BASELINE STUDY 4, MYANMAR:

Overview of Forest Law Enforcement, Governance and Trade

August 2011

FOREST TRENDS

Regional Support Programme for the EU FLEGT Action Plan in Asia

Background

The European Commission (EC) published a Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan in 2003. FLEGT aims not simply to reduce illegal deforestation, but in promoting good forest governance, aims to contribute to poverty eradication and sustainable management of natural resources.

The European Forest Institute (EFI), an international research organisation with its headquarters in Finland, conducts, advocates and facilitates forest research networking at the pan-European level. Under its Policy & Governance programme, the EFI assists in the EU's implementation of the FLEGT Action Plan. In 2007, the EU FLEGT Facility was established, hosted and managed by the EFI. The Facility (i) supports the bilateral process between the EU and tropical producing countries towards signing and implementing "Voluntary Partnership Agreements" (VPAs) under the FLEGT Action Plan, and (ii) executes the regional support programme for the EU FLEGT Action Plan in Asia.

The FLEGT Asia Regional Office (FLEGT Asia) of the EFI's EU FLEGT Facility was formally established in October 2009. FLEGT Asia seeks to collaborate and build synergies with existing regional initiatives and partners in Asia.

The EU FLEGT Facility is managed and implemented by the EFI in close collaboration with the EU.

Goal of FLEGT Asia

The goal of the FLEGT Asia Regional Programme is the promotion of good forest governance, contributing to poverty eradication and sustainable management of natural resources in Asia, through direct support of the implementation of the EU's FLEGT Action Plan.

Strategy

The strategy to achieve this goal focuses on promoting and facilitating international trade in verified legal timber – both within Asia and exported from Asia to other consumer markets. In particular, it aims to enhance understanding of emerging demands in key timber-consuming markets and promote use of systems that assist buyers and sellers of Asian timber and timber products to meet these demands.

Work Programme

The work programme to achieve the Programme's goal has three phases:

1. **Information Collection**

   Baseline information (trade statistics, product flows, future scenarios, stakeholder identification and engagement strategies), applied to countries in the region. Information on producers, processors, exporters and major consumers of exports from this region will be collected and collated. It will then be used to develop training and communication materials; to further define the nature of the capacity building to be undertaken (who are the target beneficiaries and what the training needs are) and form the baseline for monitoring the progress over the 3 years' duration of the programme.

2. **Capacity Building**

   The second phase is the strengthening of key institutions (companies, trade associations, NGOs, government agencies, customs etc.) for improved forest governance in each country and across the region to meet the identified market needs. This will consist of training (at individual level, training of trainers, workshops, pilot studies e.g. on individual supply chains and for Timber Legality Assurance); information dissemination and communications (roadshows, seminars, communication materials, website, etc).

3. **Customs & Regional Collaboration**

   The work to support trade regionally and to invest in customs capacity in accordance with market requirements will be undertaken in collaboration with other programmes in the region.

This report is financed by FLEGT Asia as part of phase (1-2) activities.

Address

European Forest Institute – FLEGT Asia Regional Office
c/o Embassy of Finland
5th Floor, Wisma Chinese Chamber
258 Jalan Ampang
50450 Kuala Lumpur
Tel: +60 3-42511886
Fax: +60 3-42511245
Website: www.efi.int/portal/projects/flegt, www.euflegt.efi.int

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

BASELINE STUDY 4, MYANMAR
Overview of Forest Law Enforcement, Governance and Trade

Kevin Woods and Kerstin Canby

Forest Trends

for FLEGT Asia Regional Programme

August 2011

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Forest Trends is a Washington, DC- based international non-profit organization that works to expand the value of forests to society: to promote sustainable forest management and conservation by creating and capturing market values for ecosystem services; to support innovative projects and companies that are developing these new markets; and to enhance the livelihoods of local communities living in and around these forests. Forest Trends analyzes strategic market and policy issues, catalyzes connections between forward-looking producers, communities and investors, and develops new financial tools to help markets work for conservation and people.

ACKNOWLEDGMENTS

The authors wish to thank James Hewitt for significant contributions to the understanding of international wood products trade data, Keith Barney for insightful comments, Michael Jenkins and the rest of the Forest Trends staff for their support, in particular Christine Lanser for her research assistance and Anne Thiel for her formatting and design assistance.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Table of Contents

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

LIST OF ACRONYMS

AAC	Annual Allowable Cut
ADB	Asia Development Bank
BANCA	Biodiversity and Nature Conservation Association
BSS	Burma Selection System
C&I	Criteria and Indicators (ITTO)
CoC	Chain of Custody
DZGD	Dry Zone Greening Department
ECO-Dev	Economically Progressive Ecosystem Development
FAO	United Nations Food and Agriculture Program
FD	Forest Department (of the Ministry of Forestry, now called Ministry of Environmental Conservation and Forestry)
FLEG	Forest Law Enforcement and Governance
FLEGT	Forest Law Enforcement, Governance and Trade
FMU	Forest management unit
FUG	Forest user group
FPJVC	Forest Products Joint Venture Corporation
FSC	Forest Stewardship Council
Ha	Hectare
JPS	Joint Production System
MFPTMA	Myanmar Forest Products and Timber Merchants Association
MDF	Medium-density fiberboard
MDG	Millennium Development Goals
m^3	Cubic meter
MoAI	Ministry of Agriculture and Irrigation
MOF	Ministry of Forestry (Ministry of Environmental Conservation and Forestry after November 2011)
MSS	Myanmar Selection System
MTCC	Malaysian Timber Certification Council
MTCP	Myanmar Timber Certification Program
MTE	Myanmar Timber Enterprise
MTMA	Myanmar Timber Merchants' Association
NFMP	National Forest Management Plan
NTFP	Non-timber forest product
REDD+	Reduced Emissions from Deforestation and Degradation
RWE	Roundwood equivalent
SPDC	State Peace and Development Council
SFM	Sustainable Forest Management
STB	State Timber Board
TCCM	Timber Certification Committee of Myanmar
UMFCCI	Union of Myanmar Federation of Chamber of Commerce and Industry
VLO	Verification of Legal Origin
WWF	World Wildlife Fund

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

1. EXECUTIVE SUMMARY AND MAJOR FINDINGS

In the early 20th century, the scientific management of Myanmar's natural forests under the Myanmar Selection System (MSS) was world-renown.[1] By the 1970s, the MSS began to break down. Today, the application of scientific forestry in the country has been marginalized. Timber remains a significant source of revenue, although relatively less for the national Myanmar government as multi-billion dollar oil, gas, hydropower and other energy related contracts surge. Timber and other forest products represent a significant source of income for ethnic political groups, most notably in Kachin State along the border with China and Karen State along the Thai border. The Government of Myanmar has established development priorities in a number of sectors, including agriculture and forestry, but these plans are not detailed and mainly focus on output indicators. Overall, 70% of Myanmar's population residing in rural areas (50-60% of the estimated total population of 60 million) depend heavily on forests for their basic needs (FAO, 2009). Some 500,000 people are thought to be dependent on the forestry sector for employment. The contribution of forestry to GDP was an estimated 1% in 1997–98 (ITTO, 2006), but timber exports alone constitute approximately 10% of Myanmar's total official export earnings. Teak alone contributes 60-70% of the export earnings from forest products, but these exports are of an increasingly low-grade, which command lower prices than the high-quality teak that made Myanmar famous.

Myanmar remains one of the world's only countries with no prohibitions on log exports. The country provides much coveted teak and other hardwood logs to the region and beyond. Sawn wood, and to a lesser extent finished wood products, contribute a relatively small amount to Myanmar's total exports of wood products.

As in the majority of Mekong countries, one of the most significant trends affecting forest lands in Myanmar relates to the considerable, and often times informal, foreign direct investments (FDI) in agribusiness plantations such as rubber, oil palm, timber plantation, cashew nut and other horticultural crops. FD are also being made in other resource sector developments, including hydropower and mineral extraction. These types of developments often require the clearing of natural forest areas and has led to land disputes with local communities. Virtually all FDI in Myanmar currently comes from other Asian countries, notably Thailand, China, Taiwan, Hong Kong, Singapore and South Korea.

The significant findings of this report include:

- **Lack of data:** An objective assessment of forest governance or even broader economic developments in Myanmar is made difficult by the lack of quality data available. The government does not collect or publish much of the data that would be necessary for a deeper analysis and understanding of the forest industry. Available information is often out-dated, ad hoc or conflicting. Many indicators are based on the application of outdated statistical standards.

- **Historically world-renowned forest management systems and professionals are being marginalized:** In the early 20th century, the scientific management of Myanmar's natural forests under the MSS was world-renown. By the 1970s, this system began to break down and today the application of scientific forestry has been marginalized, with increasing lack of capacity and proper

[1] Known during its existence as the Burma Selection System.

incentives. International collaboration is limited and the forestry sector lacks sufficient funding, a conducive research environment and effective leadership. Myanmar has one of the world's lowest levels of public sector expenditures (approximately 4% of GDP). Corruption has become a public sector strategy among employees given their inadequate salaries.

- **Indicators of unsustainable and illegal logging:** The best measure of regulated sustainable logging, and which made Myanmar forestry practices initially famous, is its scientific modelling of the annual allowable cut (AAC). The AAC has been reduced over the years, indicating fewer available mature trees to harvest. Logging quotas have little relation to the AAC, as the previous ruling government, the State Peace and Development Council (SPDC), set production targets on behalf of government institutions and did not follow the AAC methodologies. Actual overall volume harvested and exports have been beyond AAC levels by all accounts, indicating unsustainable practices and / or large-scale illegal logging.

  Affecting the AAC levels are new, less sustainable tree felling techniques. Previously, teak trees were girdled prior to cutting to reduce ecosystem damage and hauled by elephants and floated downriver to mills.[2] Now, mechanized and less sustainable "green tree" felling techniques are increasingly utilized.

  The old growth teak supply in the country is clearly being exhausted. As early as 2000, 16.5 million ha of teak-bearing mixed deciduous forests were becoming fragmented and consisted of less than 10% teak trees, which is far below historic levels. Given the unsustainable loss of high-grade teak, irreversible genetic degradation is likely.

- **Poorly designed decentralized governance systems affecting the forest sector:** While Myanmar's system of government appears centralized, in reality it is highly fragmented and characterized by opaque decision making procedures and means of governance that can have a direct impact on forestland resources in the country. At the state and division level, military regional commanders take advantage of the limited autonomy granted by the central government. At the township and village level, local Peace and Development Councils exist.

  In territories still controlled by ethnic political organizations, ethnic leaders determine and implement policies that can be relevant to the forest sector, depending on the degree of their autonomy granted by regional commanders and the central government.[3]

2 Girdling involves cutting a waist-high strip from a tree and removing the bark and alburnum, thus killing it slowly. By girdling, the tree dies upright and then can serve ecological functions as a snag until it is removed. The falling of a desiccated girdled tree could cause less – although still unpredictable – environmental damage as opposed to conventional methods of logging.

3 Since 1989, the military has negotiated at least 17 ceasefire agreements with armed ethnic groups, giving them varying degrees of autonomy and in some cases permission to retain their own armies. In many of the ceasefire areas, uneasy truces prevail. The two major groups maintaining their armed resistance against the military are the KNU (Karen National Union) and the SSA (Shan State Army), both increasingly losing control over once "liberated" zones. Ethnic opposition group's administered zones also sign logging concession deals with foreign investors who then transport the timber through their controlled cross-border check points.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

- **Unknown sourcing of exported timber:** It is likely that Myanmar exports are sourced predominantly from natural forests, either through the annual quota system or forest clearing prior to the development of agricultural plantations, hydropower, mineral extraction and road projects. Timber from tree plantations are not considered a major factor yet, but it must be stressed that the data is not especially clear. Some have asserted that forest-land conversion for economic land concessions is likely the largest single source of natural timber in Myanmar. However, the relative importance of each timber source is unclear due to inadequate or conflicting data.

- **Definition of illegally exported wood products:** All timber shipped out of Yangon is marked as state-owned Myanmar Timber Enterprise (MTE) wood – whether or not it may have been cut and transported legally or illegally by private Myanmar companies. With the MTE marking, and when using designated Yangon timber ports, the wood is presumed legal by the government.[4] Official government recognition of the problem of illegal logging and associated trade usually refers to smuggling operations that occur in overland border areas, such as with China and Thailand.

- **Shifts in exports from Myanmar – China border to Yangon ports:** In the late 1990s, until mid- 2000s, the Myanmar – China border was the center of timber extraction and cross-border trade. Since the mid-2000s, however, timber has increasingly been directed through government channels and legally exported from Yangon ports (Milieu Defensie 2009).

- **Increasing diplomatic and economic influence of China, India and other regional Asian powers, while Western governments have been left behind:** The economic influence of China is significant, particularly in the north. China, India, Thailand, Bangladesh and other Asian countries have pursued a strategy of fostering regional stability and securing economic advantages, i.e. access to Myanmar's valuable natural resources. Japan follows an approach of constructive engagement in the form of development cooperation. The United States and Europe ha ve imposed various trade, investment, visa and other restrictions, such as the US Burma Freedom and Democracy Act, as well as the recent Burma JADE Act.[5]

- **Value-added processing has decreased:** Currently, round wood— especially teak logs and sawnwood— is the main export item among wood and wood products.

---

[4] All trade statistics compiled by James Hewitt for the European Forestry Institute (EFI), unless otherwise noted. The Government of Cambodia does not publish bilateral statistics. Importing country statistics have been used to assess Cambodia's exports. The sources of the trade statistics used are General Administration of Customs of the People's Republic of China (for China), Eurostat (for imports by EU member states), Japan Customs (for Japan), Korea Customs Service (for South Korea), Ministry of Agriculture and Forestry (for New Zealand), Tradeline Philippines (for the Philippines), Directorate General of Customs (for Taiwan), Customs Department of the Kingdom of Thailand (for Thailand), United States International Trade Commission Dataweb (for the USA) and UN Comtrade. Vietnam chooses not to publish bilateral trade statistics other than in units of import and export value - volumes and weights have consequently been estimated herein. Myanmar and Laos choose not to publish trade statistics - their trade in wood-based products with Cambodia is assumed herein to be zero. Source data for Vietnam's imports during 2009 and Bangladesh's imports during 2008 and 2009 are not yet available but are assumed here.

[5] The Ministry of Forestry was renamed the Ministry of Environment, Conservation and Forestry (MOECAF) after national elections in November 2011. This report uses MOECAF except for citations of reports published before November 2011.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

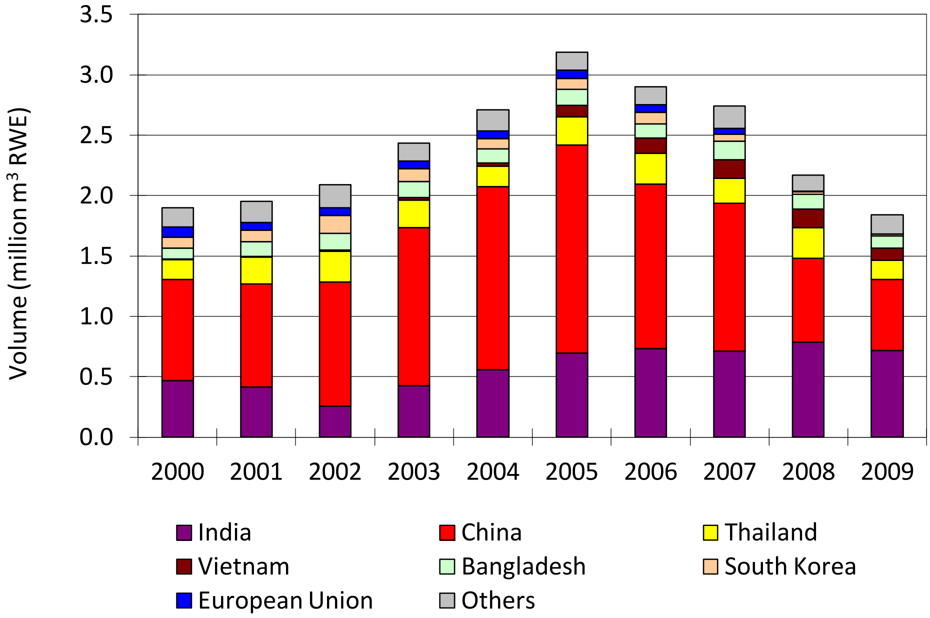
- **India, China, Thailand, Bangladesh and Vietnam are the main <u>direct</u> markets; the Myanmar – Malaysia trade may warrant further study:** India currently represents the largest export market for Myanmar forest products. The ITTO Monthly Information Services (MIS) (July 16-31, 2011) states that 80% of all teak and hardwood ocean shipments from Myanmar are going to India (ITTO 2011). While most countries in the region are seeing a decrease in imports of Myanmar timber products, the decrease in imports by China has been most significant in recent years.

  Although official trade data does not indicate significant exports of Myanmar timber to Malaysia, numerous interviews with traders from Myanmar and Thailand, and various government officials, support the argument that Malaysia serves as a major hub for trade in Myanmar timber in the region. These same interviews seem to indicate that a substantial amount of Myanmar natural timber, especially teak, is being imported into Thailand via Malaysia. The Myanmar-Malaysia timber trade has not been studied in any detail. This represents a potentially large gap in understanding of regional timber trade dynamics.

  The US and EU are not significant *direct* importers of Myanmar forest products, reflecting the impacts of various EU and US prohibitions. It is highly likely that Myanmar wood is being re-exported from China, Malaysia, Thailand and Vietnam, although it is difficult to track this information systematically.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Figure 1: Myanmar Timber Products Exports by Country, 2000-2009 (million m^3 RWE)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.[6]

- **Community forestry and related rights:** The 1992 Forest Law and 1995 Forest Policy enabled the 1995 Community Forestry Instructions (CFI), which gives legal backing for rural communities to co-manage forests. The overall principles in CFI are for local communities to fulfil basic livelihood needs for firewood, farm implements and small timbers, as well as reforest degraded forestlands.

  So far, no community forests have begun commercial harvesting, so it is too early to tell how they will factor into the county's commercial forestry sector, if at all. No government management plans have included community forests as providing timber for the country's wood sector, for example. There is also no certification program targeting community forests in the country.

[6] All trade statistics compiled by James Hewitt for the European Forestry Institute (EFI), unless otherwise noted. The Government of Cambodia does not publish bilateral statistics. Importing country statistics have been used to assess Cambodia's exports. The sources of the trade statistics used are General Administration of Customs of the People's Republic of China (for China), Eurostat (for imports by EU member states), Japan Customs (for Japan), Korea Customs Service (for South Korea), Ministry of Agriculture and Forestry (for New Zealand), Tradeline Philippines (for the Philippines), Directorate General of Customs (for Taiwan), Customs Department of the Kingdom of Thailand (for Thailand), United States International Trade Commission Dataweb (for the USA) and UN Comtrade. Vietnam chooses not to publish bilateral trade statistics other than in units of import and export value - volumes and weights have consequently been estimated herein. Myanmar and Laos choose not to publish trade statistics - their trade in wood-based products with Cambodia is assumed herein to be zero. Source data for Vietnam's imports during 2009 and Bangladesh's imports during 2008 and 2009 are not yet available but are assumed here.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Community forestry did not gain momentum in northern Myanmar, where most of the remaining forest resources remain and logging is most concentrated, until land tenure security began to be more seriously threatened. This occurred with the arrival of agribusiness concessions in the mid-2000s in Kachin and Shan States, which resulted in village agricultural uplands being confiscated. Upland ethnic farmers are now relying on community forestry as a legal measure to safeguard their village lands, although by doing so they are also granting greater administrative control over these areas to the forestry department.

- **Lessons learned from Forest User Groups relevant for policy consultations:** Most Forest User Groups (FUGs) are planting mostly high-value timber species with little focus on more nuanced agroforestry strategies or local livelihood needs, such as local demand for fuel wood. FUGs are not as inclusive of the village as envisioned by NGOs, with female members and the poorest households under-represented. Therefore, while community forestry is one of the country's most promising legal avenues to provide a platform for village participation in land governance, new problems have arisen that require serious attention.

- **Anticipated forest policy reforms:** The new government may be debating whether or not to reform existing rules and policies of the newly named Ministry of Environmental Conservation and Forestry (MOECAF), specifically the MTE and Myanmar logging policies.[7] This includes a potential ban on the export of logs. The MOECAF continues to push for greater governmental support of the domestic wood processing industries to capture more value before export. This reflects recognition within MOECAF, the Myanmar Timber Merchants Association (MTMA) and timber traders of the drastically reduced domestic supply of natural timber.

[7] The Ministry of Forestry was renamed the Ministry of Environment, Conservation and Forestry (MOECAF) after national elections in November 2011. This report uses MOECAF except for citations of reports published before November 2011.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

2. HISTORICAL OVERVIEW

Large-scale commercial logging developed in Myanmar during colonial British rule starting in the mid-1800s. Early forestry activities were based upon the vast teak forests. By the time that the British began to more effectively implement scientific forestry, large swaths of the country, specifically the Tenasserim (present-day Tanintharyi Division) teak forests near the present day Thailand border, were already heavily logged. In response, the British administration introduced commercial forest management starting in 1856 in Pegu Yoma of central Myanmar— the same year that the Myanmar Forest Department was first established.

The scientific management of natural forests in Myanmar was based upon the "Brandis Selection System", following the German model. Over the next half century the colonial forest management system transformed into the Burma (now Myanmar) Selection System (BSS, now MSS). The MSS was designed to maintain a high yield of quality timber and enhance the natural regeneration of commercially valuable trees. By the early 1920s MSS was internationally recognized as a world-class scientific forestry management model, both in theory and practice.

Another land management system developed in Myanmar is the 'taungya' system, which is now a world-famous agro-forestry method based upon agro-forest intercropping. Initial teak plantings in the mid-19th century by the British in Karen populated areas in the Tenasserim hills (now Tanintharyi Division) represented a coercive arrangement, but nonetheless represented the initial stages of a teak plantation management program in Myanmar.[8] It wasn't until the 1970s that systematic teak plantation development commenced, which continues to the present day.

The socialist era in Myanmar (1962-1988) changed forest management considerably. Under the state-socialist system, growth-oriented targets without reference to local circumstances or edaphic qualities were put forth, with expected increases in annual export earnings. The centralization of the forestry management system in Myanmar had very negative effects on the MSS, where every divisional forestry department had to raise their timber production in order to reach their allocated targets. Since the set targets were not based on the actual productivity of the forests as calculated under MSS, the forests were logged unsustainably. This included ignoring the 30-year felling cycles for extracting timber and replacing this with greatly shortened rotations.

At the end of the socialist governance system, in the 1970s, timber quickly became a principal source of national revenue. The State Timber Board (STB), the precursor of the Myanmar Timber Enterprise (MTE), became the only state agency authorized to extract and market timber. The STB (and now the MTE) thus directly challenged the institutional authority of the Forest Department, forcing foresters to permit over-cutting to meet the government's need for foreign exchange. It is at this time that the establishment of forest plantations grew in popularity, supported by the FAO.

After the Myanmar government began to adopt a quasi-private market economy in 1988, major changes again swept through the forestry sector. In the 1990s Thai industry was heavily involved in the over-exploitation of Myanmar forests along the Thai border. Heavy timber extraction shifted to the border with

---

8 See Raymond Bryant's political ecology of forestry in Myanmar for more information about *taungya*, Karen ethnic politics, and teak forest management (1996).

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Yunnan province (China) in the 2000s. Private sector involvement in the forestry sector, as well as shifts in regional politics and economics, has subsequently transformed forestry management in Myanmar. In the past decade the Forestry Department has responded to these new forces through advancing new policies and initiatives to attempt to protect and sustainably manage one of Asia's largest remaining expanse of tropical forests, as well as the world's most prized teak stands.

The northern forests along the China border were targeted by Chinese loggers and timber traders for their prized old-growth valuable hardwoods in the late 1990s up to mid-2000s following cease-fire agreements along the Sino-Myanmar border (Global Witness 2005). In early 2006 the Chinese and Myanmar governments bilaterally agreed to stop illegal cross-border timber trafficking across their shared border – to some degree orchestrated by ethnic political groups. Immediately following the bilateral cross-border timber trade clamp-down, timber flows were reduced and currently remain under volumes previously exported across the border (upwards of 1 million cubic meters in the early 2000s), cross-border timber trafficking continues, albeit at lower volumes (Global Witness 2009).

Since the mid-2000s, at about the same time that the government began to clamp down on illegal Sino-Myanmar timber trade, the government has increasingly promoted the domestic business community to engage in various resource-extraction sectors. The Myanmar private sector, along with foreign investors, has particularly got involved in timber trade – coordinated mostly through the Myanmar Timber Merchants Association (MTMA) and working in collaboration with the Myanmar Timber Enterprise (MTE) of the Ministry of Environmental Conservation and Forestry. Influential, well-known Myanmar companies have also begun to invest in agribusiness after encouragement from the Myanmar government to increase the export of agricultural commodities. Regional finance institutions and western governments have recently been reassessing their approach to financial sanctions, and seem poised to engage in the country's resource extraction industries, including forestry and agriculture.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

3. NATIONAL FOREST STRATEGY, POLICIES AND REGULATIONS

The history of Myanmar forest policy is one of continued struggle between different actors, institutions and community groups. This involves contested projects of how forests should be managed and by whom—forests for economic development and commercial gain, forests for sustainable management and forests for local community use. The most valuable species— teak, ironwood and rosewood— have typically been harvested at rates far above sustainable levels. Today, log harvesting and exports are controlled through the Myanmar Timber Enterprise (MTE) under the Ministry of Environmental Conservation and Forestry (MOECAF), although commercial enterprises are also involved in wood processing and processed exports, largely coordinated by the MTE and MTMA. Community Forestry has developed slowly in Myanmar. To date no commercial extraction by communities has been possible. The accountability of state institutions around the forest-land sector remains a significant issue, as are problems with illegal extraction and trade.

The new Myanmar government may be considering options for reform of the Ministry of Environmental Conservation and Forestry (MOECAF) -- specifically the MTE -- the Myanmar logging policies. This includes a potential ban on the export of logs. The MOECAF continues to push for greater governmental support for the domestic wood processing industries to capture more value before export. This reflects recognition within MOECAF, the MTMA and timber traders of the drastically reduced domestic supply of natural timber.

3.1 The Myanmar Selection System and Annual Allowable Cut

The Myanmar Selection System (MSS) is worthy of review, although practice diverges greatly from theory as laid out in Asia's most notable forest management scheme during colonial times. The MSS operates according to felling cycles of 30 years, with the division of forest blocks into 30 plots of approximately equal yield capacity. Each year selection felling is carried out in one plot. All marketable trees that have reached minimum exploitable girth requirements are selected for cutting.[9] Teak is extracted first, followed later by other hardwoods. In addition a range of procedures are to be followed to ensure the preferential growth of teak trees and general health of the forests.

The MSS's hallmark is the Annual Allowable Cut (AAC) set for teak and other hardwoods at sustainable levels. Since its introduction the Forest Department has conducted forest-land inventories to describe the composition of the forest and the quantity and quality of the trees that the AAC is based upon. The AAC based on 'removals' is always greater than the amount of timber that may be marketed because some timber is wasted in the process of extraction and wood processing; this waste may be in the order of 25% to 50% (MOF, 2001).

[9] In moist teak forests the minimum diameter at breast height limit is 73 centimeters, while in dry forests (central Myanmar) the diameter limit is 63 centimeters. The fixed diameter limit for other hardwoods varies across species. Teak trees are girdled 2-3 years before harvesting to enable drying to facilitate transportation by water (MOF 1995).

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

3.1.1 AAC and Logging Quotas

The AACs were revised in the 1990s and again in the early 2000s (see Table 1). Before the initial AAC changes in the 1990s, both for teak and for other hardwoods, the values had not changed for over 30 years. They were based on partial surveys done in the early 1960s (as the areas that contained most of the valuable timber were not under government control at that time), which were then extrapolated to the whole country and set at a level that would theoretically ensure sustainable timber production over the entire nation's territory. However, as many areas of the country were inaccessible due to insurgency and civil war (as is the case today, albeit to a lesser degree), the AAC for the entire country was harvested in only those parts of the country that were accessible by the government. This inevitably led to over-exploitation and is a major flaw of the established AAC figures even if precisely followed. The forest inventories that are used to set the local AAC are extrapolations based on samples, rather than a full 'contouring' exercise, leading again to less precise AAC figures even if followed correctly.

Table 1. Annual Allowable Cut (AAC) in Myanmar

	Before 1992-93		After 1992-93		Percent (%) change	
	No. of Trees (000)	Cubic Tons (000)	No. of Trees (000)	Cubic Tons (000)	No. of trees	Cubic tons
Teak	179	340 (481 m^3)	124	210 (297m^3)	-30.5	-38.2
Other Hardwood	1,366	1,300 (1,840,800 m^3)	1,795	1,800 (2,548, m^3)	31.4	38.5
Total	1,545	1,640 (2,322 m^3)	1,920	2,010 (2,846 m^3)	24	23

Source: MOF, 2001.

Logging quotas, however, have little relation to the AAC. The ruling government (formerly the State Peace and Development Council) sets production targets on behalf of government institutions in need of foreign exchange. The forestry sector is no exception to this. Based on these state revenue requirements, a target volume is calculated which is then translated downwards into logging quotas for each logging district. These quotas have little relation to the actual capacity of the forest, the calculated AAC, or the sustainability of forestry operations. MTE and private subcontractors face disciplinary procedures or the withdrawal of permits for failing to meet cutting targets. Attempting to meet unrealistic quotas lead to over-cutting, cutting of undersized trees or cutting trees outside the specified plot (Global Witness, 2003). Forest Department figures show that teak production exceeded the AAC in three of the four years between 1989 and 1992 (Brunner, et. al. 1998). Overall, since 1970 teak production has exceeded the AAC by at least an average of 15%, according to official figures (Global Witness, 2003).

In the 1990s, the AAC for teak production was reduced by over 30% in the number of trees harvested and nearly 40% in terms of weight in tons. For other hardwoods, however, the opposite occurred: the number of trees increased by more than 30% and nearly 40% for weight in tonnes. Overall AAC increased by almost 25% in number of trees and nearly 25% in tons harvested. Thus, the decrease in the AAC for teak was offset by increases for other hardwoods in order to meet revenue targets.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

The Forestry Department has also recently updated the Management Master Plan and all 62 Forest District Management Plans, each of which contains an AAC for teak and other hardwoods. In 2010 the FD's Planning and Statistics Division updated the figures for AAC again, although these measurements, much like in the past, are still not determining forest concessions allotted or timber cut with timber production greatly exceeding the AAC.

According to the FD's Planning and Statistics Division, the 2010 AAC for teak is set at 147,300 trees, and for other hardwoods, 1,131,461 trees. The FD calculates the volume as on average 1.2 tons per teak tree and 1.4 tons per hardwood tree. That comes to an AAC of 176,760 tons of teak and 1,584,045 tons for other hardwoods. These are the most current AAC figures for Myanmar.

3.2 Forest Law and Policy

The first Forest Act was enacted in 1902, which was updated as the 1992 Forest Law. The 1992 law supports conservation, sustainable forestry and socio-economic benefits. In addition, the 1992 law decentralizes forest management to some degree and encourages the private sector and community participation in forest management.

The implementation of the 1992 Forest Law has been facilitated by the Myanmar Forest Policy (1995). This policy, following other international policies on sustainable development and forestry, focuses on enhancing national socio-economic development while also ensuring ecological balance and environmental stability. The Forest Policy encapsulates sustainable production, satisfying basic needs, institutional strengthening and improvements in efficiency, protection of forests and biodiversity and participatory forestry. According to the policy, there is a call for a participatory approach to forest management with an emphasis on people's participation in forestry, wildlife and nature conservation activities, as well as in establishing plantations and increasing incomes through the application of community and agroforestry systems.

In general, the top-down political system and authoritarian political culture operating in Myanmar makes the decision making power and intentions of the ministries, departments, line agencies, business associations and NGOs difficult. A Ministry of Environmental Conservation and Forestry departmental task force may try to push a specific policy, usually driven by a courageous Director General. If the minister accepts the policy statement, it is then further sent along to other agencies and legal bodies for necessary clearance. If the policy recommendation makes it this far, then it must be further approved by the Cabinet, which meets once per week, in theory. It also needs to be formally accepted by the central government.

3.2.1 National Forestry Action Plan and Forest Working Plans

In 1996, the Forest Department updated the Forest Working Plans to incorporate more modern sustainable forest management concepts, which emphasized not only timber production, but also non-wood forest products, biodiversity conservation and the socio-economic well-being of local people. New "Administrative District Forest Management Plans" were also prepared the same year for 61 administrative districts throughout the country, which acts as a more decentralized forest management planning system. Forest Management Units (District Forest Areas) were organized in line with civil administrative districts. Each unit comprises various working areas depending on its objectives. These working areas include those for

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

production, plantation, watersheds, community forest, NWFPs and natural forest land (MOF, 2001). However every district management plan still has to get final approval all the way up to the Forestry minister (ECO-Dev, n.d.).

The National Forestry Action Plan (NFAP), established in 2001, outlines the forestry situation from 2001/2002 to 2030/2031. This includes a wide range of forest activities including wildlife and nature conservation in order to achieve the objectives of sustainable harvesting of teak, protection of forests against degradation, environmental conservation and earning more foreign exchange by exporting more value-added products. The NFAP covers extensive forest activities, including a mandate to "protect and extend reserved forests and protected public forests (PPF); pursue sound programmes of forest development through regeneration and rehabilitation; effectively manage watersheds for the longevity of dams and water reservoirs; optimize extraction of teak and hardwood within the available means; extend forestry research; enforce effective law against illegal extraction of forest products; encourage increasing use of fuel-wood substitutes; export timber and value-added forest products and seek ways and means to export other NWFPs; and promote ecotourism to earn more foreign exchange" (FAO, 2009).

The final sustainable forestry initiative established is the National Code of Practice for Forest Harvesting (2000) and the Criteria and Indicators for Sustainable Forest Management, following compliance with ITTO guidelines (of which Myanmar is a member country).

3.3 Forest Land Categories

The Forestry Department of the Ministry of Environmental Conservation and Forestry categorizes forests into different types, based on its use and protection and production value.

3.3.1 Permanent Forest Estate

The Forest Policy 1995 includes a set target to expand the existing permanent forest estate (PFE) to 30% of total land area, as well as increasing the coverage of the protected area system (PAS) to 10% of the country's total territory area. PFE is also commonly used to describe protected forest, with no allowance for subsistence use without special permission by the Minister of MOECAF or Director General of the Forestry Department (FD), or in some cases only as low as the township Forestry Official.[10].

PFE's can be roughly categorized as:

(1) *Forest Reserve*: Includes Protected Area System (PAS) (e.g., national parks, wildlife reserves and sanctuaries, etc.), commercial forests (e.g. plantations for domestic use or export) and local supply reserves near villages for village use.

(2) *Protected Public Forest* (PPF): This category is an alternative to forest reserves for protecting trees and restricting land use in non-reserved forested areas.

[10] It is important to note that these types of special exemptions are potential loop holes which can enable companies to do large-scale 'development' – including logging and plantations – in protected forests.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

As of 2003, only about 22% of total land area has been given full legal protection under the Forest Reserve System, which represents only about half of land categorized as forest according to government data. There are currently 34 protected areas including wildlife sanctuaries, bird sanctuaries, national parks and elephant ranges. These areas currently amount to just over 7% of the country's total land area and this is neither adequate nor completely representative of the country's biodiversity (WCS, 1999). Out of the 34 protected areas, 20 are managed by the Nature and Wildlife Conservation Division under the Forest Department (FAO, 2009).

The protected areas are continually under-managed and under-staffed and often operate as paper parks. In addition, protected forests sometimes become mapped within other land use concessions, especially for industrial agriculture. Within 2004-05 alone, 2,766 square miles of reserved forests, which included protected public forest, were degazetted. Not only agricultural expansion, but also other resource extraction concessions, such as dam construction in forest and watershed areas, inclusion of mangrove forests as fishing grounds and establishment of new military compounds in PFE, hamper effective conservation efforts in these 'paper parks'.

3.3.2 Non-Permanent Forest Estate

(1) *Public forest* (previously known as *unclassified forest* or *other woodland area, or OWA*): describes forest outside PFE. Villagers can harvest timber and non-timber products for subsistence (not for sale in the market), unless prohibited by law, such as cutting "reserved trees" such as teak. However, even these more relaxed rules can be overridden with special permission. Public forest is only used as an extension of reserved forests, which would not be targeted by forest plantations normally due to increased conflict with villagers and other departments, especially the Ministry of Agriculture and Irrigation (MoAI).

(2) *Waste land*: land category without clear delineation on purported use or institutional control. This land category is often used by the MoAI to allocate agricultural concessions.

Both Public Forest and Wasteland are at the disposal of any government department, although permission must be received from the local Land Management Committee (LMC), which both the Forest Department and State Land and Records Department (SLRD) of the Ministry of Agriculture and Irrigation (MoAI) belong to. MOECAF policy on public forest is that it is forestland at the "disposal of state."

3.3.3 Other Forestland Categories

In addition to the PFE, an additional 10% of total land is to be managed for multiple land use mixed with agro-forestry and community forests.

There is also the category of "degraded forest", which is referring more to the condition or quality of forest than a category of forest protection under MOECAF or which agency controls it. It could be under control of various ministries – not just MOECAF. Even if it is under the jurisdiction of MOECAF, only the trees are under the control of the FD, but not the land, which is at the disposal of the state. If a villager wants to use degraded forest land, he cannot cut trees without permission from the FD, but if he doesn't cut any trees, then he can

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

use it without permission from the FD (e.g., intercrop with food crops), according to research interviews (Interview by lead author, Yangon, July 2008).

3.4 Community Forestry

The 1992 Forest Law and 1995 Forest Policy, with its emphasis on villager participation in forest management, enabled the 1995 Community Forestry Instructions (CFI) which gives legal backing for rural communities to co-manage forests. The CFI is the first legislation to recognize villagers' right to manage nearby forests for their own use and joint management with the district Forestry Department. The CFI grants forest user groups (FUGs) a 30-year official lease over a designated forestland under joint-management with the forestry department. The village, in consultation with the forestry department and oftentimes a NGO, must formulate a village forest management plan that they then are beholden to follow unless they risk losing their community forest.

The overall principles in CFI are for local communities to fulfil basic livelihood needs for firewood, farm implements and small timbers as well as reforest degraded forest lands. The community FUGs collaborate with NGOs and district FD in managing the CF, which curtails swidden cultivation in favor of tree regeneration. Community forestry did not gain momentum in northern Myanmar, where most of the remaining forest resources remain and logging is most concentrated, until land tenure security began to be more seriously threatened. Agribusiness concessions have become more commonplace since the mid-2000s in Kachin and northern Shan States, for example, which has resulted in village agricultural uplands being confiscated. Farmers only now are relying on community forestry as a legal measure to safeguard their village lands.

Most FUGs are planting mostly high-value timber species, such as teak, Pyinkado (*Xylia xylocarpa*, or ironwood) and Padauk (*Pterocarpus macrocarpus,* or labeled as a rosewood in Myanmar), with little focus on agro-forestry strategies or local livelihood needs, such as fuelwood. As a result this is causing problems with food security for the villages (Interviews by lead author with FUGs in Kachin State, July 2009). Furthermore, the FUGs are not as inclusive of the village as envisioned by NGOs, with female members and the poor under-represented. Often female-headed households are excluded from the community forest. Therefore while community forestry is one of the country's most promising legal avenues to protect village land and provides a platform for village participation in land governance, new problems have arisen that still require serious attention.

As of 2011, there are 572 FUGs with legal community forestry certificates, managing a total of 104,146 acres of forest (only 0.13% of country's forest cover); although many more are awaiting formal certificates and more still managing their forests as if under formal community forestry management. Implementation progress to date has been highest in Shan (221 FUGs), Mandalay (99 FUGs), Rakhine (85 FUGs), Ayeyawady (49 FUGs) and Magway (40 FUGs). Annual progress of community forest establishment over the last 15 years had averaged 6,943 acres (2,810 ha) per year. These figures mean community forestry establishment is far under the government's Master Plan's 30-year target (i.e. 2.27 million acres by 2030) (Tint, Kyaw, Oliver Springate-Baginski and Mehm Ko Ko Gyi, 2011).

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

So far, no community forests have begun harvesting, so it is too early to tell how they will factor into the county's commercial forestry sector, if at all. No national government management plans have included community forests as providing timber for the country's wood sector, for example. There is also no certification program targeting community forests.

3.5 Impact of Forest Law Enforcement on Local People

While Forest Act No. 17 declares that local people are still allowed to extract forest products for non-commercial purposes without prior permission (although certain 'reserved species' are off-limits), according to Forest Act No. 42, no one is allowed in a reserve forest to cut any trees. In public forest (forestland not belonging to the FD), villagers can use trees that are not restricted, but they need permission first. No specific legal assurances are made to local people's claim to access and use forest resources, despite the language concerning people's participation.

According to one report, the system of law enforcement for forest protection in Myanmar is an issue of concern:

> "Law enforcement is necessary in natural resource management but it should be applied in the context of transparent and accountable manner. With this bias of abusive and centralized tendencies, law enforcement for natural resource management becomes an alternative tool of local authority in controlling people and oppressing their opponents in their interest. Under this circumstance, grassroots have been suffering from stringent access to tree resources for household use. They even have to seek the favor of local authority for having access to their own property, planted trees within the home compound or along the farm boundary. On the other hand, those who are more intimate to local authorities have been gaining special favors to exploit natural resources for commercial interest in contrary to what has been laid down for protecting the environment. In-situ corruption of these departments [that] result in poor performance of local level activities weaken their accountability and local authority" (ECO-Dev, n.d.).

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

4. DEMAND: DOMESTIC DEMAND AND WOOD EXPORTS

According to government data provided by the Myanmar Timber Merchants Association (MTMA), Myanmar produces 1.4 million tons of teak and hardwood annually and exports about 0.8 million tons – which would imply that 0.6 million tons are used domestically.

4.1 Domestic Demand

Very little information can be found about the domestic demand for wood products. Fuel-wood demand is likely far higher than official supplies, but the only figures available are late 1990s figures estimating consumption of fuelwood for 2000 and 2005 between 40 and 46 million m^3 – much higher than the estimated renewable supply of only 24.1 m^3(FD 1997 and Kyaw 1995 as reported in FAO, 2009).

The Myanmar Forest Policy 1995 encourages forest plantation establishment in order to supply local and industrial use as well as to increase reforestation of degraded lands. By 2009, just over 830,000 ha of plantations in total had been established, but only 5% (28,440 ha) had been designated to supply the local market for fuel wood, posts and poles. Village fuelwood plantation projects would supply an average quota of about 5,000 hectares per year (FAO 2009:20); however, no monitoring is in place in order to verify establishment in line with the quotas. Agroforestry and community forestry also offer other afforestation schemes supported by the state that help meet fuelwood demand. However, insufficient financial provisions and institutional capacity hinder efforts to meet planned targets (FAO 2009:20) and even community forestry initiatives appear to be attempting to target the more lucrative industrial market by luring private sector investment.

4.2 Exports

India now represents the single most lucrative market for Myanmar forest product exporters. The ITTO Monthly Information Services (MIS) (July 16-31, 2011) states that 80% of all teak and hardwood ocean shipments from Myanmar are going to India (ITTO 2011). Thailand and especially China are now importing declining volumes of Myanmar timber. The US and EU are not significant *direct* importers of Myanmar forest products, reflecting the impacts of various EU and US prohibitions. It is highly likely that Myanmar wood is being re-exported from China, Malaysia, Thailand and Vietnam, although it is difficult to track this information systematically.

Myanmar remains one of the world's only countries with no prohibitions of any kind on log exports. The country provides much coveted teak and other hardwood logs (and to a lesser extent sawnwood, and less still wood products) to the region and beyond. Currently, round wood — especially teak logs and sawnwood — is the main export item among wood and wood products, although the Myanmar Industrial Development Plan has targeted regular reductions of round log exports and increasing supply to domestic wood-based industries. Although both overall forest exports and round log exports reached a peak in 2005 in terms of volume (Fig. 1), the value of total exports in 2007 was much higher than that in 2005 (Fig. 2), indicating that log prices and/or the quality of logs exported increased during this time. The share of value-added exports has not increased (Fig. 3).

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

4.2.1 Discrepancies in Trade Data

Major discrepancies in the trade data surrounding Myanmar's wood products make it difficult to analyze the situation in-depth. When looking at the trade statistics of Myanmar's exports, it is important to note significant differences in data between international sources and national statistics. This report uses the "mirror" trade statistics compiled by James Hewitt for the European Forestry Institute (EFI) from the relevant official agencies of major importers of Myanmar wood[11]. Official data collected from the Myanmar Timber Merchants Association (MTMA) differs significantly.

The trade data analysis is also supplemented by a review of secondary data and interviews conducted with government officials, industry representatives and researchers in Myanmar and Thailand. While the official import/export figures presented should not be viewed as conclusive fact, it is also true that the timber trade is a sensitive topic and interview data should also thus be kept in context.

Discrepancies in bilateral trade statistics for forest products have recently attracted attention as potential indicators of illegal trade practices, such as intentional under-reporting or smuggling. With Myanmar listed by Transparency International as the world's second most corrupt place in the world (tied with Afghanistan behind Somalia), this may be the case. In 2001, China comprised a meager 0.3% (3,237 m^3) of Myanmar's official hardwood log exports, according to Myanmar figures and as reported by the ITTO 2002. China's customs statistics, however, recorded 513,574 m^3 of Myanmar hardwood log imports in 2001 (ITTO 2002) – and the majority of this discrepancy was widely acknowledged as smuggled wood over the border. While these specific bilateral trade discrepancies may have been rooted in the unique situation of massive illegal logging taking place on a massive scale along Myanmar's border with China at the time, these types of discrepancies are common. The volume of timber being exported could easily be under recorded as an illicit method of 'smuggling' timber out of the country with 'legal' shipments.

A study conducted by the MOECAF at an unknown date in the 2000s on MTE-owned and private industries in Yangon and Mandalay showed that rough san wood, veneer, plywood, garden furniture, laminated wood, finger joint, parquet, flooring, S4S, scantling and decking were being directly exported to China, Thailand, Japan, Korea, Indonesia, South America, India, the EU (France, Germany, Italy), Malaysia, Singapore and New Zealand. Trade data from importing countries, however, show that the dominant product export remained logs (Figure 3).

It must be noted that discrepancies in trade statistics can also exist for reasons that have nothing to do with illegal activities, such as measurement error and shipment lags. In particular, it should be noted that the Myanmar system of measurement uses the *Hoppus*, where 1 *Hoppus* = 50 cubic feet. This unique measurement poses problems for accurate and reliable documentation at the ports. Customs in importing countries are confused by Myanmar customs forms due to the use of *Hoppus*. The same is true for foreign companies who are dealing with customs agents at Yangon ports to ship out their timber. Customs agents in Yangon, understanding that the conversion process between Myanmar and internationally-recognized

[11] The data was collected from the General Administration of Customs of the People's Republic of China (for China), Eurostat (for imports by EU member states), Japan Customs (for Japan), Korea Customs Service (for South Korea), Ministry of Agriculture and Forestry (for New Zealand), Tradeline Philippines (for the Philippines), Directorate General of Customs (for Taiwan), Customs Department of the Kingdom of Thailand (for Thailand), United States International Trade Commission Dataweb (for the USA) and UN Comtrade.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

measurements are too complex for most to understand, typically would "guess-timate" the volume of the timber – significantly impacting official timber export statistics. This problem, however, can also serve as a convenient cover to intentionally under-record as an illicit method of 'smuggling' timber out of the country with 'legal' shipments.

4.2.2 Exports by Country and Product

As mentioned earlier, India now represents the single most lucrative market for Myanmar forest product exporters. The ITTO Monthly Information Services (MIS) (July 16-31, 2011) states that 80% of all teak and hardwood ocean shipments from Myanmar are going to India (ITTO 2011). Thailand and especially China are now importing declining volumes of Myanmar timber.

According to the EFI data, the US and EU are not significant *direct* importers of Myanmar forest products, reflecting the impacts of various EU and US prohibitions. Exports to Europe in 2007 hovered near 50,000 m^3 RWE and valued around US$90 million, but dropped precipitously in 2008 and 2009. According to Myanmar data, in 2007-08, the market share of Myanmar timber products by value showed a more significant role of European markets, with timber export destinations as follows: India (38%), Europe (22%), North America (10%), Thailand (9%), China (7%), Japan (3%), other (3%), Hong Kong (2%), Middle East (2%), Vietnam (1%), Pakistan (1%), Singapore (1%) and Malaysia (1%) (Daw Khin May Lwin et al. 2009).

FAO documents report that Myanmar timber imported by Asian countries is for domestic use (FAO, 2009). However, extensive interviews for this report with timber traders and ex-forestry officials seems to confirm that Myanmar timber imported by Asian countries (India, Thailand, China, Singapore, Malaysia, Hong Kong, Taiwan) often ends up in EU and USA timber markets (Interviews by lead author, Yangon, July-August 2010; Friends of the Earth-Netherlands 2009). Myanmar timber that is consumed in Asian countries is mostly of lower quality timber and thus with a price that is not competitive in western markets; however this is certainly set to change as urban Asian consumers change both consumption spending patterns and tastes.

Regardless of which data one uses, it is highly likely that Myanmar wood is being re-exported from China, Malaysia, Thailand and Vietnam to European and the United States, although it is difficult to track this information systematically. Within a few years, new DNA and isotope identifying technologies are likely to become available which can determine the specific geographical origin of wood species and will soon likely begin to shed some light on this debate (proceedings of the 4th Potomac Forum, 2011).

While export earnings have increased from year to year and increasing volumes are being exported, there is a decreasing trend of average price until 2004-05. This is due to Myanmar teak being of lower quality for export over time (also supported by interviews). Furthermore, first class and second class veneer logs have no longer been produced since 1997-98. Lower grade teak logs (assorted) contributed 67% of total teak export in 1999-2000 (MOF, 2001). Therefore, the Myanmar authorities are focusing on the quantity of export rather than the quality, perhaps reflective of the non-sustainable forestry practices.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Figure 2: Myanmar Timber Products Exports by Country (million m³ RWE)

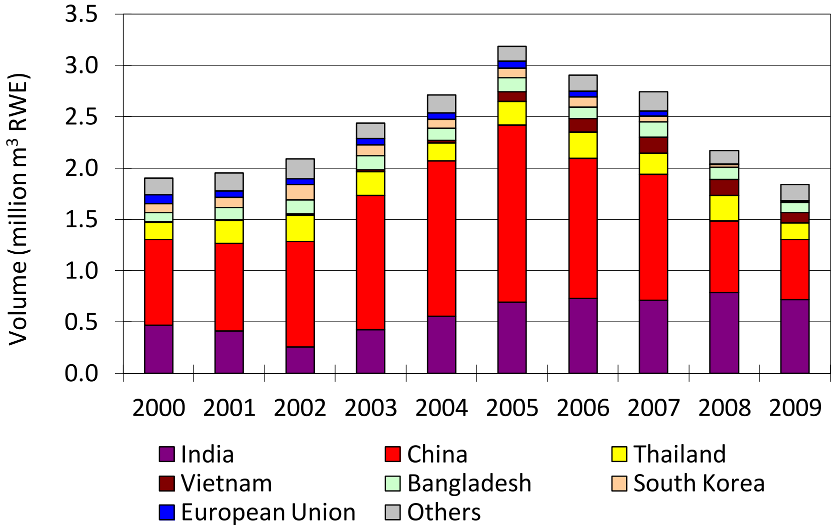
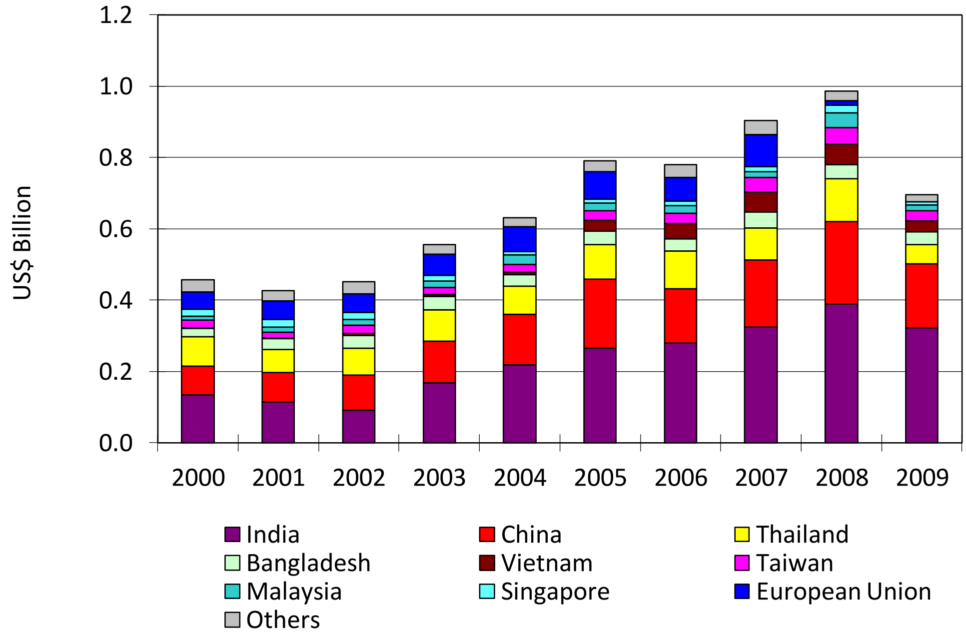


Figure 3: Myanmar Timber Products Exports by Country (US$ billion)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.

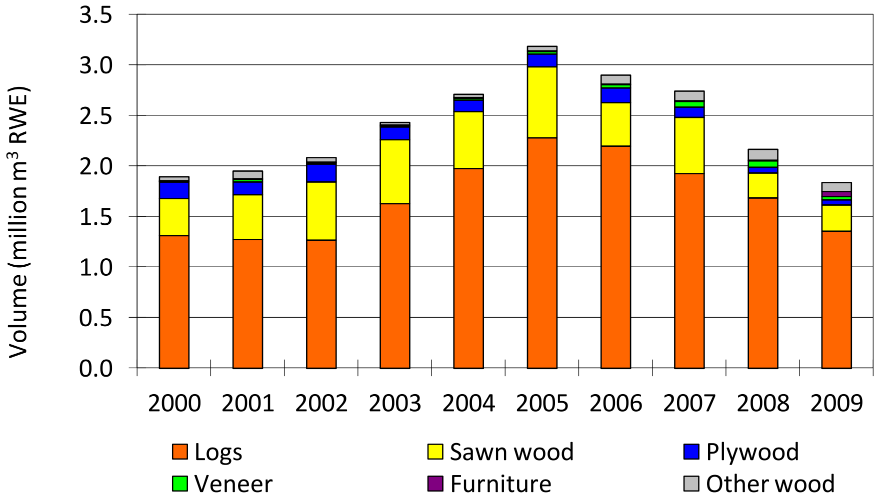
This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Table 2: Yearly Average Price of Myanmar Teak, 2001-2007

Year	Ton	Avg. Price/ton (US$)	Total Value (million US$)
2001-02	200,500	1,182.50	237.10
2002-03	205,600	1,124.50	231.20
2003-04	281,100	884.70	248.70
2004-05	319,200	790.40	287.20
2005-06	333,100	862.20	287.20
2006-07	347,440	868.50	301.70

Source: CSO, 2007; MTMA, 2009.

Figure 4: Myanmar Timber Products Exports by Product (million m^3 RWE)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.

In this case, the Myanmar data is roughly similar to the "mirror data" used by the European Forest Institute. In 2007-08, 77% of wood exports were logs, with other categories as follows: sawnwood (13%), plywood (3%), molding (4%) and furniture (1%) (Daw Khin May Lwin et. al., 2009).

From the government's own statistics, the volume and value of teak sawnwood peaked in 2007-08, the latest data available, whereas for exported teak furniture and plywood values fluctuated. The total mass of teak sawnwood exported by the private sector from 2003-04 to 2007-08 reached over 85,000 tons, valued at US$107 million.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Table 3 illustrates the continuing reliance upon the export log trade rather than the domestic wood processing industry.

Table 3: Teak Log Production Utilization (tons)

Year	Milled Locally	Exported Logs
1995-96	37%	49%
2000-01	24%	85%
2001-02	26%	59%
2002-03	21%	56%
2003-04	18%	60%
2004-05	5%	79%
2005-05	4%	90%

Source: Daw Khin May Lwin et al., 2009.

Table 4: Myanmar Teak Products Exports by Private Sector

	Teak Sawnwood		Teak Furniture	Plywood
Year	Ton	Value (US$ million)	Value (US$ million)	Value (US$ million)
2003-04	13,280	14.3	4.3	11.2
2004-05	11,163	15.0	3.6	20.6
2005-06	19,655	21.9	1.3	13.5
2006-07	19,593	23.903	2.033	17.442
2007-08	21,726	32.205	2.301	13.607
Total:	**85,417**	**107.389**	**13.563**	**76.344**

Source: MTE, 2007 and CSO, 2007 as cited in ITTO MIS, Jan 2010.

Different species of wood from Myanmar tend to end up in specific markets, although limited information is available to trace this directly. The *pyinkado* (*Xylia xylocarpa*, or ironwood) market is reported to be the strongest in India, followed by Vietnam and China (grade 8 is most popular), although some reports indicate that India may be reaching oversupply. In contrast, *padauk* (*Pterocarpus macrocarpus,* labeled as a rosewood in Myanmar) and *tamalan* ('Burmese tulipwood', a kind of rosewood, or *Dalbergia oliveri gamble*, aka '*Siam Palisander'*) is generally shipped to China and Japan. Availability of these species from Myanmar is limited and unpredictable and therefore prices are usually quite high due to limited, erratic and seasonal supply (FORDAQ, 2010b).

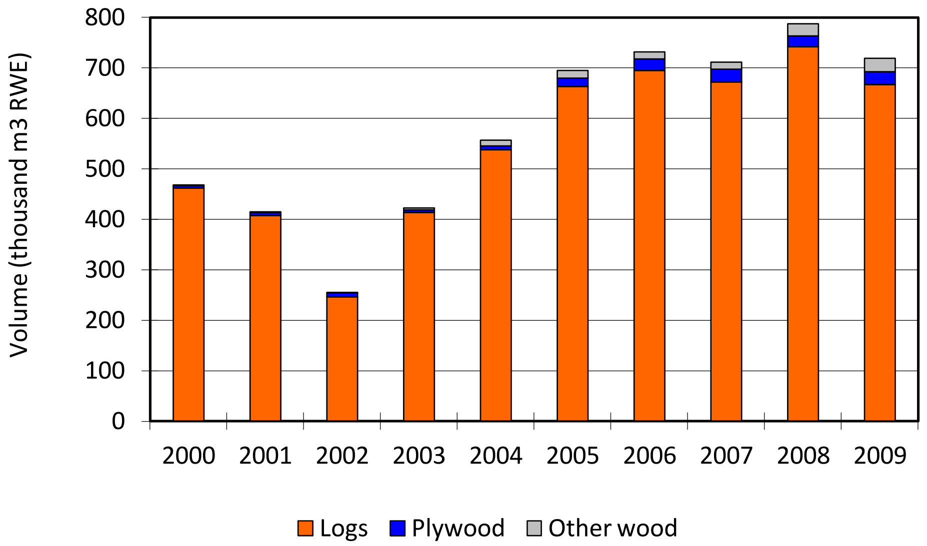
4.2.3 Myanmar Exports to India

While China has received much of the publicity regarding Myanmar's timber trade, India continues to dominate Myanmar's timber trade patterns. In the last few years there has been a dramatic increase in India's import of Myanmar teak. India is the destination for much of Myanmar's teak poles (diameter >10cm) from thinning operations (6-7 years old), used for furniture and the construction industry. Teak poles in size of 10-15 cm in diameter and 4-5 meters in length are sold for up to US$16 per pole in Raipur in Madhya Pradesh, India (Cho 2010). The recent fluctuations in the exchange rate between the Indian Rupee and US dollar means that Indian buyers have also been able to take advantage of the stronger rupee which makes Myanmar teak more competitive price on the Indian domestic market (FORDAQ 2009d).

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

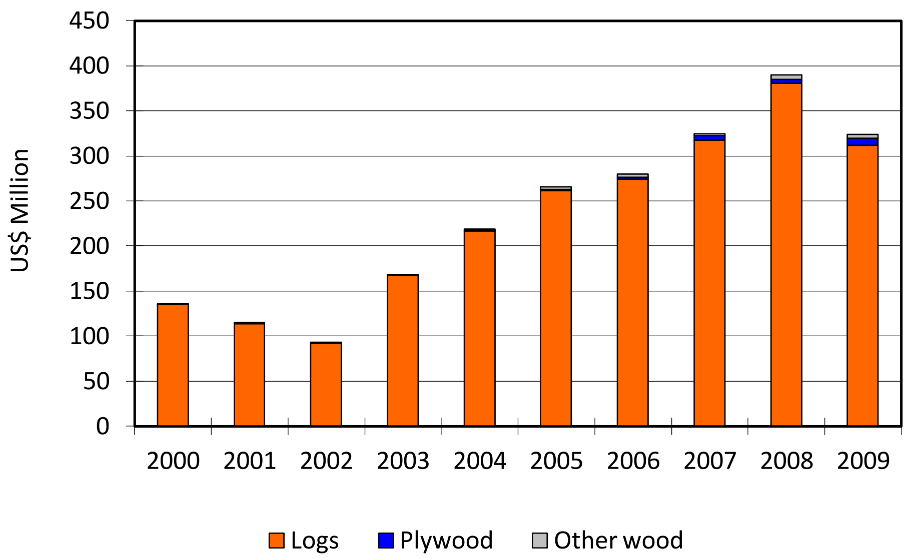
India is also Myanmar's main market for *Keruing* (*In, Gurjan*, or *Kayin* in Burmese) which, according to one Myanmar timber trader, is about 300,000 tons per year. Myanmar *Keruing* mostly comes from Arakan State, Tanintharyi Division and lower Kachin State in northern Myanmar. Myanmar wood is legally exported directly to India via Yangon, mostly to Kerala but also via Singapore through Indian business networks. India uses Myanmar non-teak wood both for its domestic market (e.g. veneer panels) as well as for the manufacture of finished products which are re-exported to the Middle East (e.g., Dubai) through Indian businessmen (Interviews with Myanmar timber traders, Yangon, June-July 2010).

Figure 5: Myanmar Timber Exports to India by Product (thousand m^3 RWE)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.

Figure 6: Myanmar Timber Exports to India by Product (US$ million)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

4.2.4 Myanmar Exports to Malaysia

According to official data from both the Myanmar and Malaysian governments, the direct trade of timber products between Myanmar and Malaysia is virtually non-existent, with volumes of only 20,000 m^3 in recent years. There have been some unsubstantiated reports that conflict with this official data. According to numerous Myanmar timber traders and former forestry officials that were interviewed for this report (Yangon, June-August 2008, 2009, June-July 2010), Malaysia acts as a major hub in the trade of Myanmar timber. Myanmar-Malaysia timber trade has not been studied in any detail and this represents a remaining gap in complete understanding of regional timber trade dynamics. Unsubstantiated reports of fraudulent certificates of origin and changing Bills of Landing abound and should be investigated.

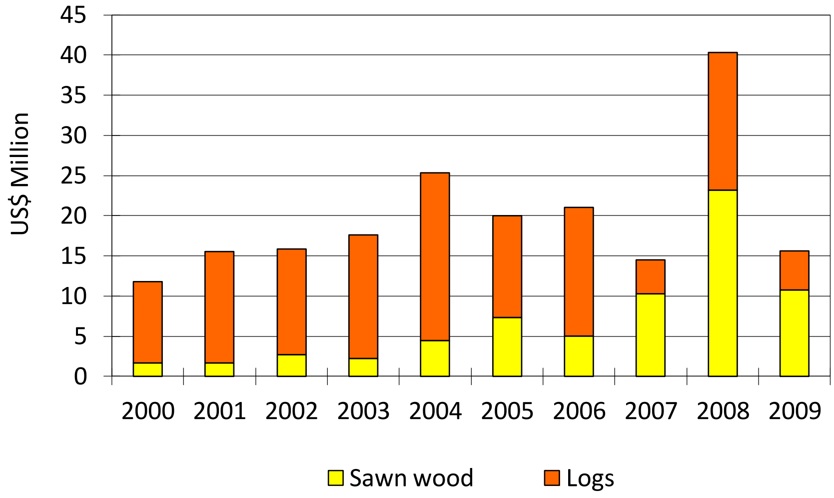
Figure 7: Myanmar Timber Exports to Malaysia by Product (thousand m^3 RWE)

Source: European Forestry Institute, as compiled by James Hewitt, 2010.

According to the official statistics collected by the European Forestry Institute, exports to Malaysia are relatively insignificant – only 25,000 m^3 RWE in 2009. The spike in 2008 values of timber exports to Malaysia to US$40.3 million were most likely due to a global spike in all commodity prices at that time.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Figure 8: Myanmar Timber Exports to Malaysia by Product (US$ million)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.

4.2.5 The Role of Singapore

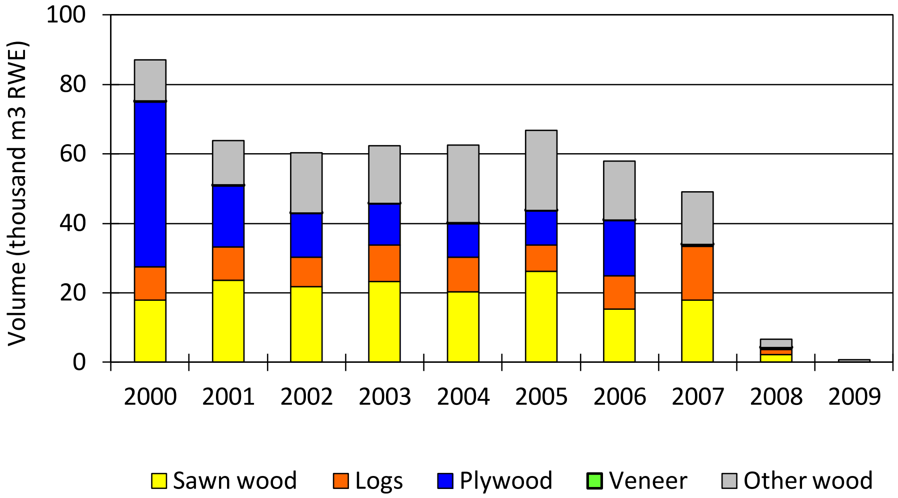
Exports of timber products from Myanmar to Singapore are even less than the insignificant amounts shipped to Malaysia noted above. According to unsubstantiated interviews with Myanmar timber traders (Yangon, June-August 2008, 2009, June-July 2010), Singapore financial institutions dominate the financial sector's support for the trade of almost all natural commodities sourced within Asia, including forest products, and it is here that Singapore might play an important role in the regional trade of Myanmar timber. According to these same sources, Singapore traders organize trans-shipment of Myanmar timber products to other countries by changing the 'specifications list' for the shipment of timber, which includes the number of pieces, size, volume, etc., as well as changing the 'Bill of Landing' from Myanmar to Singapore. Since there is no substantiated information on these activities, further research might be warranted to find out if these reports are true or not.

4.2.6 Myanmar Exports to the European Union

The EU withdrew Myanmar's GSP privileges in 1997 and excluded Myanmar from the "Everything-But-Arms" scheme for least developed countries which had been initiated in 2001. Myanmar has consistently enjoyed bilateral trade surpluses with the EU, with textiles and clothing accounting for 72% of Myanmar exports to the EU in 2005, and the remainder made up of wood and wood products, fishery and vegetable products. In 2008, however, the trade of timber products directly to EU countries dropped to virtually zero.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

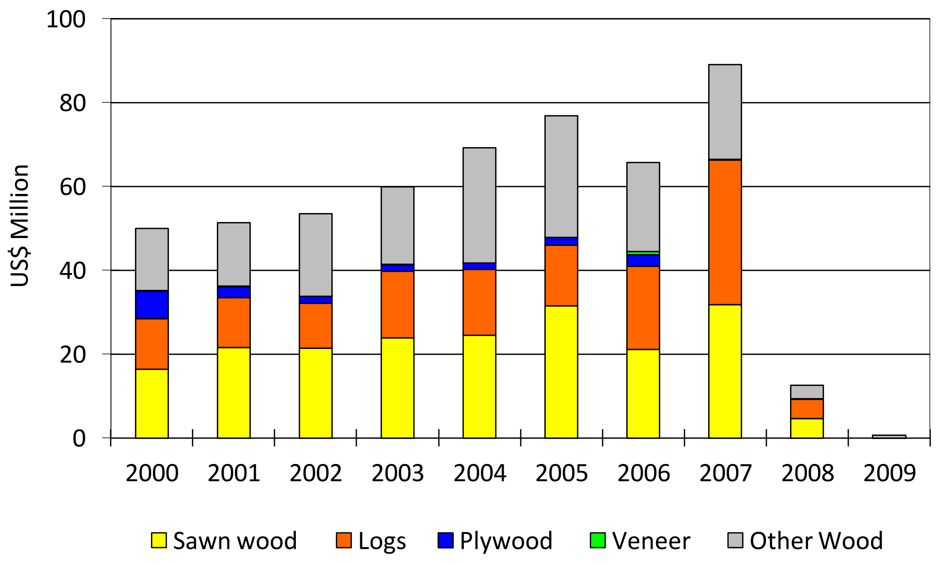
Figure 9: Myanmar Timber Products Exports to Europe by Product (thousand m^3 RWE)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.

In terms of volume, EU is not a major destination for Myanmar's wood product exports. Myanmar exported small volume of logs, sawnwood, plywood and veneer to EU each year until 2007 when economic sanctions started. For the last two years exports to Europe have all but disappeared. Less than 50 thousand m^3 RWE of timber was exported to Europe in 2007 and less 1 thousand m^3 RWE in 2009. Other wood makes up 89% of the exports in 2009. No volume was reported for logs, plywood or veneer.

Figure 10: Myanmar Timber Products Exports to Europe by Product (US$ million)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

The value of Myanmar's wood products exported to EU shows a slightly different trend from its volume. Logs and sawnwood dominated Myanmar's total wood products exports to EU with the value of plywood remaining low. Although the volume of exports decreased in 2007, the value of exports peaked at US$89 Million before dropping to US$13 Million in 2008 and to less than US$0.8 million in 2009. Sawnwood made up 15% of the total value of exports at US$120,000 while no value was recorded for logs, plywood and veneer.

US and EU sanctions against the military government, coupled with boycotts and other direct pressure on corporations by western supporters of the Myanmar democracy movement, have resulted in the withdrawal from Myanmar of most U.S. and many European companies. However, several Western companies remain due to loopholes in the sanctions. Asian corporations have generally remained willing to continue investing in Myanmar and to initiate new investments, particularly in natural resource extraction.

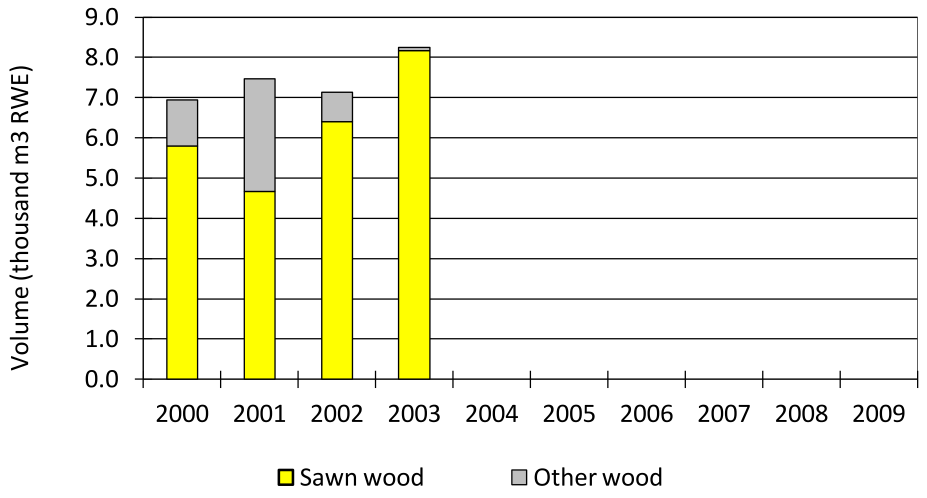
4.2.7 Myanmar Exports to the United States

The United States has imposed broad sanctions against Myanmar under several different legislative and policy vehicles. The Burma Freedom and Democracy Act (BFDA), passed by the US Congress and signed by the President in 2003, includes, among other things, a ban on all imports from Myanmar. The US Congress has renewed the BFDA most recently in July 2010. In addition, since May 1997, the U.S. Government has prohibited new investments by U.S. persons or entities. A number of U.S. companies exited the Myanmar market even prior to the imposition of sanctions due to a worsening business climate and mounting criticism from human rights groups, consumers and shareholders.

As a result of these sanctions, direct trade in forest products between the United States and Myanmar has dropped to zero (figures 6 and 7). However, high quality "Myanmar teak" is still advertised on the US market, especially in the luxury boat industry. It is likely that this is teak being falsely labelled as "Burmese teak" or true Myanmar teak that has been re-exported from a transit country such as China, Thailand or Malaysia.

While FAO reports indicate that Myanmar timber imported by Asian countries (India, Thailand, China, Singapore, Malaysia and Taiwan) is being used for domestic purposes, extensive interviews with timber traders and ex-forestry officials appear to contradict these reports. According to timber traders, a large percentage of Myanmar wood is re-exported onto the global tropical timber market, especially the EU and USA for high-end quality timber (Interviews by lead author, Yangon, July-August 2010; Friends of the Earth-Netherlands 2009). New DNA and isotope identifying technologies are becoming increasingly available which can determine the specific geographical origin of wood species and will soon likely begin to shed some light on this debate (presentations at 4th Potomac Forum, 2011).

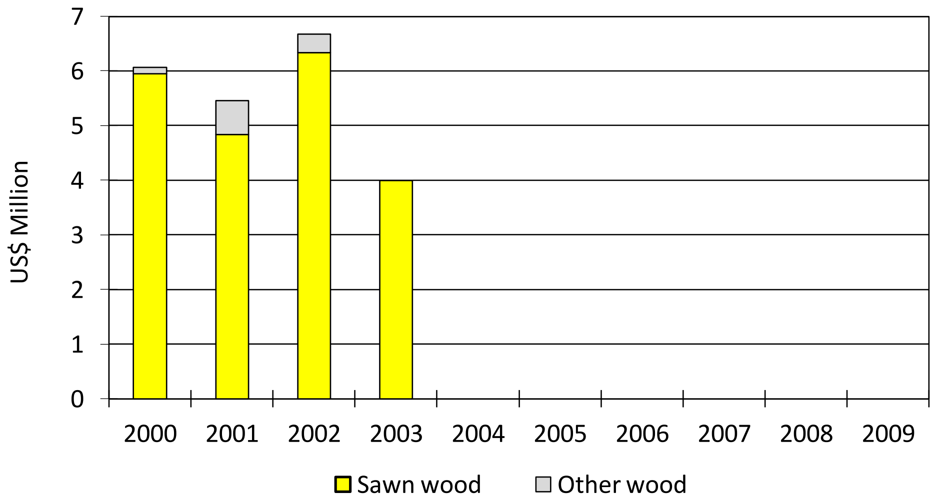
Figure 11: Myanmar Timber Products Exports to the United States by Product (thousand m^3 RWE)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.

In the past the United States imported low amounts of sawnwood from Myanmar (8,000 m^3 RWE in 2003). No timber products have been exported to the United Sates since 2003.

Figure 12: Myanmar Timber Products Exports to the United States by Product (US$ million)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.

The value of exports to the United States decreased to US$4 million in 2003 and thereafter no timber was exported to the United States.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

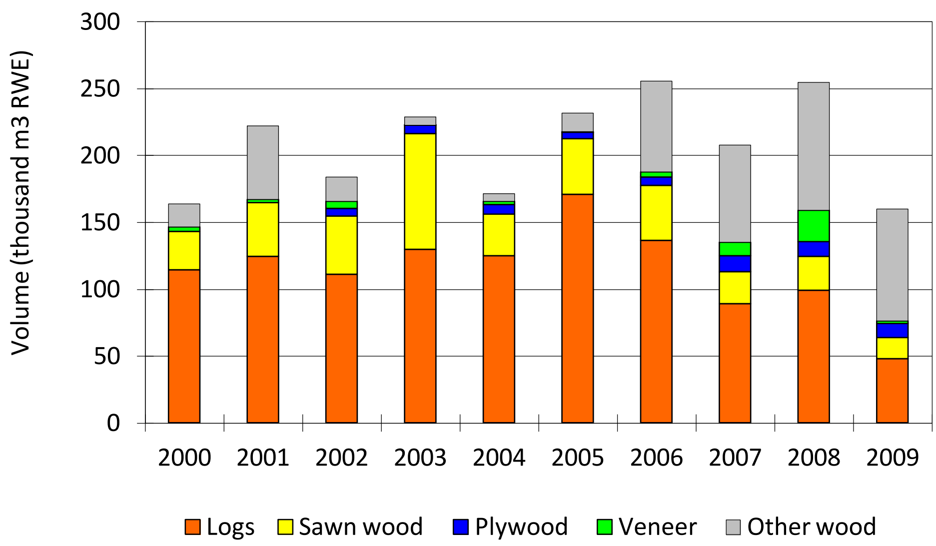
4.2.8 Myanmar Exports to Thailand

Under current Thai regulations relating to the import and domestic transport of timber, in order for Thailand to *legally* import Myanmar timber, wood must be shipped by sea via Yangon with permission of the Myanmar government. This takes almost a week, since ships must ply the route from Yangon, around the Singaporean peninsula, and then on to Bangkok. The Thai government can give special exemptions for imports across the shared land border, but this has occurred infrequently in the past decade. Processed wood, such as teak furniture, can be legally imported across the Thai land border. In practice, smaller quantities of unprocessed wood cross overland across the border without Thai governmental approval.

There have been unsubstantiated reports, based on author interviews with Myanmar timber traders in Yangon, Thai timber traders in Bangkok and Thai RFD officials (June-July, 2010), that Myanmar natural timber, especially teak, is being imported by Thailand via Malaysia. Since official reports indicate insignificant amounts of Myanmar timber is exported via Yangon to Malaysia, [12] which would be deemed 'legal' trade by government officials in both Myanmar and Malaysia, further research in this area might be justified to fully understand the timber trade dynamics in the region.

According to the official data, Myanmar exported less than 150,000 m^3 of overall timber products to Thailand in 2009, mostly in the form of logs and sawn wood. However, if significant amounts of Myanmar sawn wood are entering Thailand via Malaysia and are labelled as Malaysian wood, these numbers could be underestimated.

Figure 13: Myanmar Timber Products Exports to Thailand by Product (thousand m^3 RWE)



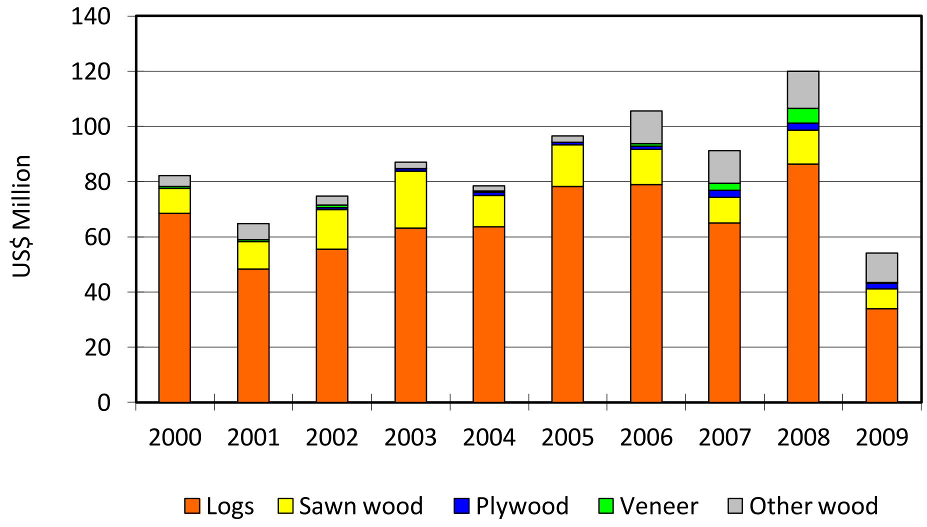
Source: European Forestry Institute, as compiled by James Hewitt, 2010.

[12] Note that official data for Myanmar – Malaysia timber trade shows very low levels of timber trade between the two countries.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Exports to Thailand fluctuated quite a bit since 2000 peaking in 2006 and again in 2008 at around 255,000 m^3 RWE. In 2009, exports decreased by 37% (160,000 m^3 RWE) with logs the largest timber product exported to Thailand, although the share has decreased tremendously. Although logs made up almost 75% of the exports in 2005 they only made up 30% of the exports in 2009 (48,000 m^3 RWE). Veneer exports increased slightly throughout 2007 and 2008 but nearly vanished in 2009 with only 1,600 m^3 RWE of veneer exported to Thailand.

Figure 14: Myanmar Timber Products Exports to Thailand by Product (US$ million)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.

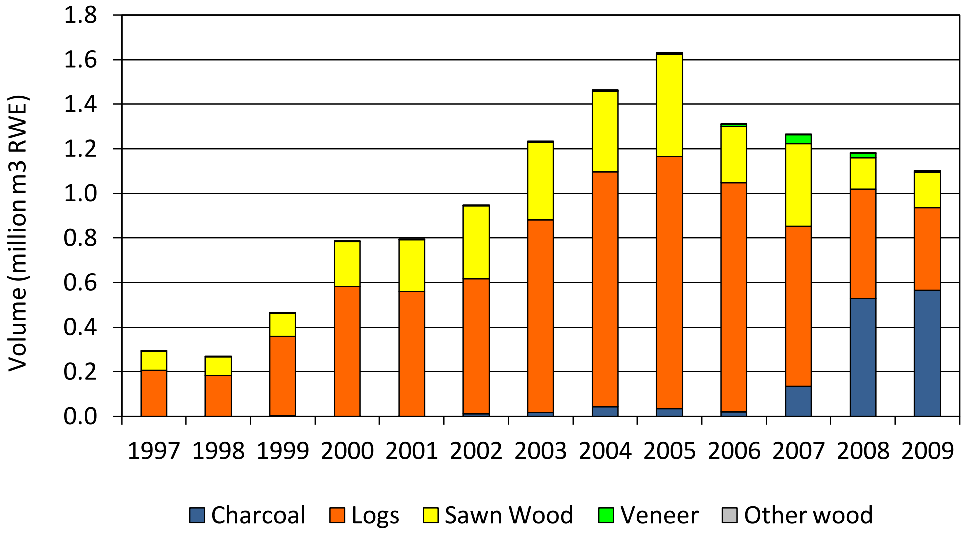
The value of exports to Thailand increased to US$120 million in 2008, $US 86 million derived from logs. In 2009, the value of exports to Thailand decreased to US$54 million, a 60% decrease.

4.2.9 Myanmar Timber Product Exports to China

Official statistics show that China's trade in timber products with Myanmar grew substantially from 1997-2005, from 0.3 million m^3 RWE in 1997 to more than 1.6 million m^3 (RWE) in 2005 at its peak. Imports have decreased since 2005, which coincides with the March 2006 bilateral agreement between Chinese and Myanmar national governments to clamp down on illegal cross-border timber trade, which had become considerable along the Yunnan border. In 2002, for example, Global Witness calculated that at least 1.0 million m^3 of timber was exported illegally from Myanmar in that year alone (Global Witness, 2003), which clearly does not show up in the official data.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

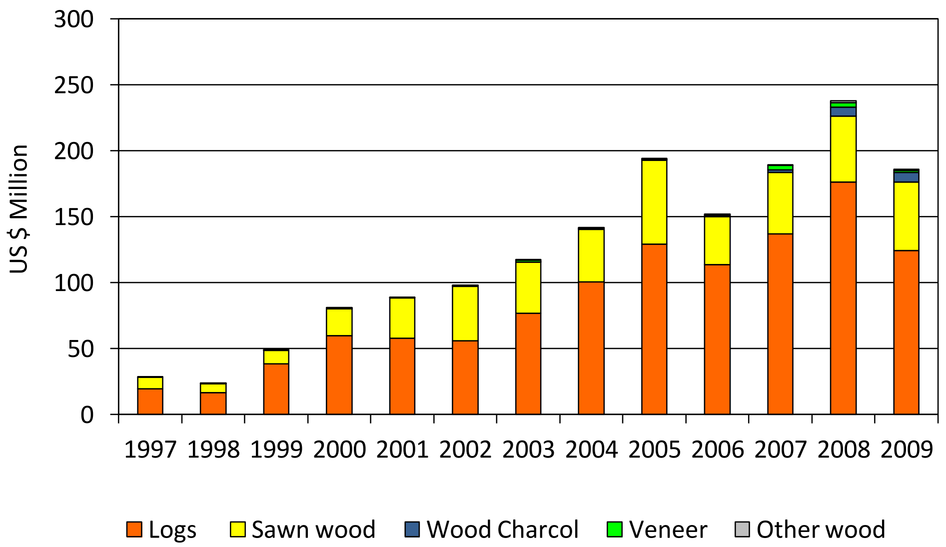
Figure 15: Myanmar Timber Products Exports to China by Product (million m^3 RWE)



Source: China customs data as compiled by Forest Trends, 2010.

The volume of logs exported to China increased gradually from 1998 and peaked in 2005 at 1.1 million m^3 RWE. After 2005, exports of logs and sawnwood to China decreased and charcoal[13] exports increased dramatically. In 2009 51% of the wood export to China was charcoal (564,000 m^3 RWE). Log exports declined to their lowest level since 1998 with only 371,000 m^3 RWE of logs exported in 2009.

Figure 16: Myanmar Timber Products Exports to China by Product (US$ million)



Source: China customs data as compiled by Forest Trends, 2010.

13 It is important to note that the China trade figures have been calculated using China customs statistics only, which include charcoal. The European Forestry Institute data, however, excludes charcoal from its data and comparisons with other countries would be difficult.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Although the value of timber exports increased temporarily in 2008 it decreased again in 2009 to U$ 186 million. Despite the large volume of charcoal exports to China, the value remained relatively low in 2009 with a market share of 4% (US$7.3 million). The value of logs decreased to US$124 million, but remained the largest value share at 66%. Sawnwood exports were valued at US$52 million (28% of the market share).

In the early 2000s, the majority of China's imports of Myanmar timber entered across their shared Yunnan border in northern Myanmar. Today, while a still significant volume of timber crosses the Yunnan border now illegally, the main points of entry seem to be more by sea from Yangon ports to China's eastern seaboard (see Table 5).

Table 5: Points of Origin of China's Timber Imports from Myanmar (early 2000s)

Origin	Concession Control and Administration	Main Logging Operators	Officially Sanctioned?	Point of Entry into China
Ceasefire Areas	Ceasefire groups	Chinese companies	Likely some	Overland into Yunnan Province
Non-Ceasefire Areas	Private businessmen	Chinese companies	No	Overland into Yunnan Province
SPDC-Controlled Areas	Myanmar Timber Enterprises (MTE)	Chinese companies	Yes	By sea to China's eastern seaboard; some over land into Yunnan Province

Source: Kahrl, Weyerhaeuser and Yufang, 2004.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

5. TIMBER SUPPLY: DOMESTIC PRODUCTION AND WOOD IMPORTS

5.1 Domestic Wood Production

5.1.1 Natural Forest Production

Timber extraction from natural forests has fluctuated over time, but with an overall increasing trend. The exception was 2009-10, when timber exports were presumably affected to some degree by the global recession, Thailand's political crisis and/or declining volumes of commercially valuable species within forest management units (FMUs).

Table 6. Teak and Other Hardwood Log Production (million m^3)

Year	Teak	Other Hardwoods
2005-06	0.60	2.10
2006-07	0.61	2.16
2007-08	0.59	2.48
2008-09	0.70	2.75
2009-10	0.54	2.64

Source: MTE, 2010.

The MOECAF is promoting natural forest regeneration to increase the composition of valuable tree species in the Permanent Forest Estate (PFE). The area included within enhanced natural forest regeneration in Myanmar climbed from 3,980 hectares in 1990; to 11,369 hectares in 2000; to 13,537 hectares in 2005.

The total number of forest management unites (FMUs) in Myanmar is 62, out of which 41 are dedicated to timber production. Thirty-four FMUs are actively managed for teak and other hardwoods covering an area of about 470,000 hectares as of mid-2005. The area harvested annually has, from 2000-05, averaged about 411,000 hectares (ITTO, 2006). According to ITTO, 52% of logging areas are under management plans or harvesting schemes (ITTO, 2006).

One measure of the sustainability and health of the forestry sector is the composition of commercially valuable growing stock in natural forests, such as teak (known as 'Kyun' in Burmese) and Pyinkado (*Xylia xylocarpa*, or ironwood). These species decreased in terms of both absolute and relative volume from 1990-2000. Moreover, the top ten species with the highest share of composition also dramatically decreased from 1.34 billion m^3 (47.8% of total growing stock) to 559.62 million m^3 (19.5% of total growing stock) (FAO, 2009)

According to these government figures, teak is consistently far beyond its AAC of 297,360 m^3 since the new figure has been set in the early 1990s, while other hardwoods hover around its allotted AAC of 2.55 million m^3. However, there is no system in Myanmar to differentiate wood extracted from natural forests and that which originates from tree plantations, which presents a serious problem in terms of forestry management, sustainability and certification. It is assumed, however, that the vast majority of the timber volumes listed above originates from natural forest.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

5.1.2 Conversion Timber

Although no empirical data exists to confirm circumstantial evidence, timber derived from the clearing of land for development projects (agribusiness, infrastructure, etc.) may be the largest source of exported timber. Myanmar is now opening up to large-scale and extensive agribusiness deals (such as cassava in Hukawng Valley in Kachin State in the north and large oil palm development in Tanintharyi Division in the south) and new roads to facilitate cross-border trade are planned and under construction. The allocation of these land concessions and problems with their allocation processes is likely the most important area of concern for forest law enforcement and governance in the Mekong region, with Myanmar no exception. Experience from other countries shows that in many cases, the project developers are mainly interested in the revenues generated from the harvesting and export of this "conversion timber" and may not even proceed with the development project. The social and ecological impacts generated from such projects are likely to be considerable and are attracting increasing attention in neighboring Mekong countries such as Cambodia

5.2 Plantation Production

5.2.1 History

Myanmar has a relatively long history of establishing forest plantations, especially for teak. Systematic teak plantations began in 1856 under the guidance of the British colonial Forestry Department, using the now internationally-recognized agroforestry method called 'taungya' (literally 'hill cultivation'), an afforestation method where crops are interspersed with trees on cleared land. It was not until the early 1960s that large-scale block plantations began to be demarcated.

After a few setbacks, including problems with pests and disease, in the mid-twentieth century, plantation acreage began to pick up again at a moderate scale, with about 2,000 to 3,000 ha per year. In the early 1970s, large-scale plantation schemes were promoted by the government to offset the rapid rate of natural forest degradation and deforestation. The total plantation area established up to 1979 was 102,050 ha, of which about 56% was *Tectona grandis*. Large-scale planting began in 1980, with more than 30,000 ha of forest plantations planted annually since 1984 (MTMA, n.d.).

The total teak plantation area from 1896 to 2007 was 384,123 hectares. Other species planted during the same period were: *pyinkado* (61,899 hectares); *padauk* (17,426 hectares); pine (21,685 hectares); and others (421,376 hectares). The teak plantation area is about 18% of the global teak plantation resources (FORDAQ, 2009b).

In the 1970s and 1980s it became policy to create one acre of plantation for every 40 cubic tons of round logs extracted from the forest. The extent was based on 40 cubic tons of marketable round logs that would be produced from one acre of teak plantation of average quality (U Ohn, 1995).

In the early phase of plantation development in Myanmar, about 80% of the plantations were for commercial purposes and the rest to meet fuelwood and small timber supply for villagers, particularly in the central dry zone. Eucalyptus was introduced as a plantation species in 1968, with about 15,600 ha planted by 1980 mostly for fuelwood, poles and posts (Forest Department, 1997; FAO, 1981; FAO, website).

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

The Forest Department began establishing watershed protection plantations in 1979 to restore degraded forests in the upland catchments of important dams. By 1995, more than 43,000 hectares had been planted, with assistance from FAO and UNDP. The most prominent example is the Greening of Nine Arid Areas in central Myanmar which began in 1994-95.

5.2.2 Current Plantation Development

The Myanmar Forest Policy 1995 encourages forest plantation establishment in order to supply local and industrial use as well as to increase reforestation of degraded lands. Four categories of plantations exist:

- commercial (for marketable wood, both domestic and for export),
- local supply (village woodlots for firewood, posts and poles),
- industrial (for supplying raw material to paper and pulp factories), and
- watershed (for water utilization, water catchments of dams and irrigation flow).

Mangrove plantations were also planted in delta areas, but it is unclear if these are included within the watershed category.
Plantation expansion is usually planned for existing PFE land, not public forest which is mostly used extensions of reserved forests.

Table 7: Distribution of Forest Plantation Categories, 2000-2005

	2000		2005	
Classification	**Area (hectare)**	**%**	**Area (hectare)**	**%**
Commercial	371,355	55	396,263	51
Local supply	188,845	28	207,127	27
Industrial use	50,394	7	64,581	8
Watershed	65,659	10	104,884	14
Total	**676,254**	**100**	**772,854**	**100**

Source: Forest Department & CSO, 2007 (2000-2005)

Table 8: Area of Forest Plantation by Species, 2000-2005

	2000		2005	
Species	**Area (hectare)**	**%**	**Area (hectare)**	**%**
Teak	281,403	42	355,512	46
Pyinkado	52,259	8	61,828	8
Padauk	15,551	2	15,457	2
Pine	15,911	2	23,185	3
Others	311,130	46	316,872	41
Total	**676,254**	**100**	**772,854**	**100**

Source: Forest Department & CSO, 2007 (2000-2005)

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

The NFMP has targeted various types of plantations to be established during three ten-year phases. The government has set targets for annual plantation area expansion by 30,375 ha from 2001/2 to 2010/11 and then an annual 24,300 ha from 2011/12 to 2020/21 (FAO, 2009:40). From 2000-07, approximately 213,000 ha of plantations were planted (FORDAQ, 2009b).

Further detail on the plans to expand 'local supply plantation' or village forests is available:

- 60,750 ha for the period from 2001-02 to 2010-11;
- 48,600 ha during 2011-12 to 2020-21; and
- 40,500 ha planned from 2021-22 to 2030-31.

Agroforestry and community forestry also offer other afforestation schemes supported by the state that help meet fuelwood demand, although so far very limited. The two main species planted are Mezali (*Cassia siamea*) and Eucalyptus. In the coastal and delta areas, species such as Kanaso *(kanbalar) and* Lamu *(thame)* are prioritized. However, insufficient financial provisions and institutional capacity hinder efforts to meet planned targets (FAO, 2009:20; Tint, Kyaw, Oliver Springate-Baginski and Mehm Ko Ko Gyi, 2011).

The main species remains teak (see Table 9).

Table 9: Plantations Established in Myanmar by Year and Species

Year	Species					Hectare
	Teak	Pyinkado	Padauk	Pine	Others	Total
2000	12,917	2,271	385	1,277	13,881	30,731
2001	12,944	1,268	101	1,219	15,237	30,769
2002	13,016	1,114	121	1,053	16,105	31,409
2003	12,986	1,291	101	972	15,103	30,453
2004	13,761	1,411	61	1,053	15,702	31,988
2005	15,011	1,413	40	628	16,123	33,215
2006	11,828	1,063	20	142	15,287	28,340
2007	11,711	729	91	364	11,016	23,911
Total (since 1896)	**384,123**	**61,599**	**17,426**	**21,685**	**421,376**	**906,209**
%	**42.4**	**6.8**	**1.9**	**2.4**	**46.5**	**100**

Source: U Zaw Win, 2009.

By 2007, *private* forest plantations consisted of the following species by hectare: teak (46,000 ha), other hardwoods (2,500 ha) and community forests (41,463 ha).

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

6. FOREST INDUSTRY

When the country initiated a market-oriented economic system after 1988, private wood-based industries started to develop after 1990. In 1992-93 the private sector accounted for 69% of industrial establishment with as much as 80% of employment (Eco-Dev, n.d.). However in 1993 a decision was made to ban log harvesting and log exports by the private sector. However, the private sector is now allowed to work in cooperation with the Myanmar Timber Enterprise (MTE) under the MOECAF for exporting value-added, semi-processed wood products only. The Myanmar Forest Products and Timber Merchants' Association (MFPTMA), now known as the Myanmar Timber Merchants Association (MTMA), was established in 1993, to facilitate wood procurement for the private sector from government.

6.1 Myanmar Timber Enterprise

The Myanmar Timber Enterprise (MTE) is the income-earning logging arm of the Ministry of Environmental Conservation and Forestry (MOECAF). While the MTE is wholly state-owned, the MTE usually contracts out preferred Burmese companies to log concessions, transport and export on behalf of the MTE. The company then must share an agreed percentage of their profits from exported timber, as well as pay for the logging concession granted to them. Due to its significant role in the Myanmar forest sector in virtually all aspects along the commodity chain – from harvesting to processing to marketing and export -- the MTE is given a section to itself. The dynamic between the MOECAF's Forest Department and the MTE are often tense, a reflection on the fact that the MTE does not always follow the Myanmar Selection System (MSS) and often operates in violation of national policies. As the commercial arm of the Ministry of Environmental Conservation and Forestry, however, the MTE carries more political influence and resources compared to the Forest Department.

6.1.1 Harvesting

Heavily in debt and desperate for foreign exchange from timber exports in the 1990s, the Government of Myanmar and ethnic opposition groups granted logging concessions to Thai companies along the Myanmar-Thai border. In the 2000s after ceasefire deals were made with ethnic opposition groups operating along the Sino-Myanmar border, logging deals were granted to Chinese logging companies both by the Myanmar government and ceasefire groups. Today, logging concessions are continuing to be granted mostly in Kachin State and in Sagaing Division southwest of Kachin State along the India border due to depleting valuable timer species in eastern Kachin State. These logs are either exported (illegally) across the Yunnan and northeast India borders or transported to Yangon for legal shipment. Teak trees are continuing to be sourced from prominent teak stands in different areas of Central Myanmar and further north. Moreover, new areas are opening up for logging for agribusiness projects, such as in Hukawng Valley in western Kachin State and Tanintharyi Division in the south, as well as hydropower development projects along the Yunnan border.

Due to its own limited human resources, the MTE often subcontracts to the domestic private sector to carry out logging operations. In return, the subcontractors are usually requested to deliver a certain volume of timber to the MTE at a given price, often at a financial loss. However, these sub-contractors are now

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

technically able to export the remaining wood as "MTE wood" and can absorb this loss due to the high profit margins from the exported wood.

6.1.2 Processing Operations

The MTE owns and manages 81 to 91 sawmills (9 for teak, the rest for other hardwoods), 4-5 plywood factories, 1 block board factory, 5 to 8 furniture factories, 2-3 moulding factories, 2 veneer factories and 1 flooring and moulding factory. The annual input capacity of each mill does not exceed 21,600 cubic meters with the exception of one MTE sawmill that consumes 54,070 cubic meters of timber per year (Daw Khin May Lwin et al., 2009).

6.1.3 Other Operations

The MTE engages directly with the private sector or provides services usually provided by the private sector. For example, the MTE also implements:

- Joint Production System (JPS) where state-owned production facilities under the MTE cooperate with private companies that are regular buyers from the MTE. Under this system, both parties must follow obligations for production as well as for wood product processing and marketing, and

- Special Promotion System (SPS) which is given to privately-owned factories to help them compete with foreign buyers in the monthly tender sales of logs. Under this system, a private company can apply to buy logs from MTE at the prescribed Industrial Raw Price (Interview with MTMA, Yangon, July 2010).

The Forest Products Joint Venture Corporation Ltd. (FPJVC) is an enterprise jointly owned by MTE (45%), the FD (10%) and private investors (45%, usually members of the political elite). It is one of only two companies listed on the Myanmar Stock Exchange. The company is entitled to a generous quota of non-teak hardwoods as designated by the MOECAF.

6.2 Non-MTE Harvesting

In addition to the MTE, subcontractors may also be involved in harvest operations. The companies that receive logging contracts from the MTE are nearly all large, influential and well-known Myanmar companies from Yangon. These include, among others:

- Max Myanmar,
- Htoo Trading,
- Asia World, and
- Dagon Timber

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

All companies work across numerous sectors, assisting the military government in construction, hotel and tourism development and agribusiness as well.[14] Logging concessions can be granted as payment for the assistance of the companies in other sectors, such as in helping to build the new capital Nay Pyi Daw. In this way the logging concessions act as a currency of exchange between the top military leaders and the companies.

The other major mechanism for companies to procure wood is through their own development projects, such as road building and agricultural development projects, in forested areas. The payment to the companies for carrying out these development projects is being allowed to cut the logs in the vicinity of the project and export from Yangon with MTE approval.

6.3 Medium-Sized Companies and Traders

A small number or privately-operated mills and processing factories also exist in the country; however the number remains small as profitability is constrained due to a host of reasons. Yangon and Mandalay are the centre for most wood-based companies, some of whom export logs and sawn wood. These companies secure their wood supply either from MTE, MTMA, or from the private companies who receive the logging concessions from MTE. They could also procure timber harvested during the conversion of forest areas for development projects (agribusiness, infrastructure, etc.) which they can later sell illicitly within the country or try to export if they can obtain permission from the MTE. These middle-range companies would also have to have good connections with the large private companies, MTMA, or the MTE as well as regional buyers. One such medium-sized company interviewed ships their sawn wood from Yangon to Bangkok using their own shipping service from Thailand, but were hesitant to reveal how they secured their wood in Myanmar. These medium-sized companies typically self-finance their operations using funds generated from their trade. Other interviews with owners of medium-sized companies reveal that these Myanmar individuals in Yangon have good connections to the different supply chains in order to procure wood at a competitive price (often below domestic market price in Yangon), as well as with shipping companies and agents to be able to export the wood. These individuals are also very well networked in the region to tropical timber buyers, including Bangkok, Singapore, Malaysia, Hong Kong, Taiwan and China.

6.4 Value-Added Processing

According to government data provided by the Myanmar Timber Merchants Association (MTMA), Myanmar produces 1.4 million tons of teak and hardwood annually, exports about 0.8 million tons, earning US$400 million. By comparison, Malaysia produces 0.3 million tons of timber and earns US$6 billion for wood-product exports in 2006: Myanmar enjoys only US$500 per ton while Malaysia benefits by US$20,000 for every ton, on average (FAO 2009:17; Interview with MTMA, Yangon, July 2010).

[14] These companies are also thought to be involved, either directly or indirectly, to varying extents, in the illicit economy, in particular narcotic production and trafficking. There are several reported cases of narcotics being smuggled in timber on boats leaving Yangon, such as that owned by Asia World for example, which is owned by a former renown drug lord.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

The wood allotment system in Myanmar produces much uncertainty for mills wanting to procure Myanmar wood materials. Overall local wood-based factories consistently face a monthly shortage of raw material (Interview with MTMA, Yangon, July 2010). Part of the reason is because MTE privileges the export of Myanmar wood logs. This situation (among other issues, such as lack of infrastructure development, high irregular taxes, limited and irregular electricity, high corruption and government oversight, etc.) makes few financers interested to invest in the wood processing industry in Myanmar. While little FDI is attracted to the wood-processing industry in Myanmar, most Myanmar investors do not have sufficient capital for large-scale production. And what little investment there is generally focuses on low-tech labour-intensive industries such as saw mills, to produce and export S4S. The tax system in the country also discourages export of finished products because there is a 10% tax on all exported items by the private sector (FAO, 2009:17).

While only at low volume levels, wood factories in Myanmar are producing furniture, decking, S4S, flooring, furniture components, parquet, finger joints, veneer and plywood. Of those wood-based processed products mostly only garden and indoor furniture is destined for export, but may also include parquet, doors and door frames and S4S products. However, for teak products the exports are more extensive: parquet, scantling, decking, furniture, garden furniture, board, door, figure joints, veneer and plywood (Daw Khin May Lwin et al., 2009).

The MTE has recently undertaken a number of steps to promote the export of good quality lumber and other semi-finished and value-added wood products, with the aim to decrease the forestry sector's reliance on log export. Out of Myanmar's five plywood factories, Plywood Factory No. 1 is now producing teak and non-teak hardwood veneers mostly for export. The MTE also established five furniture factories for both domestic and overseas markets. No. 7 Furniture Factory is now producing flooring boards, parquet, surfaced four sides lumber (S4S), scantling and decking solely for the export market. Likewise, No. 6 Furniture Factory is producing figure joint and laminated wood products primarily for the export market. A remaining problem for MTE-owned wood processing factories is out-dated machinery and unreliable electricity supply.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

7. ILLEGAL TIMBER TRADE AND MYANMAR STANDARDS, NATIONAL CODES, TIMBER CERTIFICATION AND VERIFICATION SYSTEMS

7.1 Illegal Timber Trade

All timber shipped out of Yangon is marked as MTE wood – even though it may have been cut and transported legally or illegally by private Myanmar companies – and is thus considered legal by the government (Interviews with Myanmar timber traders, June-August 2009, June-July 2010).

Figures for Myanmar's forest products trade are unreliable, often contradictory, and do not include non-official exports ('illegal'), including cross-border trade, which has been substantial in the past, especially along the Yunnan (China) border. In 2002, Global Witness calculated that at least 1.0 million m^3 of timber was exported illegally from Myanmar across the China border in that year alone (Global Witness, 2003).

In March 2006 the Chinese and Myanmar national governments made a bilateral agreement to clamp down on cross-border timber trade after much international embarrassment and pressure. Although the now illegal cross-border trade died down considerably a few years after the crackdown, according to many sources the trade has picked up again, although it remains too difficult to accurately estimate volumes. Most of the cross-border timber trafficking now occurs by motorbike at night through certain known overland crossing points. While the volume of logs does not compare to pre-2006 quantities, sources argue that it remains significant (Interviews, Yangon, June 2009, Myitkyina, July 2009) .

Despite official data from both the Myanmar and Malaysian governments, the direct trade of timber products between Myanmar and Malaysia is virtually non-existent, with volumes of only 20,000 m^3 in recent years. Yet, according to numerous Myanmar timber traders (Yangon, June-August 2008, 2009, June-July 2010), Malaysia acts as a major hub for the trade of Myanmar timber. Traders in Malaysia state they can forge Malaysian certificates of origin relatively easily (through bribes) and then re-export the wood materials, thereby erasing the Myanmar origin that presents a problem for Europe and US markets (Interviews with Myanmar timber traders, Yangon, June-July 2010)

Official government figures have spoken publicly about their recognition of illegal logging's adverse impact for Myanmar's legal log market in term of undercutting the price for legal timber exported from Yangon. "This has serious repercussions for Myanmar's economy and for legitimate timber exporters," Brigadier-General Thein Aung has said. "Exporters find it hard to compete with smuggled timber on the international market, resulting in decreasing prices and a decline in production in the wood-based industry." U Aung Lwin, the president of MTMA, publically has stated that each year, 30% of the timber that is smuggled out of Myanmar is teak. "Ending the illegal timber trade was an essential component in the drive to get fair market prices for Myanmar timber in Asia," he said. "Every year about 100,000 tons of timber are exported illegally, and only about 30,000 tons of this are recovered through the arrest of those involved". Seizures of logs, sawn timber and logging equipment are frequently reported in the Myanmar press. In May 2003, the Myanmar Times stated that FD figures showed 20,400 tons of illegally logged timber had been seized during the 2002-03 fiscal

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

year, up 900 tons from the previous year. U Tin Latt, the director of FD at that time, said that most of the illegal timber extraction occurred in Kachin State and northern Shan State, though it also occurred in Pegu, Mandalay, Magwe and Sagaing divisions (Ye Lwin, 2006).

In addition to cross-border timber trade with China, timber is also exported from ports in Yangon, which may or may have been cut and transported illegally. All timber shipped out of Yangon is marked as MTE wood and is thus considered legal by the government – even though it may have been cut illegally and transported by private Myanmar companies. This increases the price of Myanmar wood processed and exported via Yangon. In addition, although containers are checked by both customs and the forestry department, they frequently contain a greater tonnage of timber than appears on the official documentation. Illegally felled timber accompanied by an export permit is apparently possible to purchase— while expensive, this illegal timber is still about half the price of MTE timber (Global Witness, 2003).

7.2 Progress towards Standards, National Codes, Timber Certification and Verification Systems

Forest certification has made scattered progress in Myanmar. The Timber Certification Committee (TCC) was established in 1998, along with a working group in 1999, to explore the potentials and requirements of a certification regime. Myanmar is currently without an internationally-recognized certification standard, but has been engaged in several domestic and regional initiatives that could lead in that direction.

Myanmar's Criteria and Indicators (C&Is) for sustainable forest management (SFM) at both national and forest management unit (FMU) levels was approved in 1999, as based on ITTO's 1998 C&I for SFM of tropical forests. There are a total of 7 criteria identified at the national and FMU levels, 78 indicators and 267 required activities at the national level, and a total of 73 Indicators and 217 activities at the FMU level, together with standards of performance for each activity. The ITTO C&I for SFM was again revised in 2005 so that there are 7 criteria and 51 indicators in the C&I at FMU levels. The FD has been testing and assessing the adequacy and application of Myanmar's C&Is at the FMU level for further improvement.

The standard currently used for assessing FMUs for the purpose of certification is C&I for Sustainable Management of Forest Resources in Myanmar (Interviews with active forestry official and MTMA members, Yangon, July 2010).

Myanmar has also participated at the 1st, 6th and 9th Ad-Hoc working group meetings of the Pan-ASEAN Timber Certification Initiative in 2002, 2007 and 2010, respectively. The Timber Certification Council of Myanmar is now developing a timber certification standard and process, reflective of Myanmar's particular forest management system. Myanmar's ITTO-based C&I's are the basis for developing timber certification checklist at the FMU level (Interviews with active forestry official and MTMA members, Yangon, July 2010).

Myanmar's MOECAF developed a National Code of Harvesting Practice (NCOHP) in 2000 (revised in 2003) based on the regional FAO/Asia-Pacific Forestry Commission Code of Practice for Forest Harvesting in Asia-Pacific. FAO and the Japanese government supported the "Enhancing Sustainable Forest Harvesting in Asia" from 2003-08, which were the initial stages for applying improved forest harvesting.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

A number of training courses have been carried out for MTE staff. In 2002 NCOHP was field tested under the Regional Model Forest Project with FD and MTE personnel, together with technical training offered by FAO. The MOECAF desires to revise the NCOHP[15] again as soon as possible which should "ensure the provisions and prescriptions are practical as well as relevant to Myanmar's conditions and situations" (Myo Myint, 2009). The MOECAF needs to then approve these revisions and implementation. This could be facilitated by forming a governing body and working group to oversee revisions, implementation and monitoring of the NCOHP.

In 2008 Myanmar then developed "reduced impact logging" (RIL) guidelines. These initiatives are meant to lead to Myanmar developing an internationally recognized national timber certification standard. RIL is meant to provide the guiding mechanisms for how NCOHP is to be realized (Interviews with active forestry official and MTMA members, Yangon, July 2010).

The Timber Certification Committee of Myanmar (TCCM), formed in 1998 under a MOECAF decree, , acts as the national governing body to monitor the future timber certification process and activities in Myanmar. The committee consists of government officials of all departments and institutions under MOECAF and one representative from FREDA, a national forest NGO run by a retired MOECAF minister. The TCCM was reformed in 2005 with the addition of Myanmar Timber Merchant's Association (MTMA). Since its establishment, it has been establishing links with other timber certification bodies in the region on a bilateral basis, such as Malaysian Timber Certification Council (MTCC) of Malaysia and Eco-labelling Institute of Indonesia (LEI).

The TCCM aims to develop the principles, methodology and work plan to establish a credible and pragmatic Timber Certification Scheme for Myanmar. The TCCM is now a part of the greater Myanmar Timber Certification Program (MTCP). Of the total 63 Forest Districts which can be treated as FMUs, 38 districts are included in MTCP where timber extraction occurs. The FMU managers are assigned to draw up the implementation plans of MTCP, where each forest district has its own forest management plan. Currently the pre-assessments of current performance against the developed C&I are being conducted in different FMUs, according to the MOECAF. An independent assessment by a third party is scheduled to be carried out at a later date with the guidance of a Myanmar governing body (not yet established) (Interviews with active forestry official and MTMA members, Yangon, July 2010).

It is generally believed that the TCCM would strive to become a national representative body, authorized by the government to undertake certification of forests in Myanmar. The Myanmar government has stated that since all its land is owned by the state, full government involvement is necessary at all stages (Interviews with active forestry official and MTMA members, Yangon, July 2010). Independent third party monitoring and audit systems would likely be needed to augment existing systems in order to meet international standards.

---

15 During the project period NCOHP was field tested in West Swa Reserve and Saing Ya Reserve in Yedashe Township in 2004 and 2005, respectively. In addition, the country has established two model forests, Oktwin and Pauk Khaung Model Forests, in the Bago Yoma region. The FD has co-operated with the Japanese International Forestry Promotion and Cooperation Centre and the Japan Overseas Forestry Consultants Association in managing these forests. Myanmar is also participating in a regional "Implementation of Model Forest Approach for SFM in the Asia-Pacific Region" project, together with China, Thailand and the Philippines (Interviews with active forestry official and MTMA members, Yangon, July 2010).

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Currently chain-of-custody (COC) requirements for legal and sustainable timber are being developed, with hopes that the first COC certification could be achieved in the first two years of the MTCP operation.

Legislation and regulations for harvesting and transportation of forest products are believed to be in place, with the Forest Department carrying out legality verification of timber and monitoring and inspection of harvesting practices, which includes checking of log hammer marks with official documents at the depot, critical points and wood processing factories. The stated reason for not reaching this goal yet is that it requires more time for FMU to get full compliance with C&I.

The government has stated that it hopes the implementation of COC and SFM certification in Myanmar will be achieved within the ASEAN target of 2015 (Interviews with active forestry official and MTMA members, Yangon, July 2010).

The government aims to establish certification for tree plantations as well as for natural forests. The MTCP has plans for a certification program for timber from forest plantations, although to date no work plans have been created. There are plans to develop the C&I for the management of forest plantations (interviews with active forestry official and MTMA members, Yangon, July 2010).

8. STAKEHOLDER ANALYSIS

8.1 Government

Many Myanmar government institutions are currently under reform following the new elected government.

8.1.1 State Peace and Development Council (SPDC)

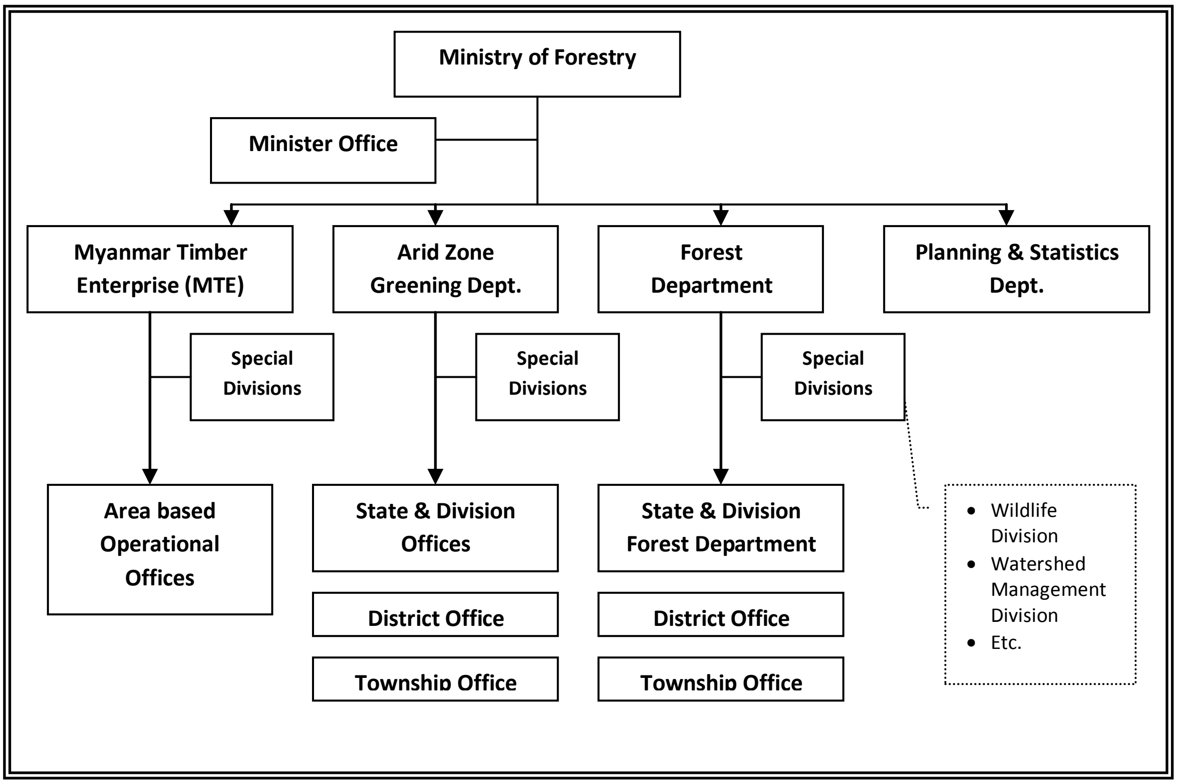
The State Peace and Development Council (SPDC) is the highest body of state authority above the cabinet for executing legislative, administrative and judicial powers. The SPDC, which after the 2010 national elections is run by military-cum-civilian officials, still relies on support from the military apparatus and ultimately decides on all governmental affairs and policies. The SPDC has a stated commitment to fulfilling the Millennium Development Goals (MDGs) and presented its "National Vision" for the period 2001-2010, which aims at "building up the country into a modern, developed, self-sufficient and self-reliant nation with a balanced economy". The new government, following advice from the new economic advisor, is set to roll out new policies to tackle poverty alleviation and food security, both of which are related to the utilisation of and access to forestlands.

8.1.2 Ministry of Environmental Conservation and Forestry (MOECAF)

In 2002, the Ministry of Agriculture and Forestry split into the Ministry of Environmental Conservation and Forestry (MOECAF) and the Ministry of Agriculture and Irrigation (MoAI). The MOECAF has full jurisdiction over forest management, policy and exploitation. As of 2005, the MOECAF also has responsibility for environmental protection (following the Forest Policy 1995). The Minister, much like the other ministries, is a military officer, while the departments are made up of trained foresters and other professionals. The director generals of the different departments are oftentimes highly trained foresters, although sometimes military personnel. However, with the lead up to the 2010 national elections, many of the higher level positions were replaced with military officials in advance of the new civilian government.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Figure 17: Institutional Map of the Ministry of Environmental Conservation and Forestry



Note: Starting in November 2011, with the re-naming of the Ministry of Forestry to the Ministry of Environmental Conservation and Forestry, restructuring is likely occurring but little information is currently available.

Source: Adapted from Eco-Dev n.d.

The main departments under the MOECAF (ECO-Dev, n.d.) including:

- *Forest Department (FD)* is responsible for the protection, conservation and sustainable management of forests, with a recent new emphasis on social factors. Following the 1992 Forest Law and 1995 Forest Policy (including the 1995 Community Forestry Instructions), the FD is currently diversifying itself from a traditionally technically-oriented department focusing only on teak-based production management to an agency more apt at socially responsible multiple use forest management;

- Myanmar Timber Enterprise (MTE), the commercial arm of the MOECAF, carries out timber harvesting, milling, downstream processing and the marketing of forest products, along with subcontracting the domestic private sector. Forest Department staff complain that the MTE does not follow the Myanmar Selection System (MSS) and often operates illegally. Due to its revenue generating responsibility, however, the MTE carries more political influence and resources compared to the Forestry Department. Due to its important role in the forest sector in Myanmar, additional description of the MTE is given below;

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

- Dry Zone Greening Department (DZGD) which looks after the reforestation of degraded forest lands and restoration of the environment in the "Dry Zone" in central Myanmar;

- Planning and Statistics Department which is responsible for coordinating and collating the statistics for the ministry.

- In addition there is an Institute of Forestry which is carries out forestry education and training. These departments work closely with the Survey Department, which carries out mapping for the whole administration. This department also serves as a focal point within MOECAF for information disclosure and official data reporting.

One source estimates about 30,600 people are employed by the government in the forest sector, including 1,400 professionals and 29,200 technical staff, of which 19,300 work for the MTE; 11,000 in the Forest Department and about 300 in the Dry Zone Greening Department.

8.2 Timber Processing Industry: Private Sector and Quasi-Private Sector

The private sector plays an increasingly important role in the forestry sector, in particular and seemingly peculiar ways. Following Myanmar's Foreign Investment Law, Citizens Investment Law and the State-owned Economic Enterprise Law, both foreign and Myanmar private entrepreneurs can invest in the timber sector in Myanmar. Three investment scenarios for the timber processing industry in Myanmar include:

- 100% investment by a foreign and/or Myanmar company as a joint venture (only private);
- A joint venture with the MTE; and
- MTE-operated and owned

Forest Products Joint Venture Corporation Ltd. (FPJVC) is an enterprise jointly owned by MTE (45%), the FD (10%) and private investors (45%, usually members of the political elite). It is one of only two companies listed on the Myanmar Stock Exchange.

The company is entitled to a generous quota of non-teak hardwoods, as designated by the Minister of Forestry. The FPJVC also pays administrative transfer prices based on extraction costs (related to auction prices). According to Global Witness, the FPJVC exports 40% of the logs and the remainder is sold locally or processed by the company.

Global Witness has surmised that the enterprise facilitates the allocation of the margin between transfer prices and market prices to the shareholders of the company, with this advantage obtained by administrative orders and not by the competitiveness of the company (Global Witness, 2003).

Myanmar Timber Enterprise is under the Ministry of Environmental Conservation and Forestry, but also plays a significant quasi-private sector role in the country's timber processing industry and is thus listed here (as well as within the main text describing the Myanmar manufacturing industry).

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

8.2.1 Mills and Wood Processing

Numerous other wood-based industries exist, but are difficult to find information. More detailed information is available on 7 companies in Mandalay (listed below) and are detailed in a study conducted by the MOECAF at an unknown date in the 2000s on MTE-owned and private industries (Daw Khin May Lwin et al., 2009):

- Hi Tech Forest Industries,
- Myanmar May Kaung Co. Ltd.,
- Myit War Co. Ltd.,
- Win Mar Lar Aung Co. Ltd.,
- Golden Pollen Saw Mill,
- Da Yan Co. Ltd., and
- Jellewary Luck Co. Ltd.

All were producing rough sawn, flooring, parquet, scantling, decking, furniture, S4S, finger joint, decking, veneer and plywood. These products were exported throughout the world, either directly or indirectly, to Italy, Korea, Japan, Singapore, Thailand, Indonesia, South America, India, China, France, Germany and Malaysia. It is important to note that this study preceded the EU sanctions against the import of Myanmar timber products.

The same study was also conducted in Yangon on MTE-owned and private industries (Daw Khin May Lwin et al. 2009):

- No. 6 Furniture Industry (MTE-owned),
- No. 7 Furniture Factory (MTE-owned), No. 1 Plywood Factory (MTE-owned);
- Teak Farm Industry (private company and MTMA member),
- United Wood Garden Furniture Industry (private company and MTMA member),
- Hay Man Co. Ltd. (private company and MTMA member),
- Asia Wood Co. Ltd. (private company and MTMA member),
- Cambawza Thitsa Hlaing Co. Ltd. (private company and MTMA member), and
- National wood Co. Ltd. (private company and MTMA member)

All were producing garden furniture, laminated wood, finger joint, parquet, flooring, S4S, scantling and decking, which was being exported to China, Thailand, Japan, Italy, Singapore and New Zealand.

8.2.2 Associations

Myanmar Timber Merchants Association (MTMA):[16] The MTMA plays an important facilitating role between the MTE and the private sector as the wood-based industries are constrained in procuring wood since MTE controls legal wood distribution within the country. While the MTE provides the raw material for public and private sector wood based industries, the MTMA facilitates wood procurement for government projects by working directly with the private sector in Myanmar. Established in 1993 and comprised of 1,214 members (240 individuals and 902 companies), the MTMA is under the guidance of the Union of Myanmar Federation

16 Previously known as the Myanmar Forests Products and Timber Merchant's Association, or MFPTMA.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

of Chamber of Commerce and Industry (UMFCCI) (Interview with MTMA members, Yangon, July 2010). Within the private sector, MTMA is the sole commercial association for wood production and marketing. The MTMA often refers to their organization as an NGO, but in fact it functions as a business association.

The MTMA's objectives include, according to their promotional material: "Development of the private sector forest based economy which will contribute to the enhancement of national income; promotion of investment for new industries creating more job opportunities; promotion for the expansion of wood product exports including minor forest products; and to help consolidate small and medium scale timber industries and integration of activities of the timber industries in general, transfer of technology so as to achieve greater achieve greater efficiency and secure a stronger base for the timber industry as a whole." Their activities involve "acting as a bridge between the government departments and the private sector; and collaboration with the departments under the Ministry of Environmental Conservation and Forestry in working out for the development of private sector wood based industry."

According to MTMA data, the private sector operates 258 sawmills, 5 plywood mills, 1,479 re-cutting sawmills and 1,588 small finished product factories throughout the country, not including small-scale operations (Daw Khin May Lwin et al., 2009).

8.2.3 Large-Scale Harvesting Companies

The companies that receive logging contracts from MTE are nearly all large, influential and well-known Myanmar companies from Yangon. These include, among others:

- Max Myanmar
- Htoo Trading
- Asia World, and
- Dagon Timber.

All companies work across numerous sectors, assisting the military government in construction, hotel and tourism development, and agribusiness as well, and are often paid for carrying out development / infrastructure projects with the rights to cut logs in the vicinity of the project and export from Yangon with MTE approval.

8.2.4 Other Wood-Based Companies

Yangon and Mandalay also have other wood-based companies, some of whom export logs and sawn wood. These companies secure their wood supply from MTE, MTMA, or from the private companies who receive the logging concessions.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

8.3 Civil Society

A group of NGOs do exist which focus specifically on forestry issues. This group includes, but are not limited to, the following:

- Forest Resource Environment Development and Conservation Association (FREDA)
- Biodiversity And Nature Conservation Association (BANCA)
- Friends of the Rain Forest Myanmar (FORM)
- Renewable Energy Association Myanmar (REAM)
- Ecosystem Conservation and Community Development Initiative (ECCDI)
- Economically Progressive Ecosystem Development (ECO-Dev)

They play important roles in advancing sustainable forestry, forest restoration and community forestry, often with a social forestry angle. To date, they have been able to exert only minimal influence on national forest management directives and policy, although with possible new spaces opening on land management with the new government, these forestry NGOs may play a larger role in shaping the sustainable forestry future of the country. None are working on forest certification and verification standards to date, however.

8.4 Bilateral Donor Programs

The majority of international donor programs do not operate in Myanmar, although many retain small offices which focus on critical health, education, human rights and democracy support programs.

China provides substantial support to Myanmar/Myanmar through partial debt relief, soft loans and technical assistance with a strong focus on economic cooperation and infrastructure. Over the last 14 years, China has extended assistance in the fields of agriculture, industry, transport, electric power, education, health and human resources development.

Until 2003, **Japan** had been Myanmar/Myanmar's largest aid donor, but has since suspended economic assistance. However, humanitarian assistance is being provided in the fields of health, education, democratization and combating drugs, with a special focus on minority ethnic groups and refugees.

Thailand's development assistance to Myanmar/Myanmar takes the form of concessionary loans and grants for infrastructure projects, e.g. for the construction of roads and bridges, as well as technical assistance such as volunteer dispatches, provision of Thai experts and equipment and training activities.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

BIBLIOGRAPHY

Bryant, R. 1996. *The Political Ecology of Forestry in Burma 1824-1994.* Honolulu: University of Hawaii Press.

Brunner, J. et al. 1998. *Logging Burma's Frontier Forests: Resources and the Regime.* Washington, DC: World Resources Institute (WRI).

Cho, B. 2010. "Market Prospects of Plantation Teak." Unpublished.

Daw Khin May Lwin, Daw Zarchi Hlaing, and Forest Research Institute. 2009. "Current Status on Wood-Based Industries in Myanmar." Regional Workshop on Development of Plantation Teak Utilization in the ASEAN Region. Central Forestry Development Training Center, Hmawbi, Yangon, Myanmar, 7-10 July.

Economically Progressive Ecosystem Development (ECO-Dev). No date. "A Study on Policy Processes and Environment of Natural Resource Management Sectors in Myanmar with Special Reference to Forest Policies." ICIMOD paper.

Food and Agriculture Organization of the United Nations (FAO). Myanmar: Planted Forests. http://www.fao.org/forestry/country/18316/en/mmr/. Last Accessed: August 25, 2011.

Food and Agriculture Organization of the United Nations (FAO). 1981. *Forest Resources of Tropical Asia, Tropical Forest Resources Assessment Project.* Technical Report 3, UN 32/6.1301-78-04. Rome.

Food and Agriculture Organization of the United Nations (FAO). 2009. *Myanmar Forestry Outlook Study.* Asia-Pacific Forestry Sector Outlook Study II, Working Paper No. APFSOS II/WP/2009/07. Bangkok, Thailand.

Food Security Working Group (FSWG). 2011. *Upland Land Tenure Security in Myanmar: An Overview.* Yangon, Myanmar.

FORDAQ 2009a. "Plantation initiatives begin in Myanmar." August 7. http://www.fordaq.com/fordaq/news/LogPrices_20510.html

FORDAQ 2009b. "Myanmar promotes plantation establishment." September 4. http://www.fordaq.com/fordaq/news/LogPrices_20751.html

FORDAQ 2009c. "Myanmar: Teak plantation opportunities." October 8. http://www.fordaq.com/fordaq/news/LogPrices_21026.html

FORDAQ. 2009d. "Myanmar: Market conditions." November 7. http://www.fordaq.com/fordaq/news/LogPrices_21259.html

FORDAQ. 2010a. "Myanmar: Hardwood shipments increase." April 28. http://www.fordaq.com/fordaq/news/Hardwood_22802.html

FORDAQ. 2010b. "Myanmar: Teak and pyinkado trade." July 7. http://www.fordaq.com/fordaq/news/logs_softwood_plywood_23499.html

Forest Department. 1997. National progress Report - Myanmar. By Tint, K. In *16th Session of the Asia-Pacific Forestry Commission*. Yangon. Forestry Department.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

Friends of the Earth-Netherlands (Milieu Defensie). 2009. *Sanctioned but Not Stopped: Research on Timber Trade between the European Union and Burma.*

Global Witness. 2003. *A Conflict of Interests: The Uncertain Future of Burma's Forests.* London, UK.

Global Witness. 2005. *A choice for China: ending the destruction of Burma's northern frontier forests.* London, UK.

Global Witness. 2009. *A disharmonious trade: China and the continued destruction of Burma's northern frontier forests.* London, UK.

International Tropical Timber Organization (ITTO). 2006. *Status of Tropical Forest Management 2005*, Technical Series No. 24, Yokohama, Japan.

International Tropical Timber Organization (ITTO). 2011. Tropical Timber Market Report, Market Information Service, Vol. 16, No. 14, July 16-31.

Milieu Defensie 2009. *Sanctioned but not stopped: research on timber trade between the European Union and Burma.* Amsterdam.

Ministry of Forestry (MOF).1995. *Myanmar Forest Policy 1995.* Ministry of Forestry, the Government of the Union of Myanmar.

MOF. 2001. *National Forest Master Plan (2001/02 to 2030/31)*, Vol. 1 & 2, the Government of the Union of Myanmar.

Myanmar Timber Merchants Association (MTMA). No Date. "Teak plantations in Myanmar." Yangon, Myanmar. Unpublished.

Myo Myint, U. 2009. "The status and future actions of the national code of harvesting practices for the sustainable forest management in Myanmar." Deputy General Manager, Extraction Department, MTE, Yangon, Myanmar. Unpublished.

Ohn, U. 1995. "Plantation Forestry on a par with the Natural Forests." Central Forestry Development Training Center, Forest Department, Myanmar.

Tint, Kyaw, Oliver Springate-Baginski and Mehm Ko Ko Gyi. 2011. "Community Forestry in Myanmar: Progress and Potentials." Yangon: ECCDI.

Woods, K. 2011. "Conflict Timber along the China-Burma Border: Connecting the Global Timber Consumer with Violent Extraction Sites." In: Tagliacozzo, E. and Wen-Chin Chang (Eds.); *Ethnic Chinese Merchants and Chinese Capitalism in Southeast Asia: A History through Commodities.* Duke University Press.

Ye Lwin. 2006. "Bid to end illegal timber trade." *Myanmar Times*. 25 January.

Zaw Win. 2009. "The role of plantation teak in Myanmar." Myanmar Timber Merchants Association (MTMA). May. Yangon, Myanmar.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

APPENDIX 1: MYANMAR TIMBER EXPORT PROCESS

Interviews with officials and timber traders in July 2010 revealed the following process for Myanmar timber auctions and export.

Auctions

Myanmar teak is sold at auction in one of two ways:

- Foreign companies enter into a secret bidding process to obtain timber quota contracts (occurs monthly);
- Pending on availability of logs, there is another auction which is called "seal tendered" where MTE openly advertises on a board supplies and type of timber available for sale, which is then openly bided on by foreign companies.

Companies must first register with the government, starting with a non-refundable US$5,000 fee. Once (or if) the company secures a "sales contract" via the above explained bidding system, then they have to pay the agreed cost of the timber contract within one month to the Myanmar Foreign Trade Bank (MFTB), the MTE's bank, via a bank account in Singapore. Only after the MTE has withdrawn the total sum can the company export the timber. The company must ship the containerized timber within one month of the financial transaction sealed, or else pay a continuous monthly storage fee.

Process to Obtain Export Permit for Foreign Private Companies

In total, three different agencies are consulted for a foreign company to purchase an export permit for Myanmar wood: the Malaysian Timber Enterprise (MTE), the Forest Department, and Ministry of Commerce. According to one retired timber customs agent it has become harder for foreign companies to get a timber export permit.

The process starts when a private company must first purchase the wood from MTE, and get an order from the MTE to legally possess and export it. The private company then must show the order from the MTE to the FD when applying for an export permit. The order includes the price, timber species, quality (e.g., domestic, assorted, grade 4, etc.), and volume. After the FD has inspected the order and verified the legal possession of the timber by the foreign company, other government agencies (Ministry of Commerce, police, customs, and Port Authority) theoretically inspect the goods and order form).

The next stage is to load the timber onto the transportation vessel for export. Once the timber is 'Free on Boat' (FOB), or timber has been loaded into containers on the boat, the various government agencies (customs, police, FD, etc.) inspect the containerized timber on the boat at the jetty.

MTE Exports

When the MTE exports without any joint arrangement with a company, the MTE uses their own internal procedures, and don't involve outside bodies, such as the FD. There is, therefore, much less oversight for wood products exported by the MTE than foreign private companies.

This Action is funded by the European Union and the governments of Finland, France, Germany, the Netherlands, Spain and the UK. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.
www.euflegt.efi.int

The EU FLEGT Facility assists in the implementation of the EU Forest Law Enforcement Governance and Trade (FLEGT) Action Plan. The Facility is funded through a multi-donor trust fund, with current contributions from the European Union and the Governments of Finland, France, Germany, the Netherlands, Spain and the UK.

www.euflegt.efi.int