeting the requirements of their public and private sector procurement policies. These support measures include, among others, facilitating effective participation of tropical timber producers in the design of their policies, due consideration of importers' policy impacts on trading partners in the tropics (e.g. through *ex ante* impact assessments as already practised e.g. by the EU), avoidance of proliferation of policy requirements (between and within importing countries), improving the clarity and consistency of policy provisions, adoption of realistic targets and time-schedules, including avoidance of constantly changing (often unrealistic) goalposts, as well as significantly expanded technical assistance and financial support to tropical timber producing countries.

In order to meet the procurement policy requirements of the public and private sectors, tropical timber producing countries will have to be prepared to accelerate their efforts in strengthening their forest governance, legality assurance systems, information base on the sector, and enterprise-level management and control systems. Of particular concern are community forests, SMEs and the informal sector which are least equipped to meet the emerging requirements as these actors risk to be excluded from export trade to the markets which require legality and sustainability. Many countries, particularly those with excessive primary processing capacity, should engage in sector reform strategies which emphasize further processing and development of alternative raw materials through planted forests. Integration of the informal sector into regulated production will be one of the most complex and politically sensitive issues to address.

9.2 Recommendations

In order to enhance the positive potential impacts of timber procurement policies in promoting legality and sustainable forest management in tropical timber producing countries, and to mitigate their potential adverse effects on these countries, the following recommendations are made:

9.2.1 ITTO

- i Monitor the development of timber procurement policies as well as the supply and demand for legality verified and SFM certified timber and timber products and associated trade flows to improve market transparency to enable tropical timber producers to plan their efforts based on adequate information
- ii Promote convergence and comparability of procurement policies related to tropical timber and timber products through enhanced exchange of information and lessons learned at international level in order to facilitate tropical timber suppliers to meet market requirements for their products
- iii Explore the feasibility to develop a common generic standard or guideline for defining legality applicable in tropical timber producing forests drawing on the accumulated experience
- iv Assist producing member countries to assess implications of TPPs for their production, export, employment, fiscal revenue and the environment, and to develop appropriate sector reform strategies
- v Provide support to capacity building, particularly forest information systems and training, to enable planning and implementation of national timber legality assurance systems
- vi Support development of community forestry through analyses of production chains of certified FMUs and their opportunities in international markets as well as analyses of production and certification costs and means how they could be reduced and financed through market benefits
- vii Facilitate exchange of information and experience between member countries in building up information and verification systems including benchmarking in production and transaction costs of legal and sustainable timber to meet the requirements of timber procurement policies
- viii Develop tools for risk assessment and management to facilitate trade in legality verified/SFM-certified tropical timber and timber products; such tools should be based on clearly defined criteria, verifiable information and transparent processes with full participation of the countries involved.

9.2.2 Governments in Tropical Timber Producing Countries

- i Participate in the consultative processes related to the development of TPPs in importing countries to enhance trade's positive impact on legal compliance and sustainability of the management of tropical forests
- ii Promote voluntary SFM certification and independent legality verification as complementary instruments to government supervision and enforcement and to reduce public sector control costs
- iii Build up reliable TLAS including strengthening of forest information systems, application of advanced technologies, inter-sectoral coordination and cooperation, and institutional improvements in enforcement
- iv Recognize that paper trail-based control systems tend to contain loopholes and weaknesses and therefore embark on piloting and introduction of improved technologies such as RFID in product tracking and tracing
- v Reduce transaction costs for legal production to minimize incentives for illegal operations
- vi When appropriate, review forestry and related legislation to detect and eliminate contradictions and to include new provisions that recognize the new technological environment characterized by digitized information systems
- vii Implement national public procurement policies to promote domestic demand for legal and sustainably produced timber
- viii Provide incentives to community forests and SMEs in the timber production to overcome their barriers to comply with legality verification and SFM certification.
- ix Take proactive measures to gradually integrate the informal sector into the formal sector in order to avoid adverse socio-economic impacts of implementation of legality and sustainability requirements in the timber supply

9.2.3 Governments in Tropical Timber Consuming Countries

- i Consider implications of their procurement policy requirements for tropical timber producing countries and notify their trading partners on their intentions to introduce or amend their central government timber procurement policies
- ii In developing and revising national public procurement policies consider the issue of avoiding unnecessary proliferation of requirements
- iii Promote the adoption of central government procurement policies by sub-national and local governments to make them compatible with the agreed policy objectives of achieving trade of tropical timber from legal and sustainable forest managements and specifically to avoid outright banning of tropical timber use
- iv Provide expanded support programmes to tropical timber producing countries to help them meet the procurement policy requirements to mitigate possible negative socio-economic impacts of their implementation (e.g. through such mechanisms as ITTO's TFLET thematic programme)

9.2.4 Forest Industry and Trade

- i Be prepared to provide transparent and verifiable information on sourcing and production of tropical timber products
- ii Gain understanding on risks and obstacles in purchasing and supplying legally and sustainably produced tropical timber products and be responsive to reduce these barriers and carry out adequate risk assessment in sourcing tropical timber
- iii Engage in legality verification and forest certification as appropriate in local conditions in view of sustainability becoming a baseline requirement in most procurement policies in the future
- iv Develop appropriate codes of conduct to promote legal compliance and sustainability in production and sourcing
- v Seek to harmonize private sector procurement policy requirements with those of the public sector
- vi Support and engage in SFM certification of community forests, smallholders and SMEs through appropriate approaches of group certification.

REFERENCES AND INFORMATION SOURCES

Literature cited

- Aggarwala, R.T. 2008. Tropical Hardwood Reduction Plan. Memorandum to Mayor Michael R. Bloomberg. February 11, 2008.
- APHIS. 2008. Amendments to the Lacey Act from H.R.2419, Sec. 8204.
http://www.aphis.usda.gov/plant_health/lacey_act/downloads/background--redlinedLaceyamndmnt--forests--may08.pdf
- APHIS. 2009. Implementation of Revised Lacey Act Provisions. Department of Agriculture. Animal and Plant Health Inspection Service. Docket no. APHIS-2008-0119. Federal Register 74(21): 5911-5913.
- Bird, D. et al. (undated). Legal Timber Verification and Governance in the Forest Sector. Overseas Development Institute/CATIE/RECOFTC/CIFOR. London.
- Brack, D. 2008a. Government Timber Procurement Policy. A submission to the Environmental Audit Committee inquiry into Forests: the future of carbon markets in their protection and the timber trade. Chatham House. October 2008. London.
- Brack, D. 2009a. Combating Illegal Logging Interaction with WTO Rules. Chatham House Briefing Paper. June 2009.
- Brack, D. 2009b. Social Issues in Timber Procurement Policies. Fourth draft, January 2009. Chatham House.
- Brown, D., Schreckenber, K., Bird, N., Cerutti, P.O., Gatto, F.D., Diaw, C., Fomete, T, Luttrell, C., Navarro, G., Oberndorf, R. & Thiel, H; Wells, A. 2008. Legal Timber. Verification and Governance in the Forest Sector. Overseas Development Institute. London. 331p.
- Buongiorno, J., Zhu, S., Zhang, D., Turner, J.A. & Tomberlin, D. 2003. The Global Forest Products Model, Estimation and Applications. Academic Press, San Diego, CA.
- CEC 2004. Buying Green. A Handbook on Environmental Public Procurement. Commission Staff Working Document. Brussels. CEC (1050) 2004.
- CEC. 2008a. Proposal for a Regulation of the European Parliament and of the Council Laying Down the Obligations of Operators Who Place Timber and Timber Products on the Market. {SEC(2008) 2615} {SEC(2008) 2616}. COM(2008) 644/3 2008/xxxx (COD).
http://ec.europa.eu/development/icenter/repository/flegt_timber_proposal_oct08.pdf
- CEC. 2008b. Public Procurement for a Better Environment. Commission Staff Working Document accompanying the Communication from the Commission to the European Parliament, the Council and Social Committee and the Committee of the Regions. Brussels, 16.7.2008. SEC(2008) 2126.
http://ec.europa.eu/environment/gpp/pdf/com_2008_400.pdf
- Cerutti, P. O & Fomete, T. 2008. The Forest Verification System in Cameroon. In Brown (2008): 135-146.
- CPET. 2008a. Comparison of Timber Procurement Policy Criteria for Forest Standards, Certification, Accreditation, Chain of Custody and Labeling. Denmark, the Netherlands, United Kingdom and Belgium. June 2008.
- CPET. 2008b. Construction Sector Project. Policy Implementation and Reporting. UK Government's Timber Procurement Policy.DEFRA. June 2008.
- CPET. 2009. Timber Reporting Pilot Study. UK Government's Timber Procurement Policy. DEFRA. July 2009.
- Department for Communities and Local Government. 2009. Code for Sustainable Homes. Technical Guide. May 2009. Version 2. http://www.planningportal.gov.uk/uploads/code_for_sustainable_homes_techguide.pdf
- Danish Ministry of the Environment. 2007. Draft Criteria for Legal and Sustainable Timber and Assessment of Certification Schemes. Danish Forest and Nature Agency. April 2007.
- Dutch Procurement Criteria for Timber. 2008. Timber Procurement Assessment Committee. October 2008.

- Dykstra, D.P., Kuru, G., Story, J., Nussbaum, R., Magrath, W.B. & Taylor, R. 2002. Technologies for Wood Tracking: Verifying and Monitoring the chain of Custody and Legal Compliance in the Timber Industry. The World Bank. Environment and Social Development East Asia and Pacific Region Discussion Paper. [http://lnweb18.worldbank.org/ESSD/essdext.nsf/80DocByUnid/F4681975EBAEF_A0B85256C79007547DB/\\$FILE/TechnologiesForWoodTracking2002.pdf](http://lnweb18.worldbank.org/ESSD/essdext.nsf/80DocByUnid/F4681975EBAEF_A0B85256C79007547DB/$FILE/TechnologiesForWoodTracking2002.pdf)
- Eastin, I. 2008. Use of Green Building Programs and Certified Wood in the US. UNECE/FAO Timber Committee Meeting. Rome, Italy, October 20th, 2008. Powerpoint presentation.
- EIA. (undated). Due Negligence. The Case for Stronger EU Legislation on Illegal Timber.
- Elson, D. 2009. Adding Value: Can FLEGT Voluntary Partnership Agreements Lead to Increased Investment and Trade for Partner Countries. Forest Trends/DFID. April 2009.
- EU-Indonesia FLEGT Support Project. 2008. Analysis of the Trade Impact of the VPA for Indonesia. Main report. Jakarta. 28 February 2008.
- FERN. 2009. Buying a Sustainable Future? Timber Procurement Policies in Europe and Japan. Brussels. http://www.fern.org/media/documents/document_4427_4434.pdf
- FLEGT Briefing Notes. A Timber Legality Assurance System. EU FLEGT Briefing Note 09.
- Garlipp, R. Director. Sociedad Brasileira de Silvicultura. Personal communication.
- Hentschel, G. 2008. Review of Timber Trade Federations' Purchasing Policies – Update 2008. EU Timber Trade Action Plan (TTAP). Draft version 23 October 2008.
- Indufor. 2008. Assessment of the Impact of Potential Further Measures to Prevent the Importation or Placing on the Market of Illegally Harvested Timber or Products Derived from Such Timber. European Commission. DG Environment. Helsinki, January 21, 2008.
- ITTO. 2003. Achieving the ITTO Objective 2000 and Sustainable Forest Management in Peru. August, 2003.
- ITTO. 2009. Proceedings of the International Conference on Intra-African Trade in Tropical Timber and Timber Products. Accra, 30 June – 3 July 2009.
- IUCN GB European Forestry Week. 2008. 20 October 2008. Powerpoint presentation.
- Joyce, A. M. 2008. Building Rating Systems around the World. European Forestry Week 2008. 20 October 2008. Powerpoint presentation.
- Lescuyer, G., Eba'a Atyi, R. & Cerutti, P. 2009. Consommations nationales de bois d'œuvre en Afrique Centrale: un enjeu majeur pour la gestion forestière durable. Paper submitted for presentation at the World Forestry Congress.
- Li, R., Buongiorno, J., Turner, J.A., Zhu, S. & Prestemon, J. 2008. Long-term Effects of Eliminating Illegal Logging on the World Forest Industries. Trade and Inventory. Journal of Forest Policy and Economics 10(2008): 480-490.
- Lundmark Jensen, C. Co-ordinator on International Forest Policy. Ministry of Environment-Forest Policy Division. Denmark..
- Mayers, J., Birikorang, G., Danso E.Y., Nketiah, K.S. & Richards, M. 2008. Assessment of Potential Impacts in Ghana of a Voluntary Partnership Agreement with the EC on Forest Governance. IIED. Final Report. 19 March 2008.
- MCPFE. 2009. Report of the MCPFE Open-ended Ad-hoc Working Group on "Sustainability Criteria" for Forest Biomass Production, Including Bioenergy. ELM/2009/Oslo/Doc 2. http://www.mcpfe.org/filestore/mcpfe/Meetings/2009/MCPFE_Expert_Level_Meeting_24-25_November_2009/ELM_2009_Oslo_Doc2_MCPFEWG_SustCritfinalreport.pdf
- Ohashi, Y. 2009. Timber Imports and Market Situation in Japan. Japan Lumber Importers' Association. 45th ITTC Market Discussion. Yokohama, November 2009. Powerpoint presentation.
- Oliver, R. 2009. EU Market Conditions for "Verified Legal" and "Verified Legal and Sustainable" Wood Products. Forest Industries Intelligence Ltd. Prepared for the Timber Trade Federation and DFID.
- PriceWaterhouseCoopers. 2009. Supply Chain Report 2009. Carbon Disclosure Project.

- Proforest. 2007a. Comparison of EU Public Timber Procurement Policies 2007. www.proforest.net/cpet.
- Proforest. 2007b. Comparison of Non-EU Public Timber Procurement Policies 2007. www.proforest.net/cpet.
- Proforest. 2007c. Evaluation of the Belgian Public Procurement Policy on Timber. Final Report, 17th April 2007. Oxford. www.proforest.net.
- Purbawiyatna, A. & Simula, M. 2008. Developing Forest Certification. ITTO Technical Series 29. May 2008. Yokohama.
- Rambøll Management.. 2006. Evaluation of the Danish Guidelines on Public Purchase of Tropical Timber. Sub-project A. User survey. Summary and conclusions. Danish and Nature Forest Agency. January 2006.
- Seneca Creek Associates LLC. 2008. Assessment of Lawful Harvesting & Sustainability of US Hardwood Exports. Prepared for American Hardwood Council. October 1, 2008. Version 1.0.
- Simula, M. 2006. Public Procurement Policies fore Forest Products and Their Impacts. Discussion Paper. In UNECE/FAO 2006; pp. 23-82.
- Spirandelli, B. 2008. Overview of Green Building: Opportunities and Constraints. UNECE/FAO Workshop "The roles of wood in green building and green building effects on the forest sector in the UNECE region". Rome, 20 October 2008. Powerpoint presentation.
- Tind Nilesen, S. 2008. Timber Legality and Sustainability Verification – the CPET Approach Using Category B Evidence. Chatham House. Workshop presentation. Copenhagen, 7-8 April 2008.
- UK Government Timber procurement Policy. Timber Procurement Advice Note. April 2009.
- UK Government Timber Procurement Policy. Central Point of Expertise on Timber. Definition of 'legal' and 'sustainable' for timber procurement. Second Edition November 2006.
- UNECE/FAO. 2009. Forest Products Annual Market Review, 2008-2009. Geneva.
- USGBC. 2008. LEED 2009 for New Construction and Major Renovations Rating System. <http://www.usgbc.org/ShowFile.aspx?DocumentID=5546>
- World Bank. 2008. The Rainforests of Cameroon: Experience and Evidence from a Decade of Reform. Washington DC.
- WRI/WBCSD. 2009. Sustainable Procurement Guide and Resource Kit. [www.SustainableForest Products.org](http://www.SustainableForestProducts.org)
- Yale Program on Forest Policy and Governance. 2008. Final Report: Assessing USGBC's Policy Options for Forest Certification and the Use of Wood and other Bio-based Materials. 25 February 2008. www.yale.edu/forestcertification/USGBCFinal.htm
- Xuang Ty, H., Hong Anh, D. & Perera, O. 2009. Sustainable Public Procurement Preparedness Assessment in Vietnam. A reference to the timber industry. IISD. June 2009.

URLs of procurement policies (consulted in August 2009)

Belgium

<http://www.gidsvoorduurzameaankopen.be>
<https://portal.health.fgov.be>

Denmark

<http://www.skovognatur.dk>

France

<http://www.ecologie.gouv.fr/IMG/>
<http://www.developpement-durable.gouv.fr/>
<http://www.legrenelle-environnement.fr/>

Germany

<http://www.bmelv.de>

The Netherlands

<http://international.vrom.nl/pagina.html?id=37479>
<http://www.tpac.smk.nl/>

Norway

<http://www.regjeringen.no/en/dep/md/>

Sweden

<http://www.msr.se/en/>

Switzerland

<http://www.bbl.admin.ch/index.html?lang=de>

United Kingdom

<http://www.defra.gov.uk/>

www.ogc.gov.uk

<http://www.proforest.net/cpet>

Canada

<http://www.cagbc.org/>

http://www.housing.gov.bc.ca/building/wood_frame/

<http://www.mrnf.gouv.qc.ca>

Japan

<http://www.env.go.jp/en/laws/policy/green/index.html>

<http://www.goho-wood.jp>

New Zealand

<http://www.maf.govt.nz/forestry/twpp/index.htm>

Brazil

www.caixa.gov.br/imprensa

<http://www.ces.fgvsp.br>

<http://www.raa.org.br/>

<http://www.pactomadeiralegal.com.br/userfiles/cartilha-pacto.pdf>

<http://www.sigam.ambiente.sp.gov.br/Sigam2/Default.aspx?idPagina=1317>

Mexico

<http://www.funcionpublica.gob.mx/unaopspf/doctos/adquisiciones/dof311007.pdf>

<http://www.funcionpublica.gob.mx/unaopspf/doctos/adquisiciones/dof050907.pdf>

<http://www.cddhcu.gob.mx/LeyesBiblio/pdf/14.pdf>

URLs of green building initiatives (consulted in August 2009)

<http://www.breeam.org/page.jsp?id=86>

<http://www.chps.net/manual/index.htm#score>

http://www.chps.net/manual/documents/Criteria/TX_CHPS_Criteria_2009.pdf

http://www.dovetailinc.org/files/u1/Env__Attributes_of_Building_Materials.pdf

<http://www.greenglobes.com>

<http://www.earthcraftthouse.com/>

http://www.housing.gov.bc.ca/building/wood_frame/

<http://leg1.state.va.us/cgi-bin/legp504.exe?081+sum+SB174>

<http://www.nahbgreen.org/Guidelines/ansistandard.aspx>

<http://www.njleg.state.nj.us/bills/BillView.asp>

<http://open.nysenate.gov/openleg/api/html/bill/S4991>

<http://www.planetfriendlycanada.com/uploads/pdf/strategie-developpement.pdf>

<https://www.revisor.leg.state.mn.us/bin/bldbill.php?bill=S2078.4.html&session=Is86>

<http://www.statesurge.com/bills/511564-hb-2337-texas>

<http://www.thegbi.org/green-globes/>

<http://www.usgbc.org/>

<http://www.woodfloorg.com/Downloads/wfrg/GreenGlobesE1E2credits.pdf>

Other URLs (consulted in August 2009)

<http://www.cen.eu/CENORM/Sectors/TechnicalCommitteesWorkshops/CENTechnicalCommittees/WP.asp?param=481830&title=CEN/TC+350>

http://ec.europa.eu/environment/gpp/index_en.htm

http://ec.europa.eu/development/index_en.cfm

http://ec.europa.eu/development/policies/9interventionareas/environment/forest/flegt_en.cfm

<http://www.equator-principles.com/principles.shtml>

www.ifa-association.com

www.SustainableForestProducts.org

www.timbertradeactionplan.info

www.wikipedia.org

Appendix 1.1 Terms of Reference

1. Preamble

Timber procurement policies are being considered and implemented by public agencies, trade associations, and private companies in many traditional tropical timber markets. These policies are being introduced principally to address public concerns about the environmental credentials of products by adding criteria other than price into the decision making process. Many purchasers are demanding that products come from sustainable, or at least legal, sources and that this be verifiable, in order to maintain credibility with public opinion. In the UK, for example, the Government announced that from April 2009 its central departments will purchase only timber and timber products that derive from sustainably managed forests or are licensed under the EU Forest Law Enforcement, Governance and Trade (FLEGT) regulation; from April 2015 only sustainably produced timber will be purchased. This policy is at present under consultation and may be modified. These types of policies have significant implications for tropical timber suppliers if fully implemented. As new developments are occurring rapidly, there is an urgent need for tropical wood product exporters to monitor these developments, assess their ability to meet these requirements if they are widely adopted, and to explore the market threats – and opportunities – presented by these developments.

2. Terms of Reference

The activity will:

1. Undertake a review of developments and progress regarding timber procurement policies particularly in key tropical timber importing countries, including the identification of drivers and influencing factors as well as trends in policy requirements for the procurement of timber particularly tropical timber;
2. Assess the positive and negative impacts of timber procurement policies on the international trade in tropical timber including, in particular, the comparative competitiveness of tropical timber, the tropical timber industry and the management of tropical forests;
3. Identify and analyse the main similarities and differences among timber procurement policies and the attendant implications for the procurement of tropical timber;
4. Assess the extent to which suppliers in ITTO member countries are able to meet the requirements and costs of timber procurement policies and have access to the opportunities and benefits generated by these policies;
5. Identify and analyse the key factors affecting the ability of suppliers in ITTO member countries in meeting the requirements and costs of timber procurement policies and make concrete recommendations on how their ability could be enhanced to overcome the constraints and meet the requirements;
6. Examine and assess the need and desirability for and the practicality of promoting convergence, coordination and harmonization among timber procurement policies as a means of facilitating the international trade in tropical timber;
7. Prepare and submit a preliminary report to the ITTO Secretariat not later than 30 June 2009;
8. Submit the final draft of the report prepared according to the ITTO Style Guide 2004, including an executive summary; recommendations to ITTO, ITTO member countries, trade, industry and other relevant parties; and a draft article for the *Tropical Forest Update* (TFU) not later than 31 August 2009. Where appropriate, take high resolution photographs of the assignment and provide 20 or more of these to the ITTO Secretariat along with data on each photo as per a proforma to be supplied by the ITTO Secretariat for this purpose;
9. Present the report at the Forty-third Session of the Committee on Economic Information and Market Intelligence to be convened from 9 to 14 November 2009 and finalise the report, taking due account of the comments made by the members of the Committee.

Appendix 3.1 Development and Status of Public Procurement Policies Related to Forest Products (August 2009)

Country	Development and status
Belgium	<ul style="list-style-type: none"> - The Federal Plans for Sustainable Development (2000-2004 and 2004-2008) identified environment-friendly and selected social aspects (particularly employment conditions) to be considered in public purchasing. - Ministerial Circular P&O/DD/1 (27 January 2005) identified a number of forest products for consideration in public tenders. Paper is included in these products. The products have to be in line with ecological and ethical guidelines. - Guidance by the Federal Council for Sustainable Development on the proposed federal procurement policy for timber (8 July 2005). - Ministerial Circular P&O/DD/2 (4 November 2005) defined the purchasing policy to promote procurement of timber from sustainably managed forests. - Belgian timber procurement policy (18 March 2006) recognizes FCS and the PEFC Belgium scheme and sets an expert committee to evaluate other national PEFC certification schemes. As a result two national PEFC lists were accepted as proof of sustainable (5 April 2006). - Methodological guide for purchasing authorities was issued in July 2006. - Procurement policy for timber and timber products has been under review since late 2007 by ProForest and decision on reorientation of the policy is expected by end of 2009.
Denmark	<ul style="list-style-type: none"> - Parliament decision in 2001 was made on central government to adjust public procurement policies to ensure that purchases of tropical timber would be based on legal and sustainable sources. - In 2003 the Ministry of Environment issued a tropical timber procurement policy to promote public purchasing from legal and sustainable sources followed by an information campaign in 2004. - The policy implementation was evaluated in 2005 (user survey, comparative analysis with national policies in four other countries, and legal study). - The policy was revised in 2006 to cover all types of timber and a 9-point action plan was approved to make faster progress. - Temporary guidance on the purchase of legal timber covering all kinds of timber was issued in September 2006. - Temporary advice (February 2008) until 1 April 2009 for public buyers to accept, as proof of 'legal and sustainable' timber, either a certificate of FSC or PEFC was given by the Danish Ministry of the Environment. - Draft Criteria for Legal and Sustainable Timber and Assessment of Certification Schemes was launched for public consultation and a further 2-day workshop for stakeholders was held in April 2008. - The process of new guidelines on public procurement of legal and sustainable timber is under development and the 2008 temporary advice applies.
European Union	<ul style="list-style-type: none"> - The FLEGT Action Plan (COM(2003)251) required that national governments develop public purchasing policies to ensure no illegal wood can be procured and called for trade associations to develop codes of conduct on environment timber procurement. - Issuance of a new Directive (2004/18/EC) on public procurement to clarify the legal basis of consideration of environment aspects. - In the interpretative document "A handbook on environmental public procurement" (SEC(2004)1050) specific guidance for timber purchase is provided. - EU Sustainable Development Strategy (June 2006), states the policy objective for 2010 of bringing the average level of EU green public procurement up to the standard achieved by the best performing Member States in 2006. - Communication on Public Procurement for Better Environment 2008 was adopted by the Commission including a proposal of a political target of 50 % green public procurement (GPP) to be reached by the Member States by the year 2010 (July 2008). A process for setting common -voluntary- Green public procurement criteria recommendations for a series of priority product and service groups is underway.
Finland	<ul style="list-style-type: none"> - A government resolution on promoting sustainable public procurement was passed in April 2009. - No specific timber procurement policy has been implemented in Finland however; the need for a specific policy on wood-based products is under consideration.
France	<ul style="list-style-type: none"> - National sustainable development strategy (2003) made a recommendation to develop sustainable public procurement. - Governmental Action plan in favor of tropical forests (April 2004) included a project to prepare Prime Minister's Advice Note ("circulaire") to public buyers. The objectives were set as 50% in 2007 and 100% in 2010 of timber and wood products bought by public buyers should come from legal and sustainably managed forests. - The Advice Note which expanded the policy to cover all kinds of timber was approved and published in April, 2005. - Evaluation of the objective of 50% in 2007 with a first assessment in 2006.

Country	Development and status
	<ul style="list-style-type: none"> - The Governmental Action Plan policy objectives were reaffirmed in October 2007 during the Grenelle Environment Forum's national stakeholder consultation ("Grenelle de l'environnement"). - The objective to buy only wood and derived products from legal and sustainable sources in 2010 was reiterated in a circular in 2008. - Grenelle I law (23 July 2009) states that the government will define the modalities for the recognition of forest management certification schemes. - Ongoing review (from April 2009 until the end of November 2009) to assess the fulfillment of the objective of 50% of wood and derived products public procurement from legal and sustainable sources and to give recommendations for the improvement of the current policy.
Germany	<ul style="list-style-type: none"> - An administrative regulation was issued in 1996 which states that tropical timber should come from sustainable forestry, attended with a credible certification. - The Government's coalition agreement (11 November 2005) states that the Federal Government will use only timber from certified forests. - The first evaluation of existing certification schemes was launched in March 2005 and the second was issued in March 2006. - Government departments agreed upon the wording of public procurement arrangement (6 July 2006). - Joint instruction on the procurement of wood products (January 2007) accompanied by explanatory notes regarding the procurement of wood products, issued by the German Federal Government, states that wood products procured by the federal administration must demonstrably come from legal and sustainable forest management and as a proof FSC and PEFC or a comparable certification are accepted. The policy is valid until 2011 before which it will be evaluated.
The Netherlands	<ul style="list-style-type: none"> - Minimum requirements for forest certification were issued in 1997. - Proposal for a law on mandatory labeling of all timber (red and green) was made but withdrawn in 2002. - Government Decision on Sustainable and Legal Timber Procurement (2 July 2004) requiring all national public institutions to procure verifiably sustainable timber, when possible, and public buyers to ensure legality of timber purchased. - Cabinet Decision on Public Procurement of Timber was made in June 2005. - National Assessment Guideline for the Certification of Sustainable Forest Management and Chain of Custody for Timber from Sustainably Managed Forests (BRL) was approved 12 October 2005 (an earlier version was elaborated in 2003 and in 2004 there was pilot testing). - In 2006 Netherlands adopted the UK's criteria for legality. - The Equivalence Assessment System (EAS) established by the Ministry of Housing, Spatial Planning and the Environment carried out an assessment on the certification schemes (2006-07) but none of the tested 6 certification systems passed the BRL-test. As a result an improved set of criteria has been under development since October 2007. - The Timber Procurement Assessment Committee (TPAC) was established by the government to assess national certification schemes against the updated draft criteria (TPAS). - The simplified criteria for sustainable timber, which include social criteria, were sent to the Parliament in June 2008.
Norway	<ul style="list-style-type: none"> - The Norwegian Action Plan 2007 – 2010 on the sustainable public procurement policy was published in July 2007 and entered into force in the beginning of 2008. The voluntary policy emphasizes the overall environmental impact of government purchases and includes provision for prohibiting the use of tropical timber in public construction.
Spain	<ul style="list-style-type: none"> - Proposal for the revision of the Forest Act to include provision on public procurement of timber (2006)
Sweden	<ul style="list-style-type: none"> - Coordination of green purchasing initiatives by the establishment of EKU tool (internet-based data base for environmental procurement criteria) as a joint public-private owner company. - The EKU criteria for paper products are under development; the requirements included provisions for forest management. - The Swedish Government endorsed a general National Action Plan (NAP) for Green Public Procurement (GPP) 2007-2009 in March 2007. However, a particular procurement policy concerning timber and timber products is not considered. - The Swedish Environmental Management Council is planning to start an assessment in during August 2009 on verifying legality and non-controversial sources of any material or product.
Switzerland	<ul style="list-style-type: none"> - Based on a motion submitted to the Swiss parliament a recommendation to all public purchasers was enacted regarding the sustainable public procurement of wood (Recommendation 2004/2). - In July 2008 a recommendation regarding sustainable construction work, including a statement that timber and timber products must be sustainably produced, was issued (Recommendation 2008/1).
United Kingdom	<ul style="list-style-type: none"> - In 1996 voluntary guidance was issued to advise government departments to purchase timber and timber products from sustainable and legal sources.

Country	Development and status
	<ul style="list-style-type: none"> - The Minister for the Environment made in 2000 a Statement to the Parliament which defined a policy on the obligation of public agencies to actively seek to buy timber products from legal and sustainable sources. - The Department for Environment, Food and Rural Affairs (DEFRA) issued Joint Note on Environmental Issues in Purchasing (October 2003). - Procurement Framework for Sustainable Development on the Government Estate in October 2004 established an obligation to integrate environmental and sustainable development considerations. - Timber Procurement Advice Note was issued in January 2004. - Criteria for Evaluating Certification Schemes were issued 15 September 2004; second edition in February 2006. - Central Point of Expertise on Timber (CPET) was established in August 2005 to give advice to public sector bodies and their suppliers on how to purchase legal and sustainable timber. - The first assessment of five certification schemes was made by CPET in 2004-05 and CPET. helpline/website became operational in the second half of 2005. - In 2006 and 2008 a further assessment on the five certification schemes concerning UK government requirements for legal and sustainable timber was carried out by CPET. - Definitions of legal and sustainable were finalized in November 2005 and a revised definition was published in November 2006. - Timber Procurement Advice Note from April 2009 states that that all timber and wood-derived products must be either from independently verifiable legal and sustainable sources or FLEGT-licensed or equivalent sources only. - DEFRA carried out a review of the current legality and sustainability definition and inclusion of explicit social criteria. A public consultation on inclusion of social criteria will end in October 2009. - The Building Research Establishment Environmental Assessment Method (BREEAM), an environmental assessment method for buildings, has adopted the CPET guidance on certification schemes for timber in its Ecohomes program criteria.
Canada	<ul style="list-style-type: none"> - The Canadian federal government does not explicitly have a timber procurement policy, however, a number of policies consider the environmental, social and economic aspects in the procurement of forest products - The Quebec provincial government pro-wood procurement policy promotes the use of wood as the green building material of choice in public buildings - The British Columbia provincial government approved a new Building Code requirements (January 2009) according to which the maximum height for wood-frame residential construction increased from four to six storeys. - The Leadership in Energy and Environmental Design (LEED) Green Building Rating System is a third-party certification program, which originates from USA, has been operating in Canada since 2004.
United States	<ul style="list-style-type: none"> - Many local and state governments have procurement policies on tropical wood. - State and local governments have been actively introducing legislation, incentives and programmes to promote green building. - LEED (Leadership in Energy and Environmental Design), a green building certification system developed by the US Green Building Council has grown in popularity and several city, state and federal governments are pursuing LEED certification.
China	<ul style="list-style-type: none"> - The Chinese Government issued a government procurement policy related to timber products in October 2006, which is mainly aimed at environmentally sound production of timber products. The policy has been implemented since then.
Japan	<ul style="list-style-type: none"> - Law concerning the Promotion of Eco-friendly Goods and Services by the State and Other Entities (2001) was complemented with an explanatory policy document with listing of products concerned (Designated procurement items). - Guideline for verification on Legality and Sustainability of Wood and Wood Products was published by the Forest Agency (February 2006) - Government Procurement Policy for Global Sustainable Forest Management took effect 1st April 2006 through the amendments of the Basic Policy on Promoting Green Purchasing. - A Council for Tackling the Illegal Logging Issue was established by the Japanese Federation of Wood Industries Association (JFWIA) in May 2006 as part of the Forestry Agency's Project to Promote a Comprehensive Response to Illegal Logging.
New Zealand	<ul style="list-style-type: none"> - Government sustainable procurement policy was issued 1 July 2001. - Policy Guide for Public Purchasers was published by the Ministry of Economic Development in July 2002 which identified timber procurement from legal and sustainably managed sources as policy objective. - Timber and Timber Products Procurement Policy Guidelines were issued in March 2004. - An updated version of the Timber and Wood Products Procurement Policy was announced in December 2006. - A review on the feasibility of making sustainable timber a mandatory provision of the policy in

Country	Development and status
	2008.
Brazil	<ul style="list-style-type: none"> - Development and implementation of Public Timber Procurement Policies in Brazil are at initial stages. - An initiative Rede Amigos da Amazônia, coordinated by Escola de Administração de Empresas de São Paulo of Fundação Getúlio Vargas, has been joined by some state and municipal governments focusing on eliminating the consumption of products from illegal logging. - An initiative “Rede Amigos da Amazônia” at a government state level and municipal level is focusing on eliminating the consumption of illegal logging. - São Paulo State issued the decree (nr 5304) and established the Cadmadeira register (June 2008) to guide the actions of the state government on the implementation of its public procurement policy. Only registered timber suppliers are allowed to participate as bidders for government construction buildings and civil works (July 2009). - A voluntary Agreement for Legal and Sustainable Timber (July 2008) was signed by some entrepreneur associations, public agencies and representatives of civil society.
Mexico	<ul style="list-style-type: none"> - The law on Acquisition, Leasings and Services for the Public Sector includes public timber procurement regulation. The Official Federal Diary (5 September 2007) states the requirement of third-party certification of wood and wood products (including furniture and office supplies) in public procurement. - A circular (The Official Federal Diary 31 September 2007) includes an outline for the sustainability aspects in public procurement decision making on wood and wood products.

Source: National policy documents, country responses

Appendix 3.2

Timber Legality Verification Service Providers

Organization	Services	Coverage	Certificate	Type of organization	Geographic area	Source
Tropical Forest Foundation (TFF)	Support to RIL and certification	<ul style="list-style-type: none"> Standards for legality and RIL Verification of compliance Training 	Legal verified label RIL verified	Non-profit	Indonesia, Congo Basin, Brazil	www.tropicalforestfoundation.org
SGS	Timber Legality and Traceability Verification (TLTV) Forest certification	<ul style="list-style-type: none"> Legality verified (origin, CoC) Legality of production (broad legal compliance) Forest certification 	SGS TLTV	Commercial	Global	www.forestry.sgs.com
Certisource	Legality verification Support to sourcing	<ul style="list-style-type: none"> Verified legal (according to GFTN Guidelines) 		Commercial		www.certisource.net
Eurocertification-BVQI	Trade facilitation Verification of legal origin and logging	<ul style="list-style-type: none"> Origin and legality of timber (OLB) 	OLB certificate	Commercial	Global, francophone Africa	www.certification.bureauveritas.fr
Global Forestry Services Inc. (GFS)	Legal verification service Wood tracking program	<ul style="list-style-type: none"> Action plans Standard of certification of legal origin Forestry Support Program (phased certification) 		Commercial	Collaboration with SmartWood	www.gfsinc.biz
Rainforest Alliance Smartwood	Certification services (FSC)	<ul style="list-style-type: none"> Smart step phased FSC certification with Verified Legal Origin (VLO) and Verified Legal Compliance (VLC) 		Commercial/ non-profit	Global	www.rainforest-alliance.org/forestry.cfm.id=smart-step
WWF Global Forest Trade Network (GFTN)	Phased certification (FSC) process and trade networks	<ul style="list-style-type: none"> Certification action plans Guidelines, training and communication services 		Non-profit	30 producing and consuming countries	www.gftn.panda.org
Tropical Forest Trust (TFT) (now Forest Trust)	Support to buyers in sourcing and suppliers in achieving FSC certification	<ul style="list-style-type: none"> Wood control systems to prevent illegal products in supply chains Certification action plans (phased approach) Training 		Non-profit	Cameroon, Congo, Gabon, Indonesia, Laos, Malaysia, Vietnam,	www.tropicalforesttrust.com

Appendix 6.1 Elements of Selected Publicly Available Procurement Policies of Private Corporations Referring to Wood Products

Corporate sector	Construction	Forestry	Furnishing	Retailing	Total
Number of companies in the group	4	9	2	9	24
Policy element					
Knowledge of the origin of product	3	9	1	5	18
Accuracy and credibility of information	4	9	2	8	23
Legality of production	3	9	2	5	19
Sustainability of forest management	4	8	2	8	22
Protection of special places (incl. sensitive ecosystems)	-	7	2	3	12
Climate change	-	2	-	1	3
Appropriate controls of environmental protection	-	4	-	2	6
Appropriate use of recycled fiber	1	-	1	5	7
Appropriate use of other resources	-	2	1	4	7
Addressing needs of local communities and indigenous peoples	-	7	-	3	10

Source: Elaborated based on WRI/WBCSD (2009)

The following companies are included in the analysis:

April, Balfour Beatty Corporation, B&Q, Carrefour, Countryside Properties, DLH Group, FinnForest, Hubert, IKEA, Jewson (Saint Gobain), Lowes, Marks & Spencer, Metsäliitto, Mondi, Nippon Paper Group, Oji Paper Group, RONA, Skanska, Stora Enso, The Home Depot, and Wates

Appendix 7.1 Forest Management Units and Timber Production in Cameroon

FMU/Type	FMUs Number	Duration Years	FMU size		Area allocated 1000 ha	Forest Management Plans				Harvesting operating costs USD/m ³	Estimated annual production 1,000 m ³	Share of production %
			Maximum 1000 ha	Average 1000 ha		Approved number	1000 ha	Type	Cost / USD ha			
Forest concession	103	15	200	59.0	6,074.0	65	4,207.9	Compre- hensive	0.71	35.5	1,700	65.4
Municipal forests	6	15	N.a	23.0	141.0	4 ¹⁾	92.0	Compre- hensive	210	8.1
Community forests	117	25	5	3.6	632.3	N.a	N.a	Simple	3.24	27.0	260	10.0
Other ¹⁾	N.a	1	N.a	N.a	N.a	N.a	N.a	N.a	N.a	N.a	430	16.5
Total	226				6,647.2	69					2,540	100.0

1) Sales of standing volume, personal exploitation permits, timber exploitation permits, special products exploitation permits, fuelwood exploitation permits

2) 4 in production, 2 more have been completed FMP

Appendix 8.1 EU Imports of Wood Products Derived from Saw and Veneer Logs in 2007

Countries	From tropical countries	From mixed zones ¹⁾	Sub-total	Total imports from outside EU	Share of tropical and mixed zones of total outside imports
	- million m ³ RWE -				%
Germany	0.9	1.8	2.7	7.0	38.6
France	1.7	1.5	3.2	4.9	65.3
United Kingdom	1.9	3.9	5.8	9.4	61.7
Netherlands	1.3	1.2	2.5	4.1	61.0
Belgium	0.9	1.5	2.4	3.4	70.6
Denmark	0.2	0.4	0.6	1.3	46.2
Sub-total TPP countries	6.9	10.3	18.2	30.1	60.5
Italy	1.5	1.0	2.5	6.3	39.7
Spain	0.8	1.6	2.4	3.9	61.5
Others	1.1	2.1	2.2	20.1	10.9
EU-25 total	10.3	15.0	25.3	60.4	41.9

1) Countries with both tropical and non-tropical forests

Source: Elaborated based on Oliver (2009)

Appendix 8.2 Global Supply of Roundwood from Certified Forests 2007-2009

Region	Total certified area million ha			Estimated certified roundwood production million m ³		
	2007	2008	2009	2007	2008	2009
Africa	2.6	3.0	5.6	0.3	0.3	0.6
Latin America	12.1	15.0	14.6	2.1	2.6	2.5
Asia	1.6	2.0	3.0	0.7	0.8	1.3
Sub-total	16.3	20.2	23.2	3.1	3.7	4.1
World total	291.8	319.9	321.2	385.7	416.4	411.3
	- % -					
Africa	0.9	0.9	1.7	0.1	0.1	0.1
Latin America	4.1	6.7	4.5	0.5	0.6	0.6
Asia	0.5	0.6	0.9	0.2	0.2	0.3
Sub-total	5.5	8.2	7.1	0.8	0.9	1.0
World total	100.0	100.0	100.0	100.0	100.0	100.0

Source: UNECE/FAO 2009

Appendix 8.3 Exports of Timber and Timber Products from ITTO Producer Countries and China

Country	Year	USD mill.	%
Africa		2166,8	5,06
Cameroon	2006	450,4	1,05
Central African Republic	2005	47,6	0,11
Congo, Dem. Rep.	2008	179,7	0,42
Congo, Rep.	2008	325,2	0,76
Côte d'Ivoire	2008	338,4	0,79
Gabon	2006	497,9	1,16
Ghana	2008	299,4	0,70
Liberia	2008	0,6	0,00
Nigeria	2008	26,7	0,06
Togo	2007	0,9	0,00
Asia-Pacific		35566,5	83,06
Cambodia	2004	9,5	0,02
China	2008	20281,3	47,37
Fiji	2007	16,3	0,04
India	2008	526,4	1,23
Indonesia	2008	4414,1	10,31
Malaysia	2008	6286,9	14,68
Myanmar	2008	894,4	2,09
Papua New Guinea	2004	166,9	0,39
Philippines	2008	1090,3	2,55
Thailand	2008	1879,6	4,39
Vanuatu	2007	0,6	0,00
Latin America/Caribbean		5084,7	11,88
Bolivia	2007	126,1	0,29
Brazil	2008	3333,3	7,78
Colombia	2008	137,8	0,32
Ecuador	2008	174,5	0,41
Guatemala	2008	69,6	0,16
Guyana	2008	48,6	0,11
Honduras	2007	68,6	0,16
Mexico	2008	871,8	2,04
Panama	2008	0,7	0,00
Peru	2007	211,5	0,49
Suriname	2008	9,5	0,02
Trinidad and Tobago	2008	16,1	0,04
Venezuela	2008	16,6	0,04
Total ITTO Producers plus China		42818,0	100,00
Total ITTO Producers		22536,7	52,63

Note: The data includes logs, sawnwood, veneer, plywood, other wood-based panels, joinery products and wood furniture.

Source: COMTRADE data base

Appendix 8.4 Export Market Distribution of ITTO Producer Countries and China in 2007/2008

Country	Export market distribution %								Total export
	EU	Japan	US	Canada	Australia	New Zealand	Sub-total	Others	
Africa	52.8	0.2	3.8	0.2	0.3	0.0	57.3	42.7	100
Cameroon	77.8	0.1	2.6	0.1	0.0	0.0	80.6	19.4	100
Central African Republic	32.7	0.4	0.2	0.0	0.0	0.0	33.2	66.8	100
Congo, Dem. Rep.	69.6	0.3	1.9	0.3	0.0	0.0	72.3	27.7	100
Congo, Rep.	28.9	0.1	4.2	0.6	0.0	0.0	33.9	66.1	100
Côte d'Ivoire	64.3	0.0	6.2	0.3	0.0	0.0	70.8	29.2	100
Gabon	46.4	0.3	0.4	0.1	0.0	0.0	47.1	52.9	100
Ghana	32.7	0.1	10.1	0.4	1.9	0.1	45.1	54.9	100
Liberia	73.0	0.8	9.4	0.0	0.0	0.0	83.2	16.8	100
Nigeria	44.9	0.0	0.2	0.0	3.3	0.0	48.4	51.6	100
Togo	15.7	7.5	1.3	0.0	0.0	0.0	24.5	75.5	100
Asia-Pacific	21.2	15.0	24.9	2.9	3.2	0.3	67.5	32.5	100
Cambodia	0.6	0.0	0.0	0.0	0.1	0.0	0.8	99.2	100
China	23.0	9.7	33.6	4.1	3.1	0.3	73.9	26.1	100
Fiji	0.6	1.0	27.3	1.3	11.4	10.7	52.3	47.7	100
India	41.3	0.5	24.3	3.1	2.2	0.1	71.6	28.4	100
Indonesia	29.3	19.5	16.5	1.1	4.6	0.4	71.3	28.7	100
Malaysia	15.5	20.9	12.4	1.5	4.1	0.3	54.5	45.5	100
Myanmar	1.8	0.4	0.0	0.0	0.2	0.1	2.4	97.6	100
Papua New Guinea	1.0	12.0	0.1	1.3	4.5	0.7	19.7	80.3	100
Philippines	2.7	81.9	10.2	0.2	0.5	0.0	95.6	4.4	100
Thailand	17.2	14.3	15.8	1.5	1.8	0.2	50.8	49.2	100
Vanuatu	0.3	1.6	0.0	0.0	0.3	0.0	2.3	97.7	100
Latin America/Caribbean	29.5	0.4	38.7	2.0	0.3	0.1	70.8	29.2	100
Bolivia	26.9	0.1	37.8	0.1	0.0	0.0	64.9	35.1	100
Brazil	41.5	0.6	28.5	1.7	0.4	0.0	72.7	27.3	100
Colombia	1.7	0.0	15.4	0.2	0.1	0.0	17.4	82.6	100
Ecuador	20.0	0.1	33.0	0.1	0.4	0.0	53.7	46.3	100
Guatemala	7.5	0.3	34.2	0.7	0.1	0.0	42.8	57.2	100
Guyana	15.5	0.0	13.6	0.1	0.2	3.5	32.8	67.2	100
Honduras	3.6	0.0	27.8	0.0	0.0	0.0	31.4	68.6	100
Mexico	1.4	0.1	88.0	4.8	0.0	0.0	94.2	5.8	100
Panama	12.4	0.0	5.8	1.3	0.0	0.0	19.4	80.6	100
Peru	5.4	0.0	33.0	0.4	0.2	0.4	39.4	60.6	100

Country	Export market distribution %								
	EU	Japan	US	Canada	Australia	New Zealand	Sub-total	Others	Total export
Suriname	38.6	0.3	3.5	0.1	0.0	0.0	42.4	57.6	100
Trinidad and Tobago	4.4	0.0	1.5	0.2	0.0	0.0	6.1	93.9	100
Venezuela	3.8	0.1	7.9	3.4	0.1	0.0	15.4	84.6	100
Total ITTO Prods + China	23.8	12.5	25.5	2.6	2.7	0.3	67.4	32.6	100
Total ITTO Producers	24.4	15.0	18.2	1.3	2.4	0.2	61.5	38.5	100

Note: The data includes logs, sawnwood, veneer, plywood, other wood-based panels, joinery products and wood furniture.
Source: COMTRADE data base