

BASELINE STUDY 5, THAILAND:

Overview of Forest Law Enforcement, Governance and Trade

July 2011

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.

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Forest Trends
for FLEGT Asia Regional Programme
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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.

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METHODOLOGY

The data used for this report was collected by Kevin Woods and based on literature reviews as well as semi-structured interviews with RFD officials, academics in Thai universities, and the private sector. In all cases, interviewees were told that that the study was funded by the European Forestry Institute and would likely result in a public report. Unless otherwise noted, data on wood import and export volumes was compiled by James Hewitt for the European Forestry Institute. The primary source of these trade statistics originates from the Customs Department of the Kingdom of Thailand. Additional sources were World Trade Atlas and UN Comtrade. Also, Thai newspapers were an important source for secondary data. Donor reports and web-based newspapers were instrumental in obtaining secondary data. Every effort has been made to provide pertinent analyses and accurate quantitative figures on the Thai forest product trade. Also, it should be clear that while this report strives to be as comprehensive as possible regarding the forest law enforcement, governance and forest products trade in Thailand, some aspects of this initiative may not have been captured.

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ACRONYMS

ADB	Asia Development Bank
ADT	Air dried tonne
AFIC	ASEAN Furniture Industry Council
AFPIC	ASEAN Forest Product Industry Club
ALRO	Agricultural Land Reform Office
ASEAN	Association of South East Asian Nations
BAAC	Bank for Agriculture and Agricultural Cooperatives
BDMT	Bone-dried metric tonne
CF	Community forestry
CoC	Chain of Custody
CoO	Certificate of Origin
DNP	Department of National Parks
EIA	Environmental Impact Assessment
FAO	United Nations Food and Agriculture Program
FIO	Forest Industry Organization
FIP	World Bank Forest Investment Program
FLEG	Forest Law Enforcement and Governance
FLEGT	Forest Law Enforcement, Governance and Trade
FSC	Forest Stewardship Council
GIS	Geographical Information System
GMT	Green metric tonne
ITTO	International Tropical Timber Organization
IUCN	International Union for the Conservation of Nature
MDF	Medium-density fiberboard
m ³	Cubic meter
MNRE	Ministry of Natural Resources and Environment
MOAC	Ministry of Agriculture and Cooperatives
NESDP	National Economic and Social Development Plan
NGO	Non-Governmental Organization
ORRAF	Office of Rubber Replanting Aid Fund
OECD	Organization for Economic Cooperation and Development
PAO	Provincial Administrative Organization
PAS	Protected area system

PREP	Private Reforestation Extension Project
REDD+	Reduced Emissions from Deforestation and Degradation
RFD	Royal Forest Department of Thailand
RWE	Roundwood equivalent
SCG	Siam Cement Group
SLIMF	Small- and Low-Intensity Managed Forests
TAO	Tambon Administrative Organization
TISI	Thailand Industrial Standards Institute
TLAS	Timber Legality Assurance System
USAID	United States Agency for International Development
VLO	Verification of Legal Origin
VPA	Voluntary Partnership Agreement
WWF	World Wildlife Fund

1. EXECUTIVE SUMMARY AND MAJOR FINDINGS

Thailand diverges from neighboring regional Mekong countries, with a decade or more experience of actively pursuing policies to combat domestic illegal logging and internal transportation. The 1989 logging ban, and the rise of grassroots social movements organizing around large-scale plantations and community displacement, has meant that Thai forestry institutions have needed to become more responsive to environmental and social concerns. Forest cover decline in Thailand has generally been stabilized in the last few decades, and forests are even increasing in extent in some areas. Decentralization and community-based natural resource management is now a mainstream policy theme in the country, although tangible implementation has been uneven. In general, Thai state institutions have been responsive to local stakeholders and forest sector enterprises, in terms of developing a dynamic and effective policy framework based on a long-term vision that links forests, communities, conservation and economic development. These are welcome developments – the question is whether the reforms will be implemented equitably and effectively.

Despite the lack of community forestry legislation, well-organized Thai social movements continue to press forward with practical decentralization and community-based resource management alternatives. Under the Thai Constitution and recent legislation around decentralization, there is significant potential for Tambon (sub-district) Administrative Organizations (TAOs) to participate in natural resource management and in community forestry in particular.

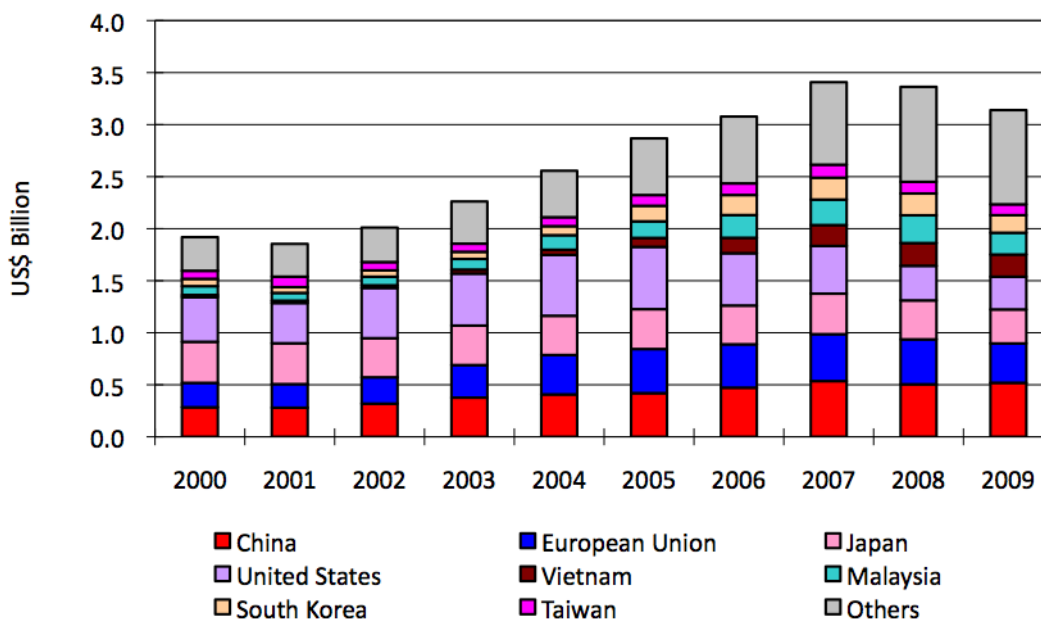
Meanwhile the Thai forest manufacturing industry has responded to the national logging ban and the inability to secure large-scale timber concessions by shifting into imported wood materials and utilizing less valuable plantation species grown by smallholder and contracted farmers, particularly rubberwood. The smallholder eucalyptus outgrower sector continues to expand. Thailand continues to import natural forest timber products sourced from neighboring countries with known forest governance and commodity chain transparency problems.

Significant findings of this report include:

Thailand is a regional forest products manufacturing hub: Thailand has become a regional forest products manufacturing hub, competing with China and Vietnam, while also sending large volumes of raw materials to these countries in the form of sawn rubberwood and eucalyptus woodchips. Thus Thailand is both a regional competitor in some industry segments, and a regional supplier in others.

Each year since 2006, Thailand has exported more than US\$3 billion in forest products annually (Figure 1) – even during the course of an economic downturn. For comparison purposes, Vietnam exported US\$3.4 billion in forest products in 2010, while China has been exporting more than US\$25 billion annually since 2007. The major destinations for Thailand’s wood-based exports are diversified, and include China, the EU, Japan, the USA, Vietnam and Malaysia.

Figure 1. Thailand Forest Products Exports by Value (US\$ billion)



Source: European Forestry Institute, as compiled by James Hewitt, 2010.¹

Thailand is the world's largest producer of plantation rubberwood timber: Thailand is the world's largest producer of industrial rubberwood, and these rubber logs are largely absorbed by the country's furniture manufacturing sector. Thailand's wooden furniture industry was restructured in the 1990s after a 1989 ban on logging of natural forests, and is now almost entirely reliant upon plantation rubberwood as a raw material source. Thailand is also a significant producer and exporter of wood-based panels, including particleboard, MDF, and plywood, and these industries are also heavily reliant upon domestic rubberwood supplies (FAO 2009:66).

It is important to consider the timber species and the export market for understanding Thailand's wood product export trade. About 97% of the total sawnwood exports in 2004 were comprised of rubberwood, and China was the destination for 80% of this (FAO, 2009:60) Most of the remaining destinations were rubberwood exports to peninsular Malaysia, which has a significant rubberwood shortage (FAO 2009:60).

The bulk of Thailand's wood industry relies upon industrial rubberwood and eucalyptus supplied by smallholders and, to a lesser extent, state-owned plantations: Thailand's plantation sector, for both rubberwood and eucalyptus, is dominated by smallholder producers, and thus Thailand represents a regional alternative to a reliance upon large-scale, corporate land concessions. At the same time, the extent of smallholder tree farming in Thailand introduces some challenges for environmental regulation and certification. Land use conflicts are present to some extent between smallholder producers and state forest agencies, including the Forest Industry Organization (FIO). There are also emerging issues around smallholders maintaining rubber plots inside protected areas. However, there are dangers in viewing such issues only through the lens of legality, as the some of the FIO plantations created between the 1960s to the 1980s were based upon the dispossession of local farmers. Similarly, smallholders managing integrated rubber plots in protected areas often have land claims which

¹ All trade statistics compiled by James Hewitt for the European Forestry Institute, unless otherwise noted. The primary source of trade statistics on which this analysis is made from the Customs Department of the Kingdom of Thailand (<http://search.customs.go.th:8090/Customs-Eng/Statistic/Statistic.jsp?menuNme=Statistic>). Additional sources were World Trade Atlas and UN Comtrade (http://comtrade.un.org/db/dqQuickQuery.aspx?cc=4801*,%20-4801&px=H0&r=764&y=2007&p=ALL&rg=1&so=8)

pre-date park establishment, and they argue that ‘jungle rubber’, or rubber trees integrated into a natural forested landscape, is not ecologically damaging.

Smallholder rubber farmers in Thailand would likely face significant challenges meeting international certification or legality assurance systems, depending on the type of system put in place. Smallholder certification could be disproportionately costly compared to larger-scale land tenure models, and Thai smallholder producers could have difficulty demonstrating full legal title to their land. The entire framework of National Forest Reserves in Thailand is open to significant dispute and contestation. It is reported that there are some 20-25 million people, including entire villages, located within legal Forest Reserve areas.

The pulp and paper sector dominates the overall forest industry by wood volume consumed: The majority (73%) of the country’s eucalyptus woodchip harvest is consumed by the pulp and paper sectors (Barney 2005). Since the takeover of Phoenix Pulp and Paper by Siam Pulp and Paper (a subsidiary of Siam Cement Group, or SCG), two semi-integrated companies— SCG and Advance Agro—together represent approximately 75% of domestically produced wood pulp.

Thailand still imports tropical hardwoods from neighbouring countries: Although domestic industrial tree plantations have largely replaced natural hardwoods for use in Thailand’s wood manufacturing sector, certain segments of the industry also consume imported natural hardwoods. Myanmar accounts for the bulk of round log imports, mostly teak. Malaysia provides the majority of imported sawnwood (approximately 1 million m³ in 2009). Most sawnwood imported to Thailand is comprised of non-rubberwood species (i.e., natural forest hardwoods) (FAO 2009:57). Imported natural hardwoods are used to create high-quality plywood for use in the building construction industry, or in furniture manufacturing. While some of the wood furniture is for domestic consumption, especially rubberwood, much of the natural wood furniture is for the export market, and therefore would respond to certification or verification measures. However, many problems present themselves: according to numerous lead-author interviews with Myanmar timber traders and former Myanmar forestry officials, Myanmar timber is being processed into sawnwood in Malaysia and then shipped onwards to Thailand, but is often listed as Malaysian wood.

Thailand is vulnerable to new requirements for proof of legal origin: The United States, Japan and the European Union account for approximately one third of Thailand’s forest product export market by value, worth approximately US\$840 million in 2009 (Figure 2). In all three of these major markets, over the past ten years, there has been a rapid increase in demands for the proof of the legality or sustainability for their wood products – and this proof must be third-party verified. Thailand also exports semi-processed sawn timber to several regional manufacturing hubs, including China (US \$300 million in 2009) and Vietnam, and these countries in turn export predominantly to Europe, North America and Japan. Requirements for proof of legal origin for Thai forest products could eventually also come from these regional East Asian exporters.

Thailand’s forest products industry could be considered as less exposed than that of China and Vietnam, which sent 50% to 80% of their exported wood products to these environmentally sensitive markets.

While documented proof of legal origin is the emerging requirement to export to Western/OECD countries, such documentation is made more costly and complex in Thailand by a plantation sector dominated by thousands of smallholder farmers, operating outside of the mandate of the Royal Forestry Department (RFD).

National wood management and tracking systems are relatively systematic, but imports are under-regulated: Thailand already maintains a rather rigorous national management system for the wood industry, with systematic documentation of importation, transportation, processing and export of wood and wood products. While these rules and regulations are indeed effective overall in protecting the country's forests (albeit with a number of small-scale illegal logging cases), other gaps remain. For example, Thailand does not seek to regulate the legal status of logs or sawnwood sourced from regional countries with known forest governance problems, including Myanmar, Laos, Cambodia and Malaysia. A wood import ban overland from Myanmar was executed after the infamous 1997 so-called Salween Scandal to ensure that *Thai* logs were not being sent across the Myanmar border and then returned into Thailand, a ruse used to get around the Thai logging ban. But this has since been overturned and only an official certificate of origin is needed by customs.

Overall low awareness of certified/verified legal wood products: Much of the processed wood industry relies upon domestic industrial tree plantations, and the construction sector—using imported hardwoods— does not require any documentation of legal origin or compliance. Only the wood furniture export business seems oriented towards these concerns, as their customers in Japan, USA, and EU are beginning to demand such timber legality guarantees.

Thailand's FIO secured Forest Stewardship Council (FSC) certification for two plantation sites in 2001, although these were revoked in 2003 (WRM, 2003). FIO regained FSC certification for 4 teak producing forest management sites in Lampang and Phrae provinces, in 2008, totalling over 11,000 hectares (Smartwood, 2008). In addition, by 2011 there were 35 Thai wood processing companies holding FSC Chain of Custody certificates.

Lack of data: Data on Thailand's wood industry remains somewhat opaque. While customs data on imports and exports published by the Royal Thai Government are easily obtained, the government does not appear to collect or publish much of the data that would be necessary for a deeper analysis and understanding of the forest industry, and available information is often out-dated or conflicting. From 2005, RFD and Ministry of Natural Resources and the Environment (MNRE) have listed the number of illegal logging cases² (in Thai). It is difficult to ascertain the acreage and per annum volumes harvested in the plantation sector, as inventory survey data for the smallholder sector is not collected. While the government has implemented various programs to subsidize smallholder tree farms, little monitoring or certification has followed.

Strong civil society operating in the forest sector: Thailand has a well-organized civil society sector that is very active in forestry, environment and social justice issues. However, many of these groups have remained focused on community-based programs and have not often participated in national or international forest governance policies and initiatives, such as certification systems or the promotion of sustainable economic forestry. The status of the Thai Community Forestry Bill remains in limbo after more than 15 years of negotiations.

² Available at: <http://web2.forest.go.th/stat/>; <http://web2.forest.go.th/stat/stat52/stat2552.html>; <http://www.dnp.go.th/statistics/>.

2. BACKGROUND

Thailand's logging ban on logging (excluding coastal mangrove forests) has dramatically reshaped the country's forest sector and timber processing industry. The Thai wood processing sector needed to find a new strategy to procure natural forest wood. The demand for natural wood was so high in the 1990s that there were many reported cases of illegal logging within Thailand's own borders, as well as logging by Thai companies in the neighbouring countries of Myanmar, Cambodia and Laos.

After the logging ban, timber imports increased, culminating in the 1997 "Salween Scandal". In this incident, a Thai company, backed by Thai politicians, was charged with illegal logging in the Salween Wildlife Sanctuary in northern Thailand. The Salween timber was trucked across the Myanmar border, and re-imported back into Thailand via a different route, but stamped as Myanmar timber. This led to a temporary wood import ban from Myanmar, a measure aimed at protecting Thailand's remaining forests. However, this has since been overturned; now an official certificate of origin is all that is needed to import wood overland. Thailand's domestic logging ban, the previous overland wood import ban from Myanmar, and other regional and international laws and regulations have produced various constraints on the ability of Thai wood processing companies to source natural hardwoods. Domestic illegal logging continued to be an issue into the early 2000s.

In the plantation sector, the *khor jor kor*³ plantation project was promoted under the 1991-92 military government. The project would have resulted in widespread land evictions of farmers in Northeast Thailand (Isan) in order to establish 5 million rai (800,000 ha)⁴ of fast growing trees (Lohmann 1995; Barney 2005; Pye 2005). Strong socio-environmental movements organised in protest against these policies, and the Thai government no longer promotes large-scale plantation concession-style developments.

The RFD has subsequently altered course to promote a strong conservation ethos for protecting remaining natural forests. Illegal logging in natural forests still occurs, although to a lesser extent than in the past. After the logging ban, the state-owned Forest Industry Organization (FIO) transitioned to focusing on its role in managing tree plantations (especially teak, rubber and eucalyptus).

Increasing environmental awareness and continued strengthening of civil society in the 2000s led to a more stable arena for forest protection, with much reduced deforestation rates and improvements in watershed conservation. However, new debates developed concerning authoritarian conservation policies, the recognition of the land use rights of upland minority populations. A strong civil society movement focusing on land rights and the development of a Community Forestry Law emerged in the 1990s, and continues to the present. However an effective compromised position between the different interests around the community forestry issue in Thailand has not yet been reached.

³ In English called the "Land Distribution Programme for the Poor Living in Degraded National Forest Reserves in the Northeast of Thailand."

⁴ 1 hectare = 6.25 rai.

3. NATIONAL FORESTRY STRATEGY, POLICY AND REGULATIONS

The legal framework upholding the national forestry sector in Thailand includes: the Forest Act 1941; National Park Act 1961; National Forest Reserve Act 1964; the Wild Animal Preservation and Protection Act of 1992; and the Forest Plantation Act 1992 (reforestation and land registration of private reforestation rights and ownership). In addition, there are more than 20 laws and several Cabinet resolutions regulating forest management. The 1997 and 2007 Thai constitutions recognize the rights and roles of Thai civil society in participating in national policy formulation and implementation, as well as in the management of natural resources.

The tenth national plan includes proposals to protect and conserve forests at no less than 33% of the total land area, with conservation forest representing 18% of total land area (FAO 2009:10). Annual deforestation has been estimated at 50,000 – 63,000 hectares per year (Nalampoon 2003; FAO 2009:13). However, Leblond (2011), based on extensive fieldwork and reviews of available studies, challenges this narrative of a continuing deforestation crisis in Thailand, noting that forest cover likely increased between circa 1995-2005.

Every five-year period the government readjusts the country's national development model in their National Economic and Social Development Plan, the most current one (the tenth) for 2007-2011. Currently the government is striving to balance their national economy to be prepared for future global changes, benefit from globalization, build resilience in all sectors to future turbulences, and all in accordance to the country's Sufficiency Economy philosophy.

3.1 Forests and Conservation

The legal system of state forest tenure in Thailand is ambiguous and characterized by multiple and at times overlapping zones. Even the key state agencies do not appear to have indicative maps for the boundaries of all of the forest zones officially in effect. As has been widely noted, many areas declared as legal forestland by the Thai state, are not actually populated with trees— but rather are represented by smallholder agricultural plots. There is also considerable disconnect between official policies and local land use realities, and local officials within the forestry bureaucracy are said to have considerable discretion in the enforcement of national regulations, which can help with diffusing potential state-village forest-land conflicts (Fujita, 2003). The following represents our best attempt to describe the system of 'legal forest lands' in Thailand.

Leblond (2011) notes that legal forests in Thailand include the following: three categories of National Forest Reserve; different types of Protected Areas (including wildlife sanctuaries and national parks); and a residual category of un-demarcated 'ordinary forest' (or, *paa 2484*, i.e. the year in the Thai calendar in which the 1941 Forest Act was passed).⁵ Not all of these types of legal forest have been mapped or demarcated on the ground, and public access to these maps is limited. Some of these legal forest categories also overlap with each other.

National Forest Reserves: There are currently 1,221 distinct areas of National Forest Reserves in Thailand, totaling some 23.4 million hectares. Reserve Forests are formally under the jurisdiction of the RFD, and are said to represent about 42% of the territorial landmass of Thailand (FAO 2009:18).⁶ It is claimed that approximately

⁵ *Paa 2484* includes all land defined by the 1941 Forest Act as 'forest', in other words, all *legal* forest (Leblond, pers. comm., Nov 7, 2011).

⁶ Under the Thai land reform program, National Forest Reserve land that has long been deforested and cultivated by farmers can be re-zoned and allocated through the Agricultural Land Reform Office (ALRO). To date, approximately 6.5 million hectares of National Forest Reserve land has been transferred to the ALRO as part of the on-going agrarian land reforms (Leblond 2011). This indicates that the area covered by National Forest Reserves has by now decreased to approximately 17 million hectares (Leblond, pers. comm., Nov, 7, 2011)

20% of the country's rural villages are located within National Forest Reserves, including entire villages, and indeed many areas zoned as National Forest Reserves have long been deforested. For this reason, communities living within National Forest Reserves (some 10-15 million people, Hirsch 1990; Onchan 1990; Leblond 2010) have often historically had varying degrees of tension with the RFD. Villagers are allowed to freely collect dry and dead wood for use as fuelwood and construction timber from National Forest Reserves, but felling of any living tree species in natural forests or clearing of land for new agriculture is legally prohibited.

Different policies have been developed to address the situation of smallholder farmers and villages living within National Forest Reserves. First was a 1975 cabinet resolution, which was aimed at providing recognition to farmer's agricultural holdings made previous to that year. Also in 1975, a 'Forest Village' program was established in an effort to enlist farmers living in National Forest Reserves into planned settlements, as a way of limiting forest clearance, and enlisting farmers into reforestation programs in exchange for use rights to 2.4 hectares of agricultural land (as well as to undermine the influence of the Communist Party of Thailand movement) (see Fujita 2004). In 1982, a Cultivation Rights Project was launched, (*khrongkan sithi thamkin*, or the STK project), which provided partial legal use rights (through STK certificates) to farmers cultivating land in National Forest Reserves up to certain area limits (15 rai). In 1992, National Forest Reserves were organized into the following three categories: protected forest (Zone C); forest for economic production (Zone E); and land suitable for agriculture (Zone A) (Fujita 2003). And in 1993, the jurisdiction over some smallholder agricultural land located within National Forest Reserves was transferred to the Agricultural Land Reform Office (ALRO). These farmer plots were then recognised through partial user rights enshrined in ALRO SPK 4-01 land documents. There have been varying rates of re-alignment through these programs, but the basic contradiction between *de jure* forest and *de facto* smallholder agriculture remains.

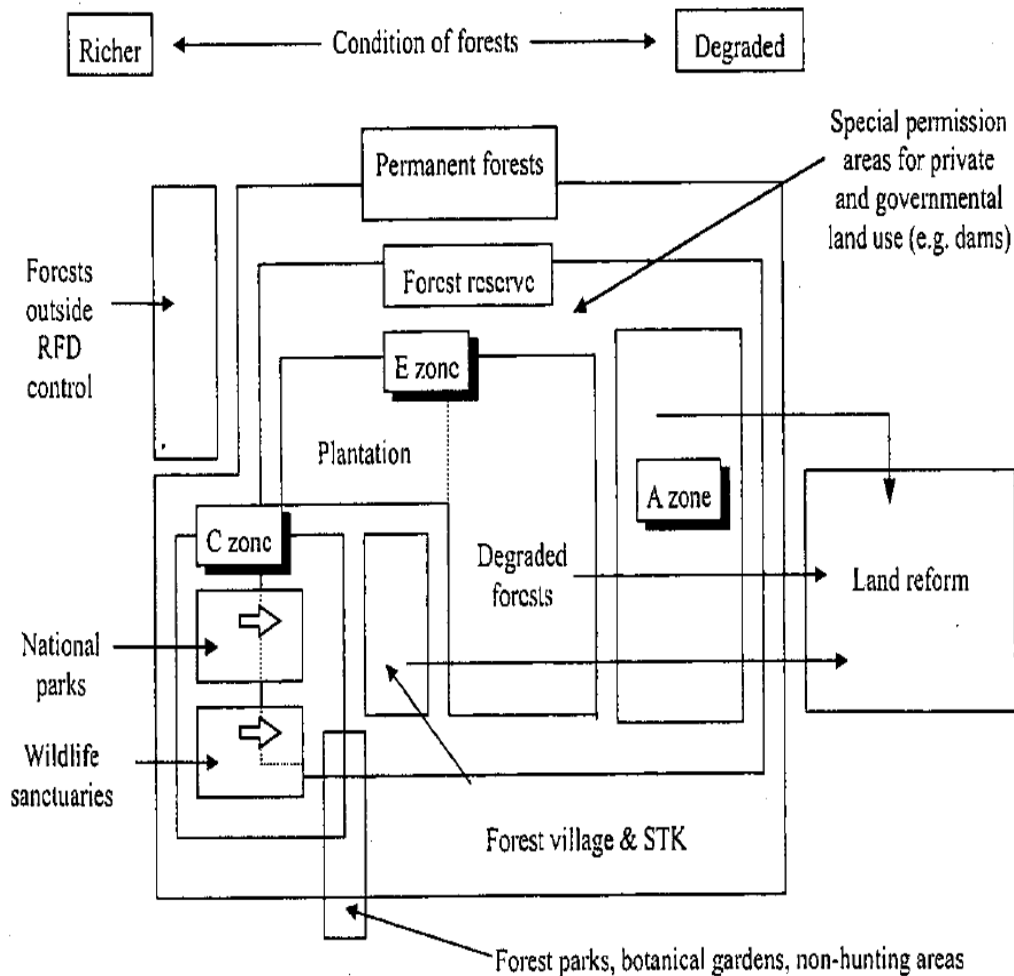
National Forest Reserves are managed with less stringent rules than territories covered by full protected area status, but logging is still not permitted in Forest Reserve areas since the 1989 logging ban. Various measures have been attempted to promote reforestation and to restrict further forest clearing in these areas. From the 1960s to the 1980s some communities have been evicted from National Forest Reserve territories, and others have been threatened with eviction. However, relocations of communities from Forest Reserves or Protected Areas in Thailand have dropped significantly since their peak period between 1986 and 2000 (Leblond 2010).

Protected Areas: The extent of Protected Areas increased rapidly from through the 1980s and 1990s (Vandergeest 1996). Today, there are 227 Protected Areas, totalling 11.3 million hectares, under the control of Department of National Parks, in the Ministry of Natural Resources and the Environment (MNRE). The Thai government has a target of 25% of the total land area set aside as protected areas, an objective that seems to have been met.⁷ In general, areas located within the Protected Areas and Class 1 Watershed Areas are more likely to contain actual 'forests' than are Reserve Forests, although there are still many farming communities who live in areas zoned legally as a Protected Area. Trisurat (2007) notes that Protected Areas are governed through the National Park Act of 1961 and the Wild Animal Preservation and Protection Act of 1992 (amended from 1960), which, it is claimed, represents a stronger legal instrument than the Forestry Law.

Together, National Forest Reserves and Protected Areas appear to cover approximately 34.7 million hectares, although there is some overlap between these categories of legal forest land (Sato 2003). Sato (2003) provides a useful representation of the complex system of legal forest land classification in Thailand.

⁷ Trisurat (2007:239) explains: "The existing national parks, wildlife sanctuaries, and the Class 1 Watersheds encompass 10.2%, 7.0%, and 18.1% of the country's land area, respectively. However, the results of GIS analysis indicated that ~50,000 km² of the Class 1 Watersheds overlap national parks and wildlife sanctuaries... Thus, the total area of protected area systems occupies an area of 125,082 km² or 24.4% of the terrestrial area nearly meeting the 25% targeted as in the Ninth NESDP and the National Forest Policy... 83.8% of the whole protected area system, or 104,861 km², still remains as forest cover."

Anatomy of Forest Land Classification in Thailand



There are some governance issues with smallholder rubber farmers in protected areas, especially in southern Thailand (see e.g. Bangkok Post 2010a). In some cases, villagers argue that their claims to land pre-date the establishment of the protected area in question, and also that integrated 'jungle rubber' represents a sustainable ecological production system. To date, the Thai government has resisted the temptation to redefine rubber as forests.⁸

3.2 Public Consultations on Development and the Environment in Thailand

The 1997 Thai Constitution mandates the state to *promote* public participation around natural resource management and pollution control. However there is no legal instrument that *compels* state agencies to do so. The relevant sections of the 1997 Constitution include:

⁸ On rubber and climate change see Bangkok Post (2010b).

“Article 46 established community rights in natural resource management. Article 59 guaranteed individual rights to participate with the state and community in managing natural resources and the environment. Article 76 exhorted the state to support participation in shaping public policies and to be accountable to the public. And Articles 79, 290 and others called for the participation of local governments, associations and traditional communities in policy making” (Unger and Siriros 2011:211-212; see also Thawilwadee 2006).

The 1997 Thai Constitution was superseded by the 2007 military-backed Constitution. As of yet, there has been no Public Consultation Law passed by the Thai senate. The current legal instrument that guides public consultation around environment and development issues is a 2005 Prime Ministers Order (Unger and Siriros 2011:214). In practice, state agencies have dominated public consultations around the environment in Thailand, with civil society participating on an *ad hoc* basis, and with political parties playing only a minor role (*ibid*).

A complex bureaucracy in Thailand has led to a situation in which different agencies and organizations hold overlapping jurisdictions, impeding the legibility and transparency of the Thai state. For instance, Floch and Blake (2011:30) argue that Thailand’s water management sector:

“...has been marked by events of public deliberation that turned out as mere public announcement forums ‘educate’ an ‘uninformed’ or ‘uneducated’ rural population about the merits of a particular investment. This is at odds with attempts to build what Novotny (1999) calls ‘socially robust knowledge’, or public participation that goes beyond state actors (and consultants engaged by them) defining both problems and solutions.”

Environmental megaprojects proposed by the Thai government (such as the Khong-Chi-Mun inter-basin irrigation scheme for Northeast Thailand, proposed by the first Thaksin government in 2004) have been characterized by non-transparency and poor planning (Molle and Floch 2008).⁹ In turn, Thai environmental civil society has been divided (including urban vs. rural divisions, rich vs. poor; and socio-environmental left vs. right). Some Thai environmental groups themselves have issues with democratic accountability, and are often focused on local and community-based initiatives that tend to limit their influence in national political affairs and within the realm of policy.

However, participation in policy-making processes is improving as civil society becomes increasingly organized and state agencies have begun to include more stakeholder groups in substantive consultations. Grainger (2004) argues that interactions between the domestic Thai media and Thai environmental campaigners plays a crucial role in building environmental momentum around specific issues— international organizations are presented as playing a far more limited role. Yet, the failures to arrive at more effective policy solutions to environmental problems in Thailand likely stems from the absence of encompassing institutions able to broker compromises. Thai political parties do not play such a role often or effectively. In three environmental cases examined by Unger and Siriros (2011) [the Thai public consultation process, and the Thai community forestry and water management legislation], NGOs found it difficult to devise or to accept compromise outcomes, leading to policy bottlenecks on these issues. The Thai Experience with the Community Forestry legislation, presented below and in Box 1, offers an opportunity to examine the role of public participation in the forestry sector.

⁹ On the proposed K-C-M irrigation megaproject, Molle and Floch (2008:200) argue: “Despite the dramatic likely impact on populations, livelihoods, and the environment, in terms of benefits, costs, and externalities, no participatory mechanism was observed...”. Regarding previous water megaprojects in Thailand, the authors write: “public hearings were often not transparent and were a means to legitimize projects... public participation [were] selective, and EIAs [were] shoddily prepared or bypassed completely... The past stories around the Pak Mun and Rasi Salai Dams echo a traumatic experience of how the assessment of costs and benefits can be distorted, and of how attendees to public hearings can be selected.” (*ibid.*)

Community Forestry

Thailand has more than 10,000 community forest sites, with over 7,000 of them registered with the RFD. With up to 20 to 25 million people living within or near National Forest Reserves (FAO 2009:27), 1 and 2 million villagers living within protected areas,¹⁰ community forestry has been a pressing issue for decades in Thailand. In 1991 a Community Forestry Division, now renamed the Office of Community Forest Management, was created to administer community forestry. Other advances included the 1993 Community Forestry Bill. However, despite many such versions drafted (the latest in 2007), no final consensual approval has yet been reached. Despite these setbacks, approximately 15% of all villages in Thailand are involved in managing community forests in the country, of which about half (over 5,300 villages) have formally registered their community forest with RFD. CF areas total nearly 200,000 hectares, or 1.2% of the total forest area (FAO 2009).¹¹ A major recent initiative has been the development of community forestry networks with a range of members, from the sub-district (Tambon Administrative Organization) and district levels through to the Community Forestry Assembly, which operates nationally. These networks are proving to be an important vehicle in which to share lessons learned and practical experience for setting up and managing sites. They also give supporters a stronger voice to advocate for legislative reforms.

Despite the advances in community forestry management without any formal law yet passed, all the natural forests (regardless of classification) remains owned by the state and controlled either by the RFD or Department of National Parks (DNP). Local villagers only have use rights to forest resources, but not the forestland. Some argue therefore (e.g. FAO 2009) that the potential benefits of community forestry, even with a Bill passed, would render marginal additional benefits to communities, tied to more management responsibility.

FAO (2009:33) notes that there is significant contestation and disagreement around what can and cannot be done within a community forest, and that this situation leads to frictions between concerned parties. There are complex bureaucratic procedures for establishing a legal community forest and for securing approval from RFD, overly technical management plans, and a centralized approval process that requires signatures from the top levels of the Director-General's office in the RFD.

¹⁰ Communities which overlap with protected areas not officially recognized or registered, and have become a flashpoint in the debate over the Community Forestry Bill.

¹¹ Community forests are often organized by ethnic minority villages located in the northern uplands. Following the logging ban, villagers are not allowed to harvest any living trees from natural forests, even for household use. While timber and fuelwood harvested from plantations is permissible, for teak and other reserved species a permit is first required from the RFD.

Box 1: The Politics of the Thai Community Forestry Bill, 1990-2008

- 1990 Community Forestry Division in the Royal Forestry Department develops a draft community forestry (CF) bill
- 1991-93 With support from Ford Foundation, local activists, community members and scholars develop a citizen-designed framework for CF, which was based upon public meetings with forest communities across the country
- This advocacy network forwards a completed draft CF bill in 1993, under an elected Democrat government. Bill extends community rights to manage forest resources but does not recognize private forest-land ownership.
- 1994 Local advocacy NGO CF Backers submit bill to political parties, conservationists, the RFD, and other government agencies. No political parties come forward to sponsor the bill, and many state agencies actively oppose it, including the RFD, particularly around the issue of communities in protected areas.
- 1994 Thai government organizes a workshop to develop a consensus on the contentious aspects of a set of competing CF frameworks. A compromise CF bill gains cabinet approval.
- Urban conservationists oppose the compromise CF bill, which leads to more public hearings and another CF bill revision. A revised version does not gain support of forest communities or local/social justice NGOs.
- 1994-97 A stalemate ensues amidst a series of short-term government coalitions.
- 1997 Thai economic crisis and a new 1997 Thai Constitution. PM Chuan Leekpai calls for further revisions and compromises, which does not gain support of forest communities. Chuan submits a version to cabinet for approval, but the Thai government falls in the aftermath of the crisis.
- 1997-99 Assembly of Poor, a rural advocacy NGO, collects 50,000 signatures to promote their version of a CF bill to be considered directly by the Thai Parliament, bypassing cabinet. Before anything could move forward, another parliament is dissolved, new elections are called and the draft again stalls.
- 2000-01 The newly established Thai Rak Thai Party under leader Thaksin Shinawatra promises support for the community forestry bill.
- 2001 House under PM Thaksin approves the NGO advocacy CF bill and it goes to the Senate.
- Senate organizes public fora to discuss the bill in each of the country's four regions.
- Senate votes in support of the community forest idea but against granting rights of communities to live in protected forest areas. Draft CF Bill returns to the House. House-Senate create joint committee to reconcile competing versions of the CF Bill.
- 2002 MONRE Minister, Yongyuth Tiypairat, shifts from supporting to opposing the NGO-advocacy CF Bill. His switch bolsters support for the Senate version of the bill. The Thai Rak Thai party does not resolve the deadlock, and the bill stagnates for 3 more years.
- 2005 NGO CF leaders launch a seven-week march from northern Thailand to Bangkok.
- 2006 New elections in 2006 intervene, and the draft bill does not emerge from a joint committee.
- Military-backed government comes to power following the coup. NGO-linked members of the military-appointed National Legislative Assembly offer a new bill that recognized the land-use and settlement rights of minority communities in protected forests.
- MNRE offers a separate draft community forest bill.
- The National Legislative Assembly holds a series of debates on the clause that would permit people to live in conservation forests. But representatives of NGOs and villagers in the Assembly's special subcommittee on community forests could not convince members of the National Legislative Assembly (largely comprised of former bureaucrats, along with some NGOs and environmental lawyers).
- 2007 MNRE submits bill that bars settlement in protected areas for approval to the Assembly; and this passes November 2007 .
- Disgruntled NGOs appealed to the Constitutional Court to overturn the bill on the grounds that it violated the new 2007 Thai Constitution's guarantee of community rights.
- 2008 Constitutional Court voids the CF legislation because it was decided that the National Legislative Assembly did not have a quorum when it passed it in 2007.

Source: Based on Unger and Sirios 2011.

4. DEMAND: DOMESTIC MARKETS AND EXPORTS

The Thai economy has grown at a moderate and generally steady pace since the economic crisis of 1997-98, with the exception of a sharp downturn in 2009 due to the domestic political situation. Compared to the export powerhouses of China and Vietnam however, the Thai economy has underperformed, as has the Thai wood products manufacturing sector. The last years of heightened political instability has also acted as a drag on economic expansion. In the pulp sector, there have been no major new pulp and paper expansion projects since before the 1997 economic crisis.

While the data available is out-dated, for both domestic and export markets, Thailand's industrial wood use in 2003 reached nearly 22 million m³, according to the following percentages by industry: pulp and paper the largest user (48%), followed by furniture (29%), construction (19%), and plywood and veneer (4%) (FAO 2009:51). The major timber species used are eucalyptus (48%), rubber (*para*) (28%), teak (*tectona*) (0.3%) and other various hard wood species (23%) (FAO 2009).

Table 1: Annual Wood Consumption in Thailand by Industry Type

Industry	RWE (m ³) from Timber	RWE (m ³) from Lumber (Sawnwood)	Total (m ³)	Percent
Pulp & Paper	10,488,022	--	10,488,022	47.8
Furniture	121,533	6,160,618	6,282,151	28.6
Sawmills*	5,728,590	--	5,728,590	26.1
Construction	--	4,283,086	4,283,086	19.5
Plywood and Veneer	909,799	--	909,799	4.1
Total *	11,519,354	10,443,704	21,963,058	100.0
Percent Share	52.4	47.6	100.0	

Source: FAO 2009:51.

*Note: Figures for sawmills is excluded from total wood consumption.

Domestic Markets

For domestic markets, 75% of overall domestic plywood consumption is for construction uses, 20% for furniture and 5% packing crates and other uses (FAO 2009:65). Medium-density fibreboard (MDF) and particleboard is primarily used in furniture and cabinet making. Sawmillers and the plywood industry utilize the largest diameter rubber logs, MDF industry uses medium diameter logs, and particleboard mills are able to use the branches and thinner logs.

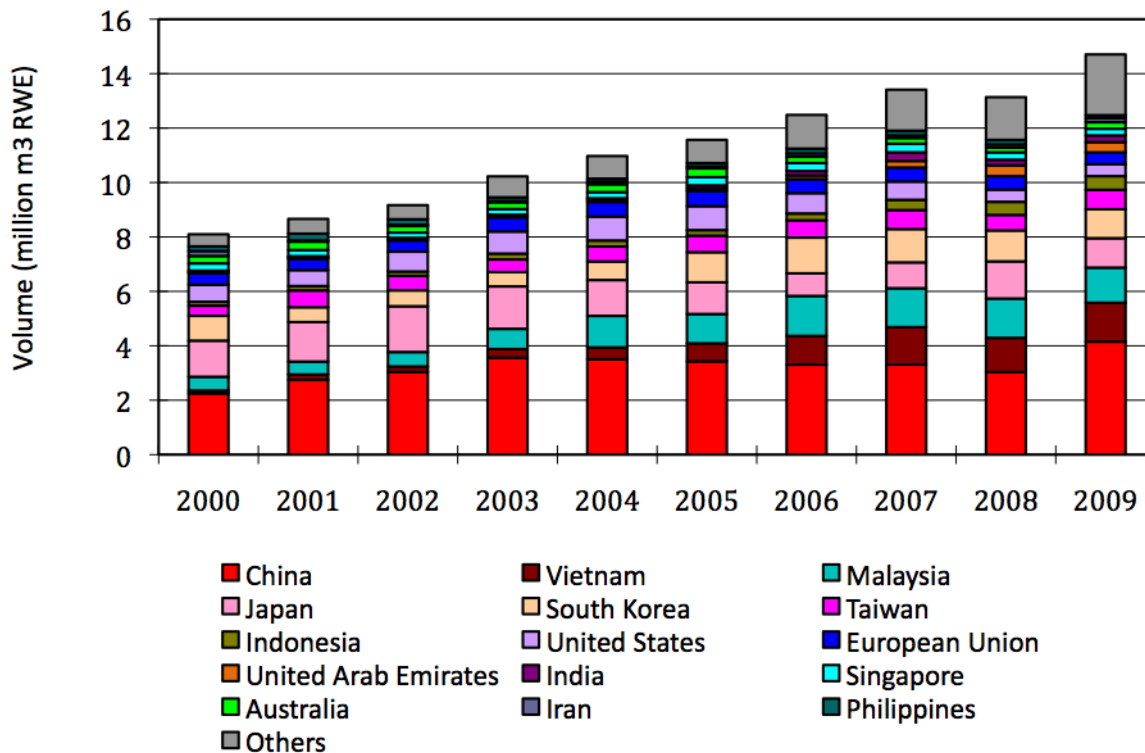
The pulp and paper industry relied almost exclusively on eucalyptus planted by farmers and bought by private companies. FAO (2009) reports that the furniture industry in Thailand was heavily reliant upon rubberwood as a raw material, and that imported sources of timber were also being used.¹² Total furniture industry consumption was listed at 6 million m³. The construction industry relies on hardwood natural forest species, 93% (almost 4 million m³) of which is imported, mostly consisting of hardwoods such as *Shorea leprosola* and Dipterocarpaceae species, such as *Dipterocarpus alatus*. The plywood and veneer industry, while needing smaller volumes of timber, used mostly rubber (94%) (FAO 2009:51).

¹² FAO (2009:66) notes: Thailand's wooden furniture industry can be divided into solid rubberwood furniture (60 percent), hardwood furniture (10 percent) and furniture made of wood panels such as particleboard, MDF and plywood, 90 percent of which are also made of rubberwood. Thus, the industry is almost entirely dependent on rubberwood for its raw material.

4.1 Exports¹³

Thailand's wood export markets are geographically diverse (Figures 1 and 2). By value, China, EU, Japan and the USA were the largest importers in 2009. Although China made up a large portion by volume in 2009 (29%), it only made up 17% by value. EU and the USA, on the other hand, were relatively small markets by volume (both at 3%), but accounted for a high percentage of the value (12% and 10%, respectively).

Figure 2. Thailand Forest Products Exports by Country by Value (million m³ RWE)



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

Thailand also exports to several regional export platforms including China, Vietnam and Malaysia. Thus Thailand is both a global competitor of China, Vietnam and Malaysia in some forest industry segments, as well as a primary supplier to these countries in other industry segments.

China remains the largest destination for Thailand's forestry exports, by both volume and value. Vietnam has become the second largest destination, increasing dramatically from 1% in 2000 to 10% of Thai exports by volume in 2009. Malaysia surpassed Japan becoming the third largest destination at 1.29 million m³ RWE, importing large amounts of Thai paper and wood panel products. As China is largely importing semi-processed timber (especially sawnwood and woodchips) from Thailand (see fig. 7), this could be taken as an indication that Thailand is moving into a subordinate manufacturing position in relation to China's tertiary manufacturing and export centres.

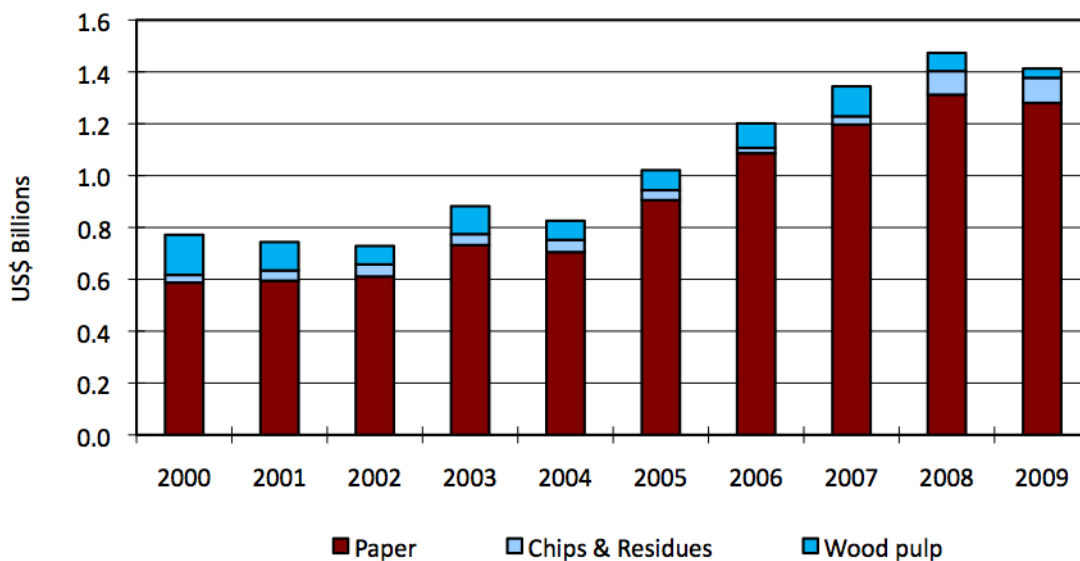
Since the Thai logging ban was enacted in 1989, the export-based wood processing industry has expanded significantly. Paper, wooden furniture, panels, and sawn rubberwood are the primary exports. Minor volumes of

¹³ It is important to note that significant discrepancies are apparent between the export figures reported by the Thailand government, and those of the importing countries. For example, according to FAO, one-third of the reported Thai sawnwood exports are not recorded in the importing countries (2009:60). Further investigation is needed.

round logs are exported each year by the para-statal Forest Industry Organization (FIO), the only legally-authorized organization able to export logs.

The Thai data shows that the EU and USA typically import value-added forest products from Thailand. The EU and the USA both import furniture and paper. US imports, however, dropped by 50% since 2005, by both volume and value. Japan imports large volumes of woodchips from Thailand. In 2009 Thailand sent approximately US\$160 million of wooden furniture to the EU, US\$ 180 million to Japan, and US\$ 180 million to the USA. This represents about US\$ 470 million of exposure in this wood product category to these more environmentally-sensitive markets now requiring independent proof of legality and/or sustainability.

Figure 3. Thailand Pulp and Paper Exports by Value (US\$ billion)



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

The value of Thai paper exports has gradually increased, accounting for nearly US\$ 1.3 billion in 2009 (Figure 3). Overall, Thailand exports 23% of its paper production and 19% of its pulp output (FAO 2009:57). In the past, due to the nature of its sourcing practices (i.e. heavily reliant upon domestic smallholder outgrowers, and recycled paper), the Thai pulp and paper sector likely did not appear to be heavily exposed to international timber legality issues. However, due to the rapid expansion of this sector around the world and the increase in the export of high quality and glossy paper materials which rely on primary fibres, sourcing strategies are likely rapidly changing and would be worth a more in-depth survey in the near future. Woodchips are exported to Japan and China.

Figure 4. Thailand's Forestry Exports by Product (excluding Paper) by Volume (million m³ RWE)

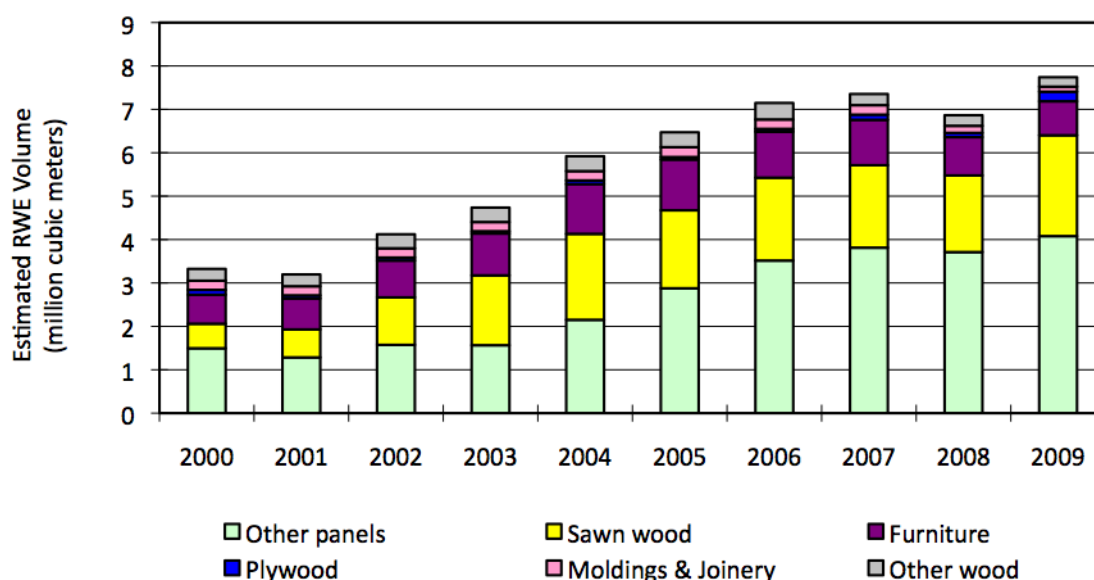
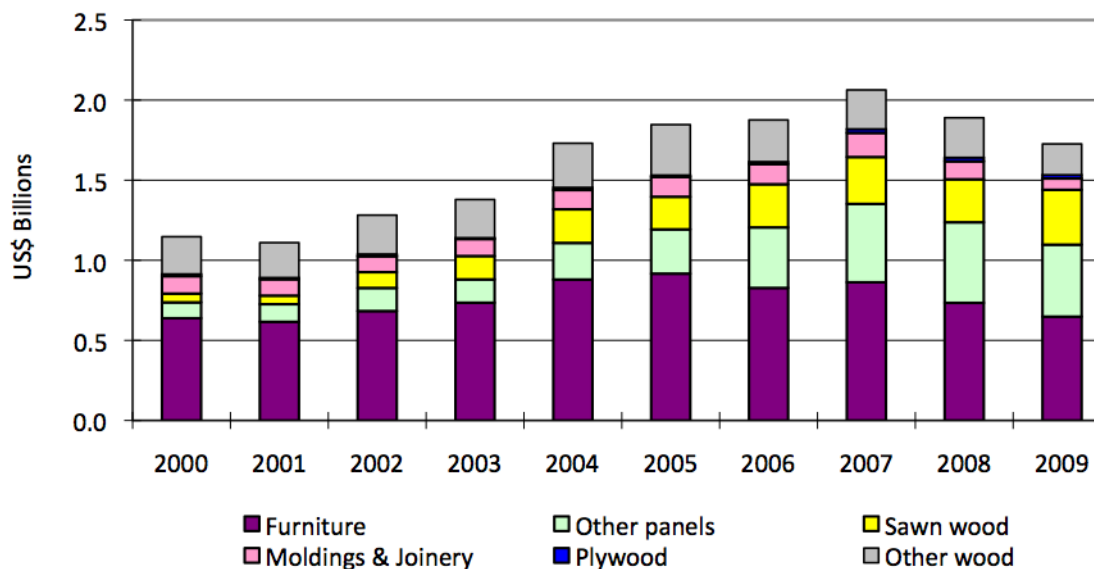


Figure 5. Thailand Forestry Exports by Product (excluding Paper) by Value (US\$ billion)



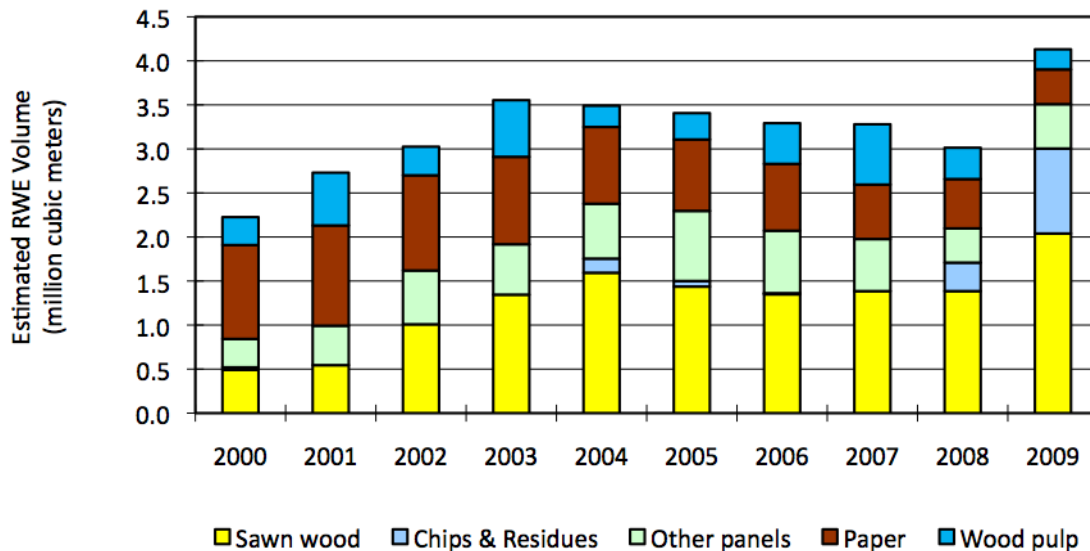
Source: European Forestry Institute, as compiled by James Hewitt, 2010.

Panels and sawnwood are Thailand's largest timber product exports by volume (Figure 4), but by value, furniture is the largest revenue generator for the export-oriented timber products industry (Figure 5), accounting for 37% of exports by value, or US\$650 million.

4.1.1 Exports to China

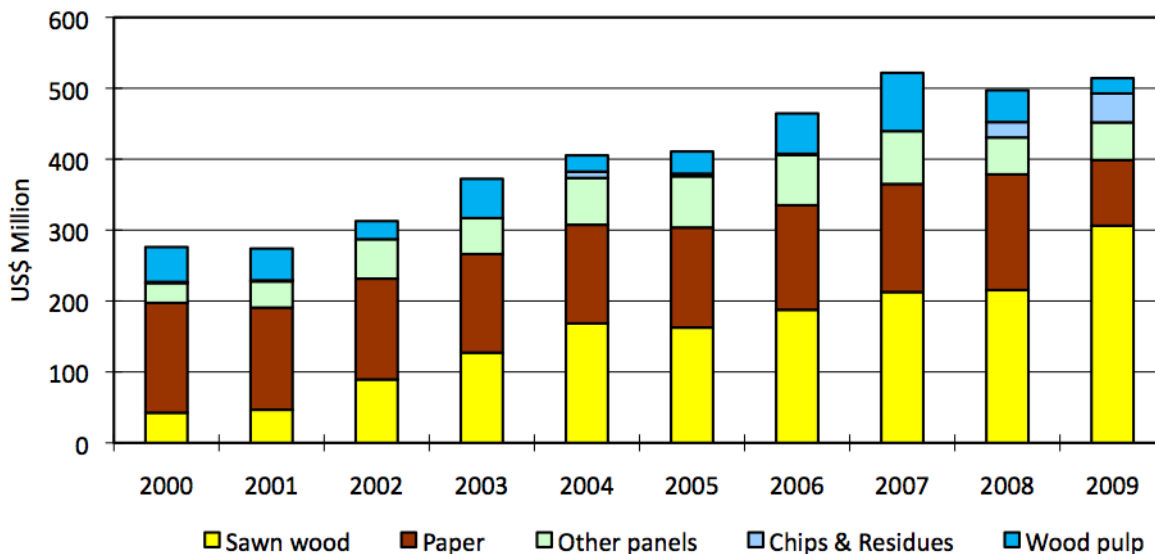
China represents the largest single market for Thai forest products, by both volume and value (Figures 6 and 7). Thailand sends a mix of products to China, but notably not furniture, which makes up the bulk of exports to other key markets such as North America and Europe. Thai exports to China are mainly sawnwood and paper (by value) and sawnwood and chips and residues (by volume). Despite China's historically voracious market for round logs, Thailand has never been a source of logs to China. The FIO is the only organization with the legal ability to export round logs, the majority of which is teak.

Figure 6. Thailand Forest Products Exports to China by Volume (million m³ RWE)



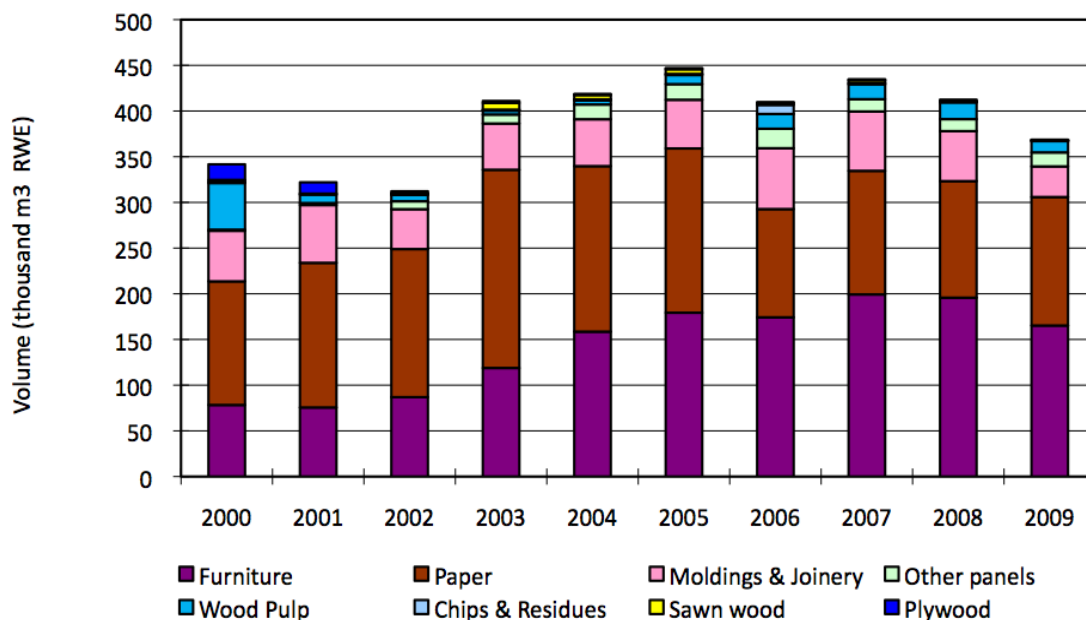
Source: European Forestry Institute, as compiled by James Hewitt, 2010.

Figure 7. Thailand Forest Products Exports to China by Value (US\$ million)



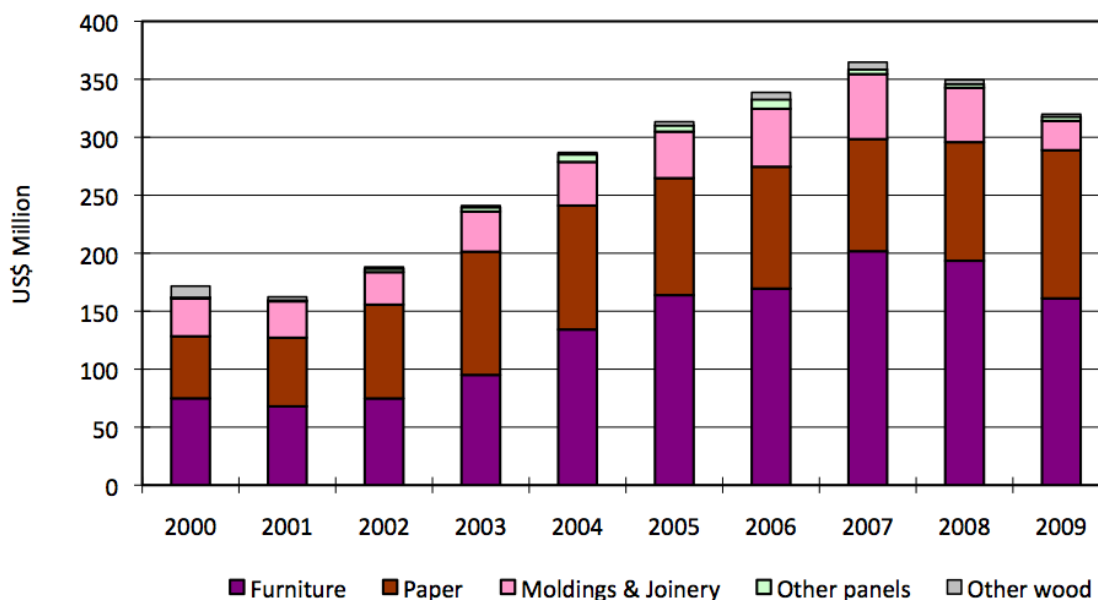
4.1.2 Exports to the European Union

Figure 8. Thailand Forest Products Exports to the European Union by Volume



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

Figure 9. Thailand Forest Products Exports to the European Union (US\$ billion)



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

Wooden furniture and paper are the key exports from Thailand to the EU (Figures 8 and 9). Non-rubberwood furniture could be considered as particularly open to requirements for legal verification, as countries considered as sources with 'high risk' are supplying this timber, such as Myanmar (directly or via Malaysia), Lao or Cambodia. Thai paper exports would likely be less associated with potential illegality, although the legality as-

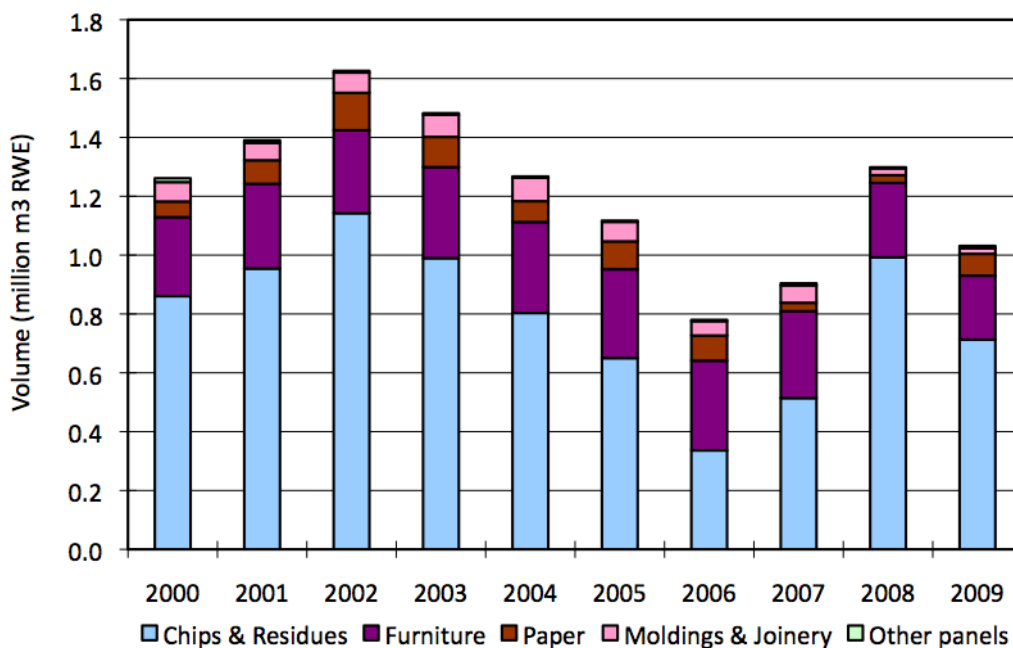
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insurance systems of Thai paper would be challenging as raw eucalyptus fibre is typically grown in contract arrangements by thousands of rural smallholders in Thailand. Certain Thai pulp and paper companies do import round pulpwod logs from concessions in Laos however.

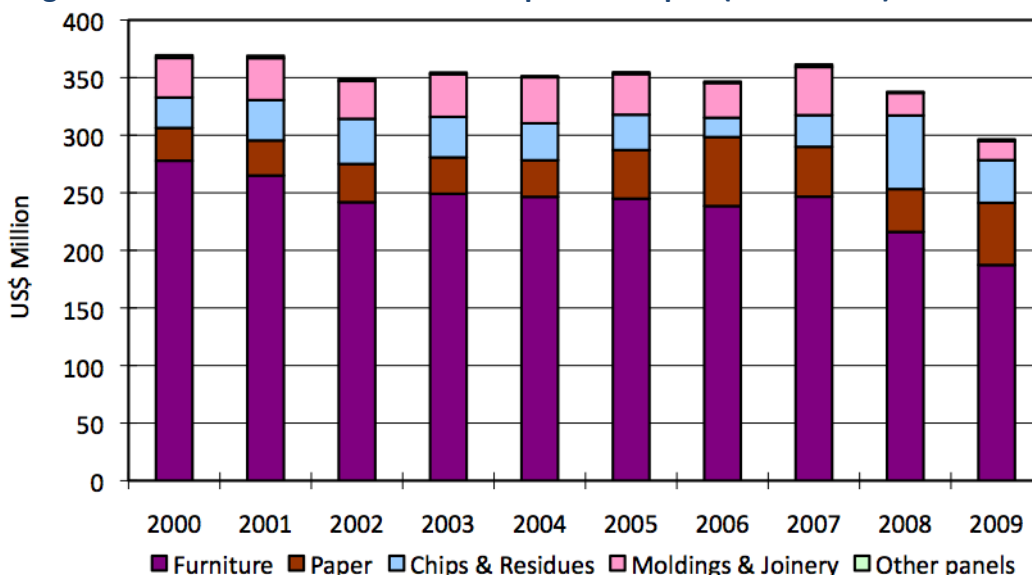
4.1.3 Exports to Japan

Figure 10. Thailand Forest Products Exports to Japan (million m³ RWE)



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

Figure 11. Thailand Forest Products Exports to Japan (US\$ million)



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

By volume, Thailand's major forest product exports to Japan are woodchips. Furniture is a much more lucrative export by value however.

4.1.4 Exports to the United States

Figure 12. Thailand Forest Products Exports to the USA (million m³ RWE)

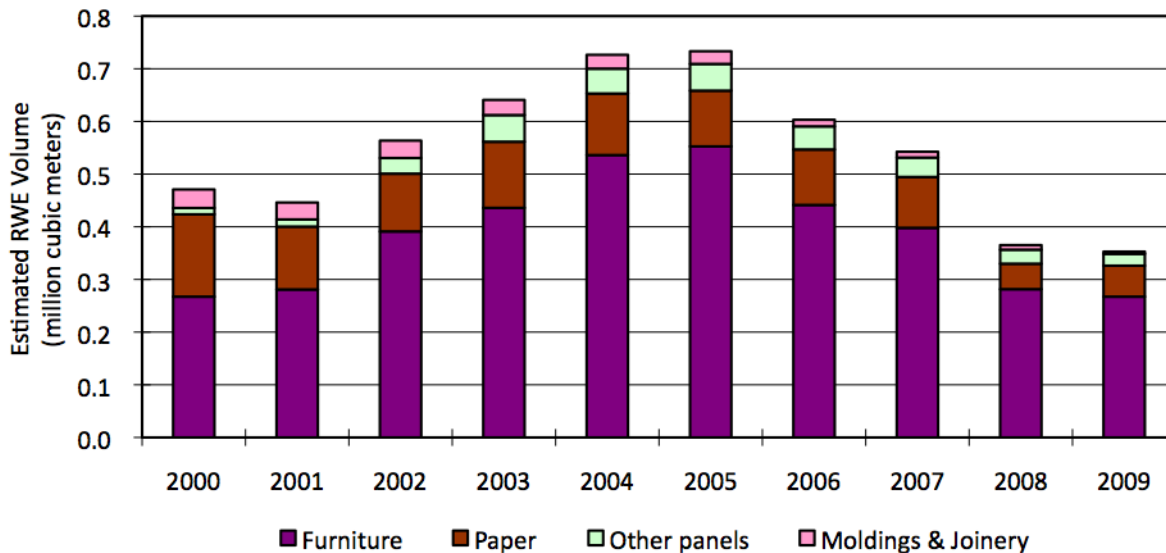
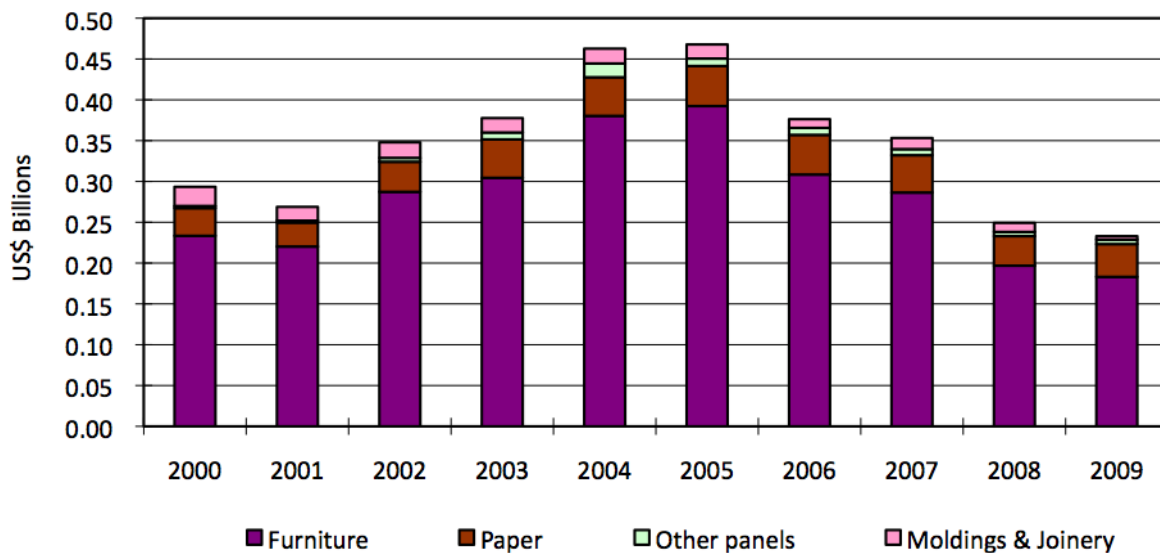


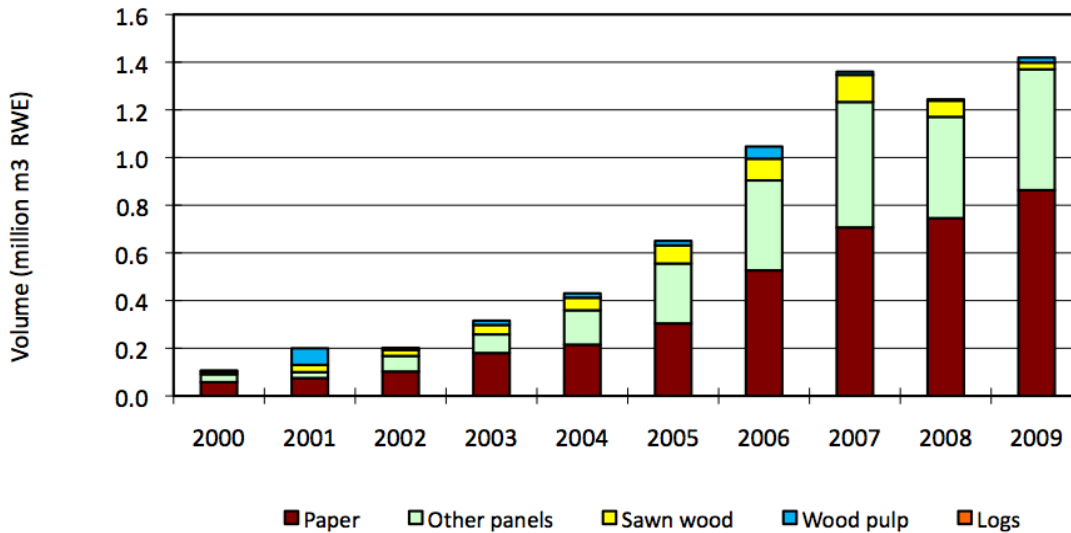
Figure 13. Thailand Forest Products Exports to the USA (US\$ billion)



The United States is a declining market for Thailand's wood manufacturing industry. Exports to USA dropped by 50% by value from 2005-2009, even as Japan and EU markets remained steady, and China rose in significance. It could be speculated that Thailand was facing stronger competition from China and Vietnam after 2005 for furniture production, while after 2008 the US housing market began to decline rapidly.

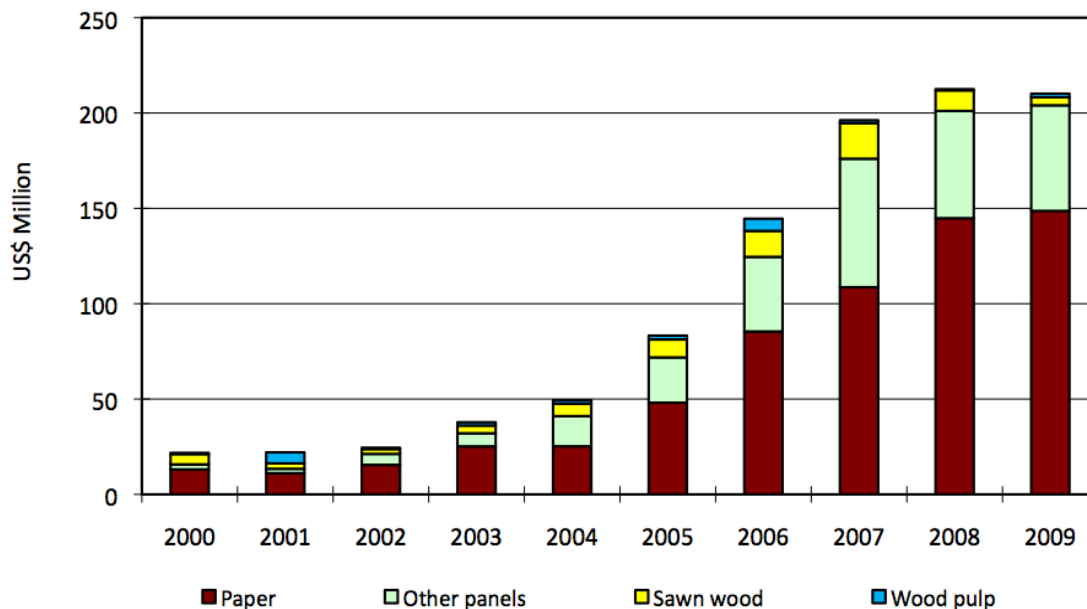
4.1.5 Exports to Vietnam

Figure 14. Thailand Forest Products Exports to Vietnam by Volume (million m³ RWE)



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

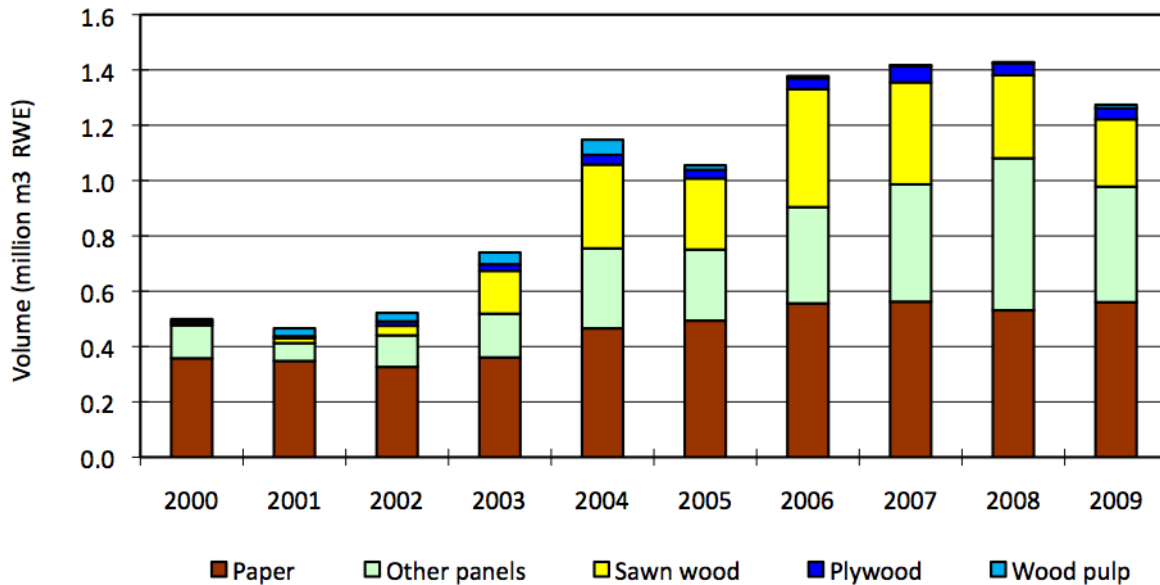
Figure 15. Thailand Forest Products Exports to Vietnam by Value (US\$ million)



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

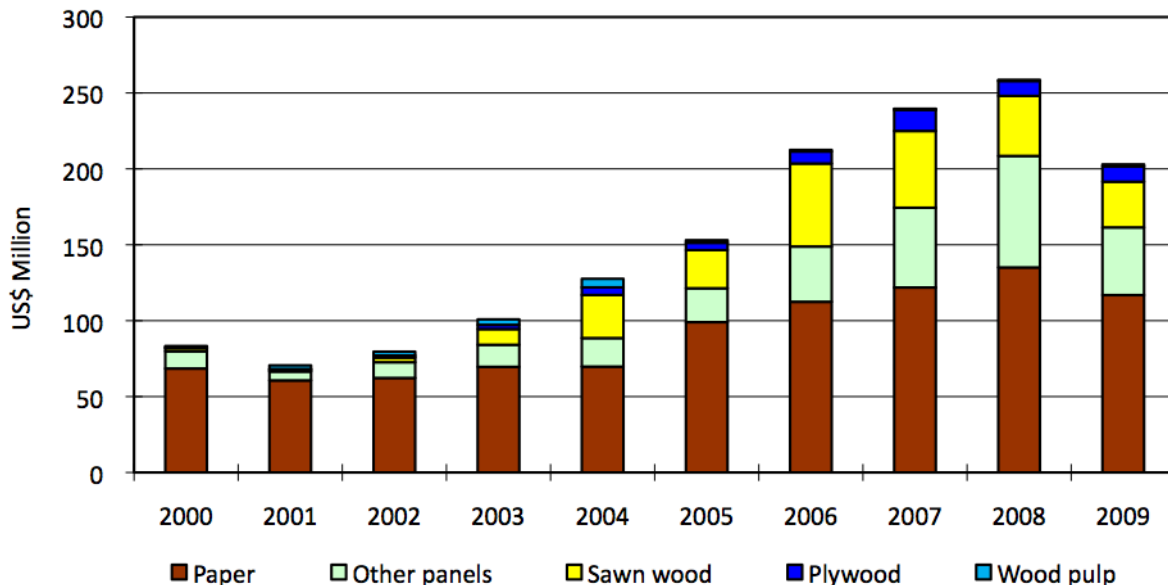
4.1.6 Exports to Malaysia

Figure 16. Thailand Forest Products Exports to Malaysia by Volume (million m³ RWE)



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

Figure 17. Thailand Forest Products Exports to Malaysia by Value (US\$ million)

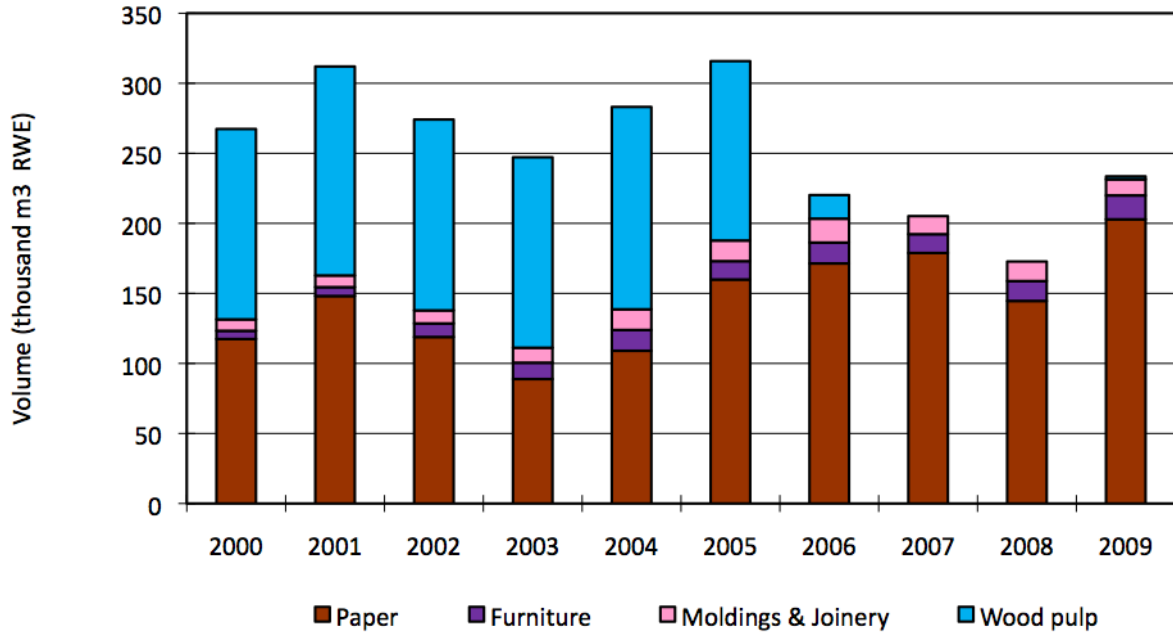


Source: European Forestry Institute, as compiled by James Hewitt, 2010.

Malaysia is now nearly equivalent to the USA in terms of an export market for Thai wood products.

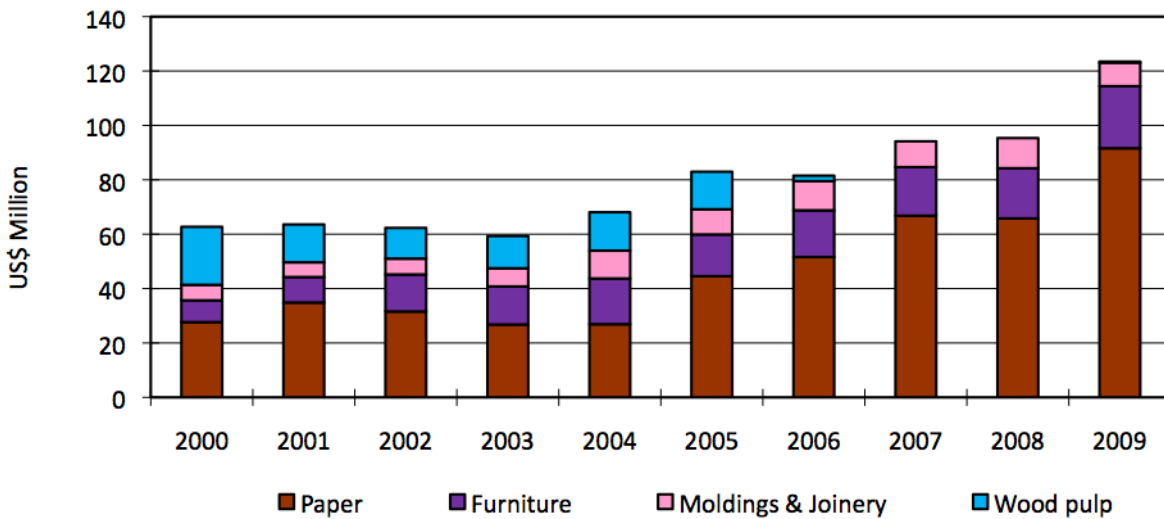
4.1.7 Exports to Australia

Figure 18. Thailand Forest Products Exports to Australia by Volume (thousand m³ RWE)



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

Figure 19. Thailand Forest Products Exports to Australia by Value (US\$ million)



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

5. TIMBER SUPPLY: IMPORTS AND DOMESTIC PRODUCTION

The decline of domestic wood supply from natural forests has led to a clear domestic wood deficit for some economically-valuable species. The solution has been to import natural forest round logs and sawnwood from neighbouring Southeast Asian countries, particularly Myanmar, Cambodia, Lao PDR, and Malaysia. At present, the overall wood procurement profile for Thailand's wood manufacturers is based upon:

- i) Domestic supplies of plantation rubber, eucalyptus/acacia, teak, and other minor plantation species, the majority smallholder-based;
- ii) Significant roundwood and sawnwood imports;
- iii) Minor access to Forest Industry Organization (FIO) plantations.

Of the 19.2 million m³ that comprised the country's total industrial roundwood supply in 2003, only 20,000 m³ of it was from natural forest. 98% of overall roundwood was procured from plantations (10.6 million m³ of eucalyptus and 8.2 million m³ of rubberwood from private smallholders, and just 3,900 m³ from FIO plantations) (RFD/KU 2005). Imported roundwood amounted to just over 380,000 m³ during the same year. From 1992-97, it was estimated that imports covered more than 95% of natural hardwood log supply and 70-80% of overall processed wood product supply in Thailand (Mungkorndin and Castren 1999).

Good quality large-sized logs remain in limited supply for the plywood industry, and imports account for 28% of consumption as a result in this sector (FAO 2009:57). Log imports, mostly from Myanmar, support Thailand's plywood production level, as the country's domestic small diameter rubberwood can only be used in mills which have been specifically designed for this purpose.

Timber import tariffs play an important role in the dynamic of wood imports and wood product exports. While imported logs are only taxed at 1%, further processed products can have taxes much higher—as high as 30%; wood-based panel imports have tariffs between 2% and 12.5% (FAO 2009:59). Thailand's Board of Investment has also been active in lobbying for lowering or even abolishing import taxes on imported raw materials for Thailand's furniture industry.

5.1 Imports

In part due to Thailand's significant export-based wood manufacturing industry, Thai industries have developed an elaborate sourcing strategy that links a long list of countries (Malaysia, Myanmar, Laos and others). Thai firms add value to these raw or semi-processed timber resources, and then the products are consumed nationally or re-exported to the global forest products market, namely China, EU and North America.

When a shipment arrives or leaves Thailand, importers or exporters are required to file a goods declaration form with supporting documents to the Customs for cargo clearance. To speed up and facilitate the flow and movement of legitimate cargo, the Customs Department provides two clearance systems: manual and Electronic Data Interchange (EDI) (See Annex 1 on timber import procedures).

Officially reported timber import volumes hovering around 2 million m³ appear to be relatively stable, having levelled off since recovering from the Asian financial crisis. However, this is far below that of pre-crisis volumes (3-4 million m³). Laos presents an exception to this trend, where timber trading volumes with Thailand are higher than that of the mid-1990s.

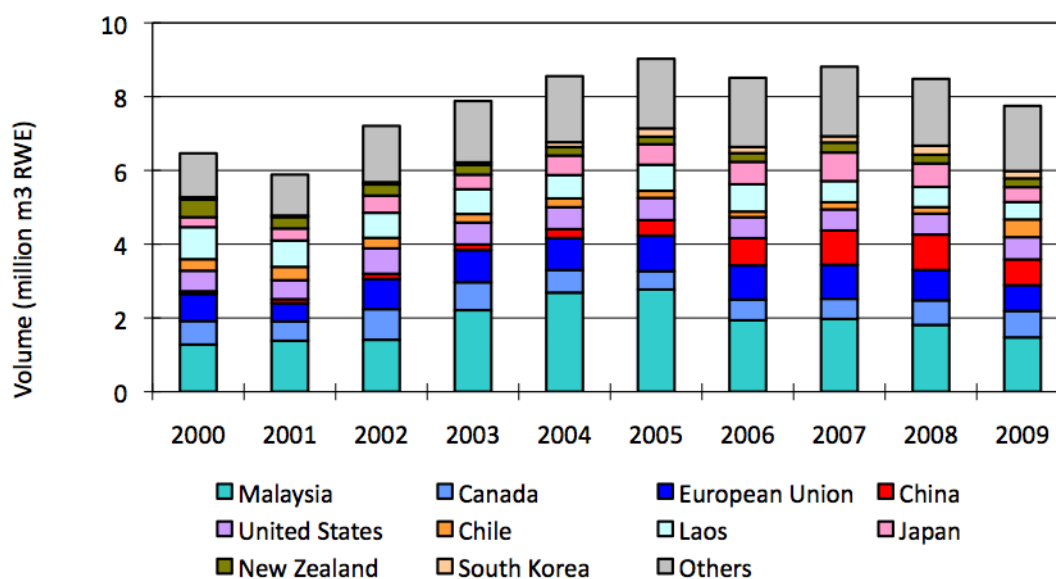
For wood imports, very low taxes are levied on logs or rough sawnwood. Other imported wood products incur a tax, however; for example, for smooth sawnwood there is a 5% tax, and wood furniture has a 20-40% tax.

The Company needs to prepare the following supporting documents for the Customs Department: Bill of lading, an invoice, packing list, insurance premium invoice, a release form, foreign transaction form (if import value >500,000 Thai Baht), import license (if applicable), certificate of origin, and any other relevant documents. If all forms are accepted, then the company will receive a document for permission to transport wood within Thailand (which then must be shown at check points along the transportation route). This system is meant to ensure that wood is not illegally cut along the transportation route to the factory and added to the cargo. Once the wood shipment arrives at the factory, the owner must notify the district RFD official.

A certificate of origin (COO) from the exporting country is needed; however it seems that it is only mandatory when from a neighbouring country, such as Malaysia and Myanmar where they have the most problems with illegal wood imports. If the COO is a suspected forgery, the Customs Department contacts the Ministry of Foreign Affairs. Since 2008, the Department of Customs is no longer allowed to sell confiscated wood. This ruling came after many irregularities with custom's wood seizures and subsequent selling without going through the FIO.

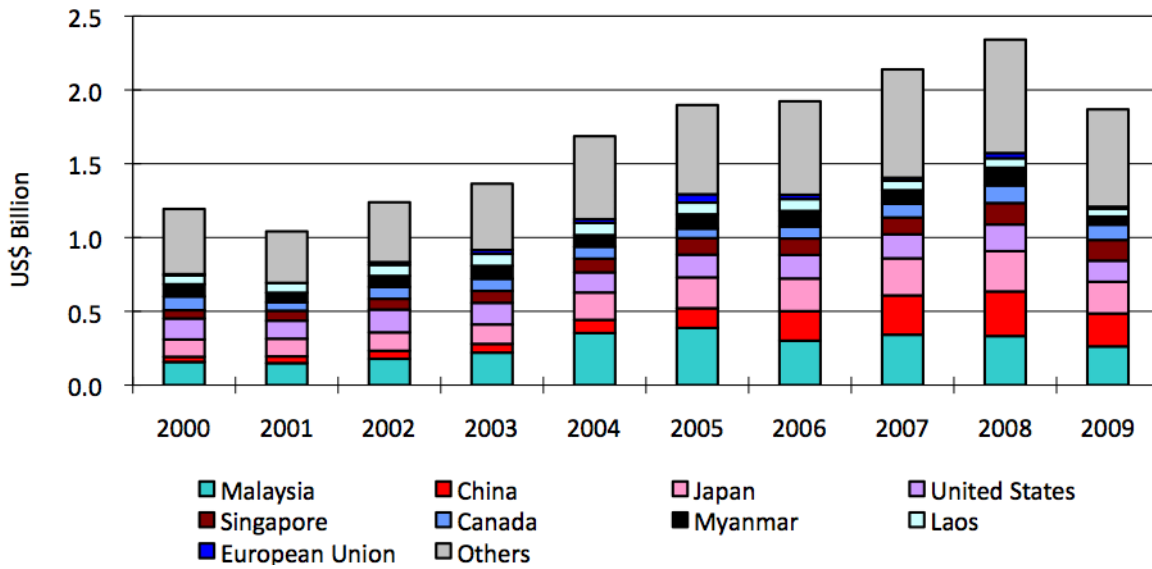
The Custom's Department has continuing problems with forged COO for imported teak wood (actually from Myanmar) from three specific countries: China, Singapore, and Malaysia. But due to legal constraints, if the COO may be suspected to be fake but is presented nonetheless, then Thai customs allows the shipment to be imported. For example, for a shipment of teak wood from Malaysia with a COO stating Malaysia, the Thai Customs processes it accordingly despite the high probability that it is Myanmar teak.

Figure 20. Thailand Forest Products Imports by Country (million m³ RWE)



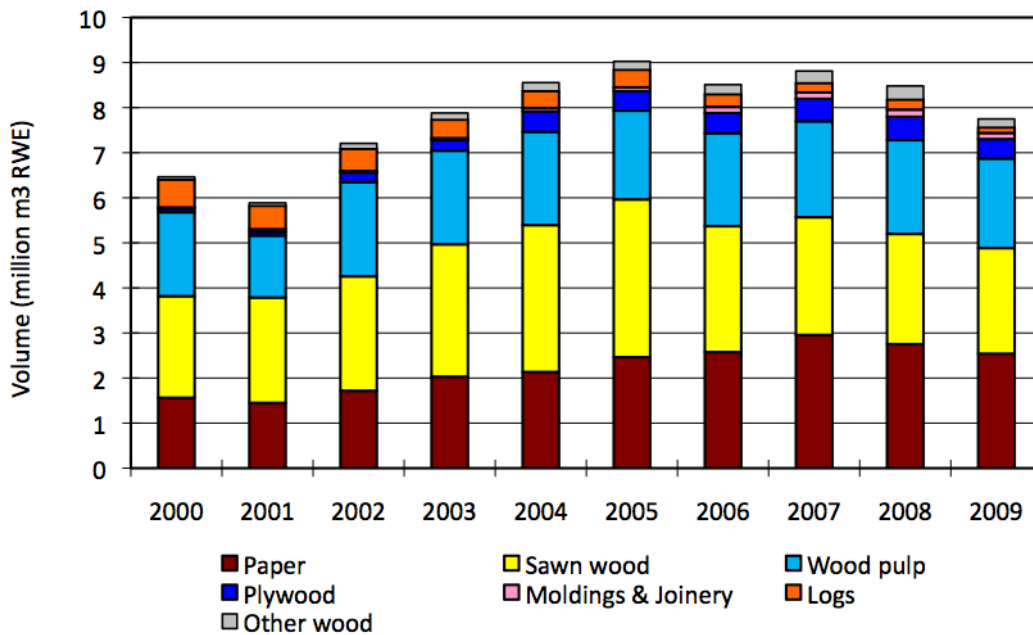
Source: European Forestry Institute, as compiled by James Hewitt, 2010.

Figure 21. Thailand Forest Products Imports by Country (US\$ billion)



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

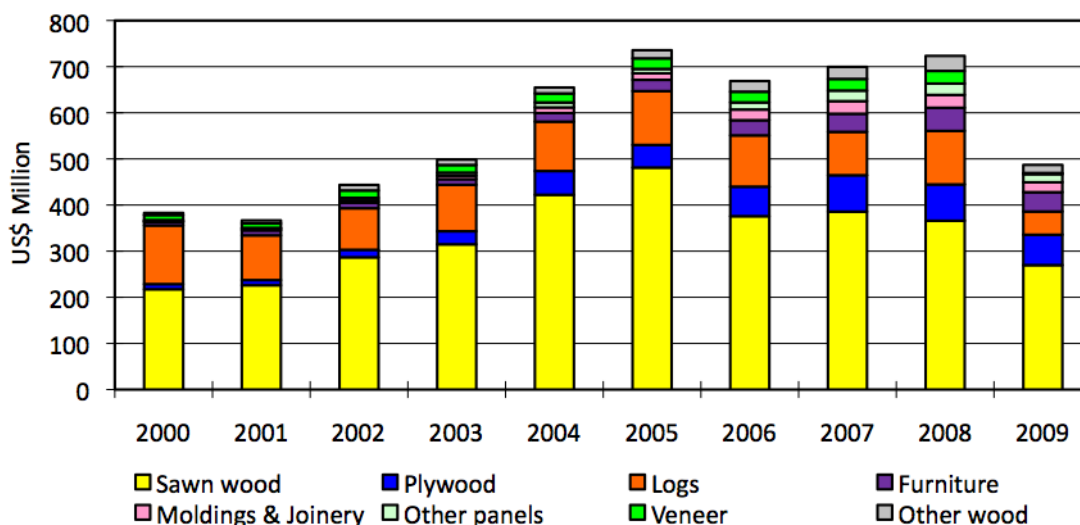
Figure 22. Thailand Forest Products Imports by Product (million m³ RWE)



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

Sawnwood continues to be Thailand's largest solid wood import (i.e. excluding pulp and paper), standing at 2.3 million m³ RWE, and 74% by solid wood volume in 2009. The sawnwood trade (both import and export) is of considerable magnitude for Thailand, as it accounts for 90% of the total solid wood product imports and 54% of total exports (FAO 2009:58). About two-thirds of overall sawnwood consumption is imported, and this is used mostly in the construction industry (FAO 2009:57). The export-oriented wood furniture industry also relies upon sawnwood and log imports, mainly teak from Myanmar, although the volumes imported are much lower. Wood imports dramatically increased in the early 2000s and currently remain relatively stable by volume, with a sharper decline in the value of exports with the global slowdown in 2009.

Figure 23. Thailand Timber Imports (excluding Pulp and Paper) by Value (US\$ million)



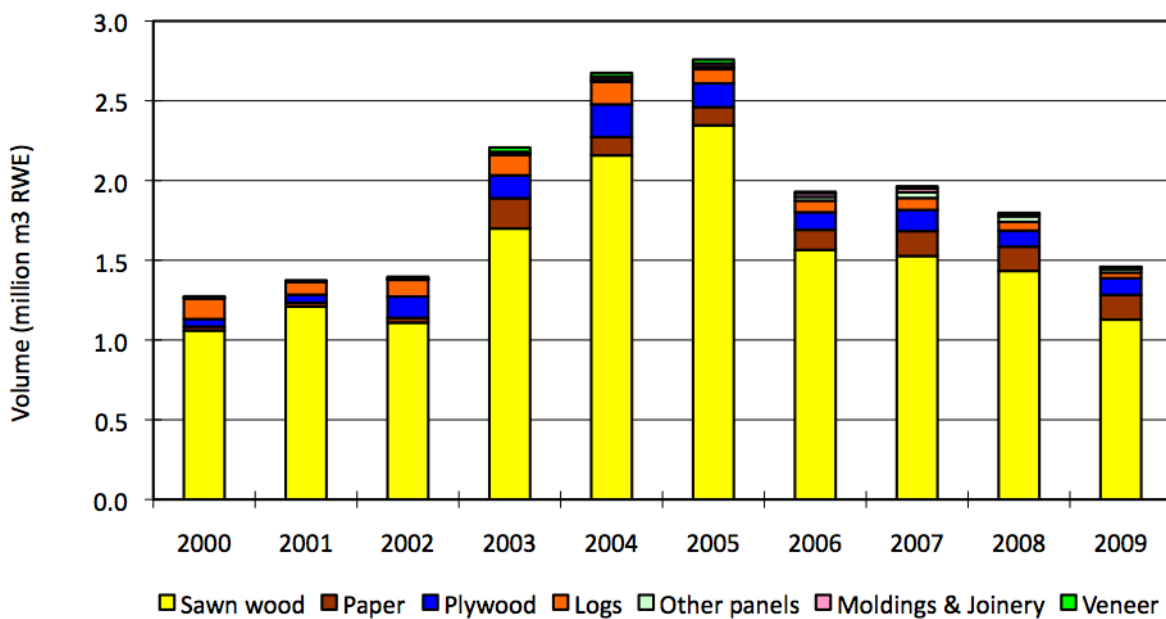
Source: European Forestry Institute, as compiled by James Hewitt, 2010.

The value of Thai imports increased between 2000 and 2008, (from US\$380 million in 2000 to \$720 million in 2008). There was a significant decrease in the value of wood imports in 2009 however, dropping to less than US\$500 million, with the mixture of imported goods remaining in relative proportion.

5.1.1 Imports from Malaysia

Thailand has been importing 1.5 to 2 million m³ RWE of sawnwood from Malaysia since 2006, with significantly higher imports earlier in the decade. Based on author interviews with Myanmar timber traders in Yangon, Thai timber traders in Bangkok, and Thai RFD officials (June-July, 2010), it would appear that a substantial amount of wood imported from Malaysia, depending on the species, could be Myanmar natural timber, especially teak. Since the Myanmar timber is exported via Yangon to Malaysia, this would be deemed 'legal' trade by government officials in both Myanmar and Malaysia. Once this timber arrives in Malaysia, interview sources suggested, the Myanmar timber might be able to receive a certificate of origin as being a product of Malaysia, and then could possibly be re-exported to other countries such as Thailand.

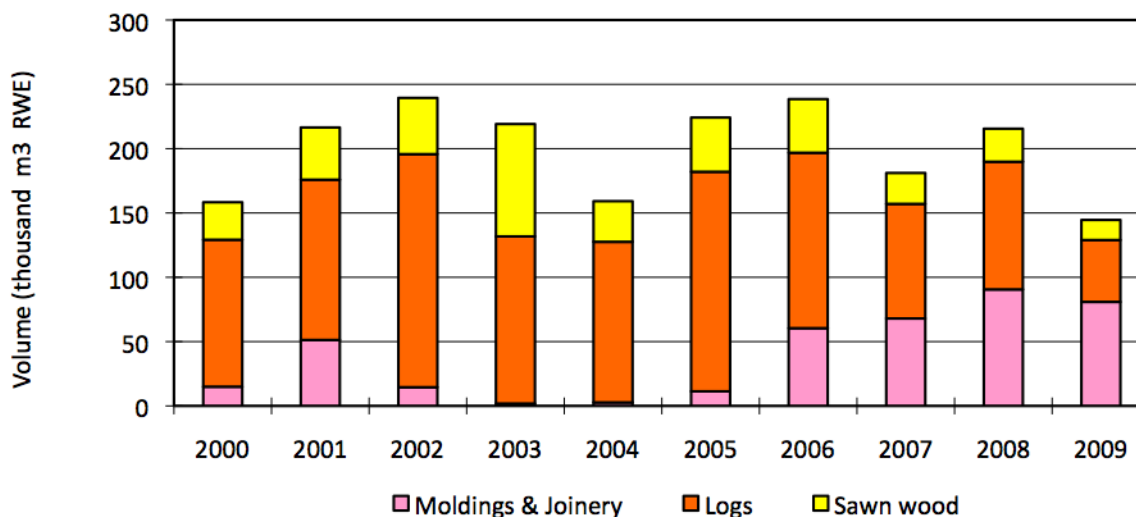
Figure 24. Thailand Forest Products Imports from Malaysia by Value (million m³ RWE)



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

5.1.2 Imports from Myanmar

Figure 25. Thailand Forest Products Imports from Myanmar by Volume (thousand m³ RWE)

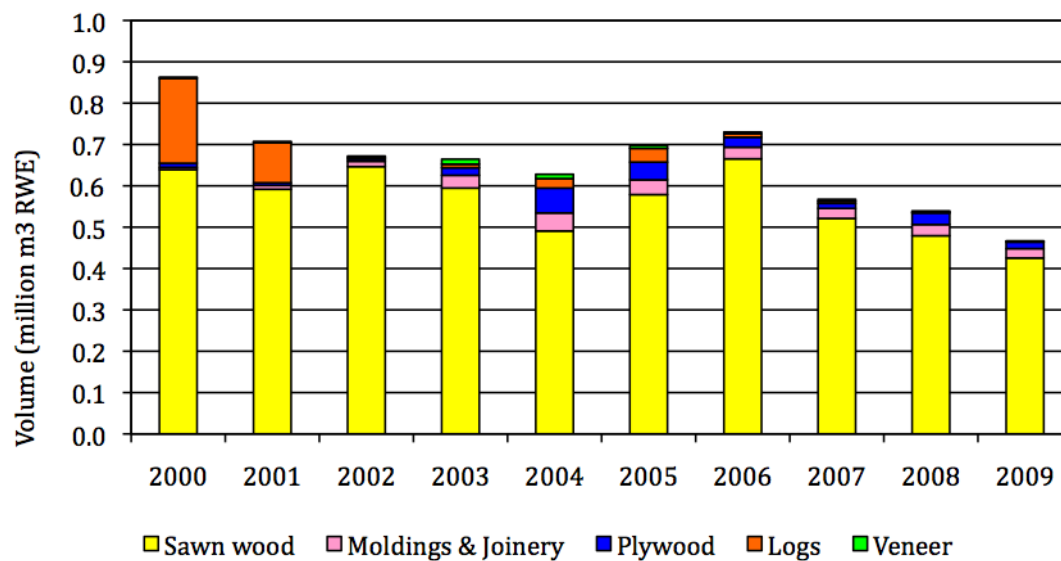


Source: European Forestry Institute, as compiled by James Hewitt, 2010.

According to the official data, Myanmar exported less than 150,000 m³ of overall timber products to Thailand via the sea in 2009, mostly in the form of logs and sawnwood. However, if significant amounts of Myanmar sawnwood are entering Thailand via Malaysia and are labeled as Malaysian wood, these numbers would be possibly underestimated. Furthermore, there is still an existing problem with wood being imported overland from Myanmar through unofficial border crossing, which may not be taken into account in official Thailand statistics.

5.1.3 Imports from Laos

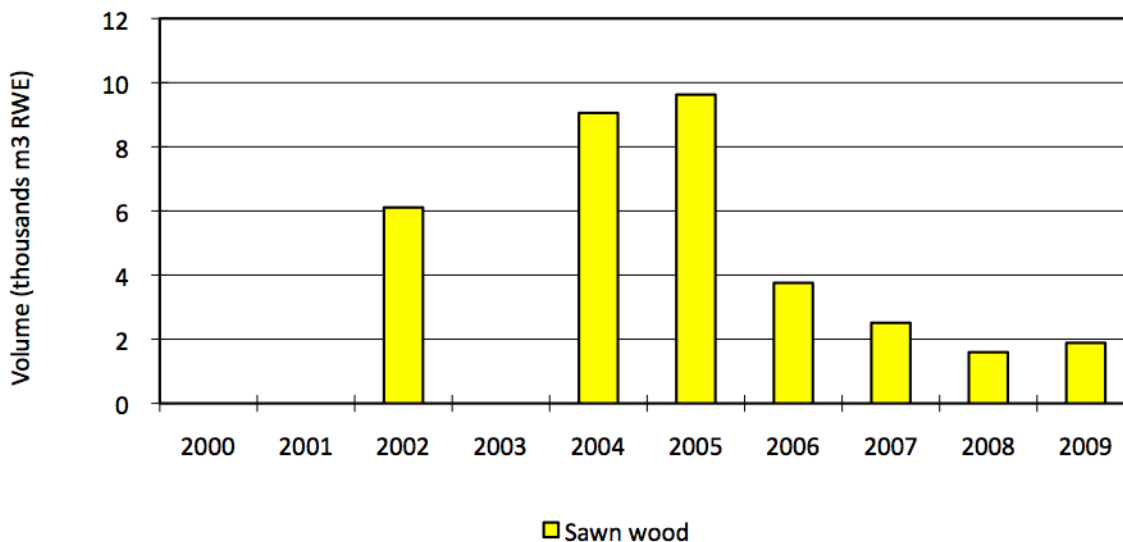
Figure 26. Thailand Forest Products Imports from Laos by Product (million m³ RWE)



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

5.1.4 Imports from Cambodia

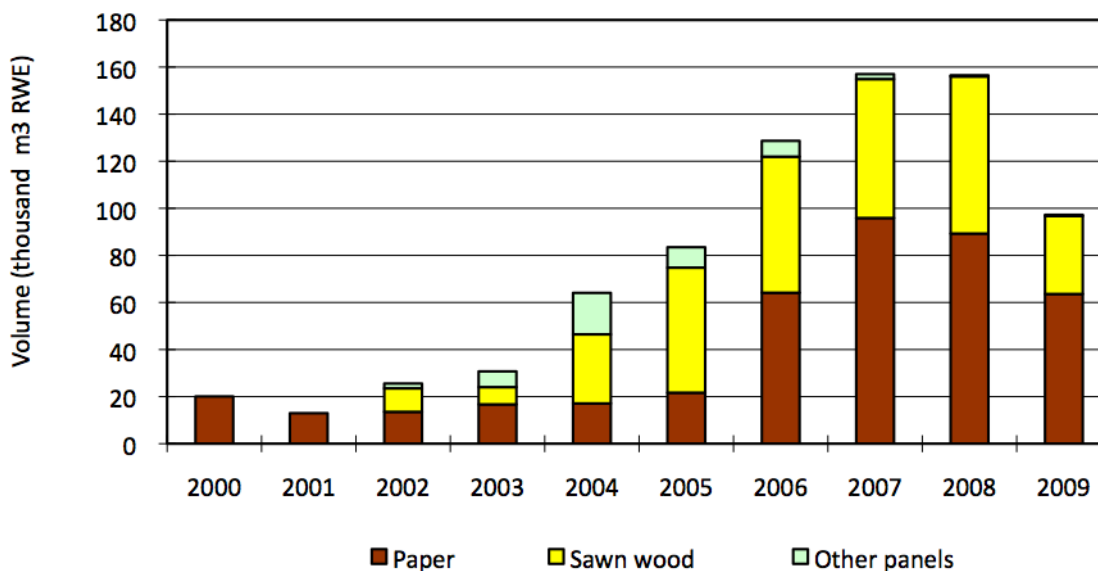
Figure 27. Thailand Forest Products Imports from Cambodia by Product (million m³ RWE)



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

5.1.5 Imports from Australia

Figure 28. Thailand Forest Products Imports from Australia by Value (thousand m³ RWE)

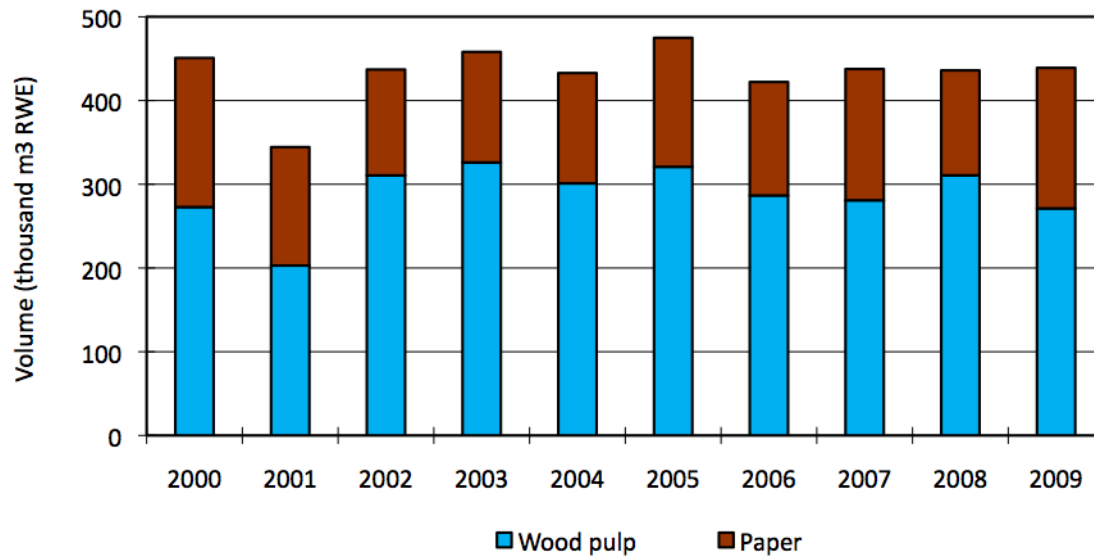


Source: European Forestry Institute, as compiled by James Hewitt, 2010.

5.1.6 Imports from Canada, European Union, and the USA

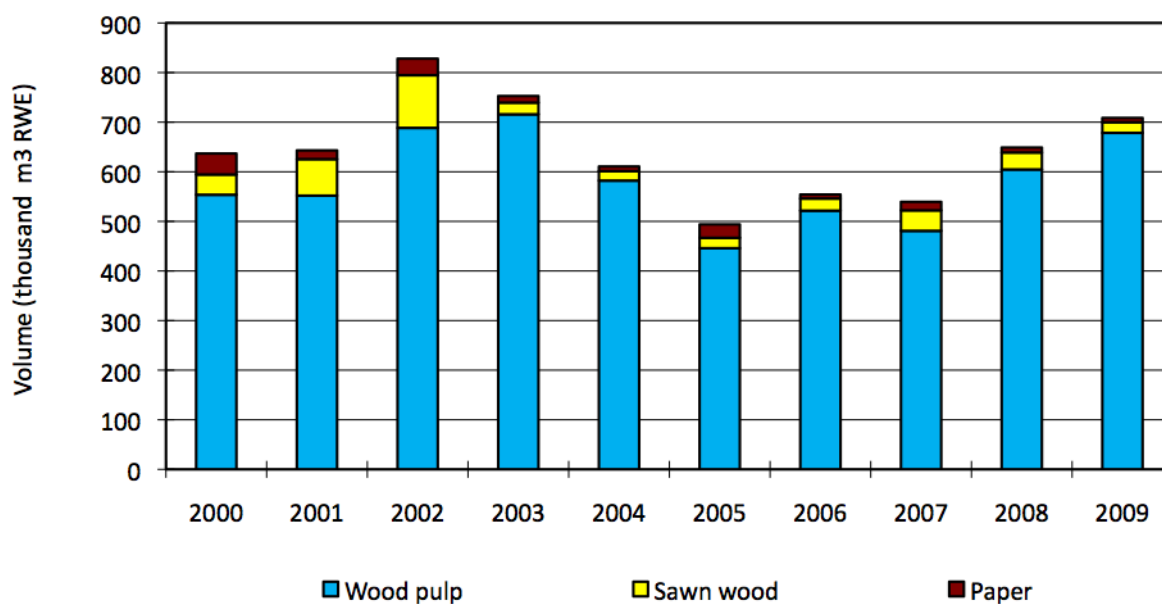
Imports from Canada, the USA and the European Union are predominantly for the pulp and paper industry – comprising largely wood pulp and paper.

Figure 29. Thailand Forest Products Imports from USA by Volume (thousand m³ RWE)



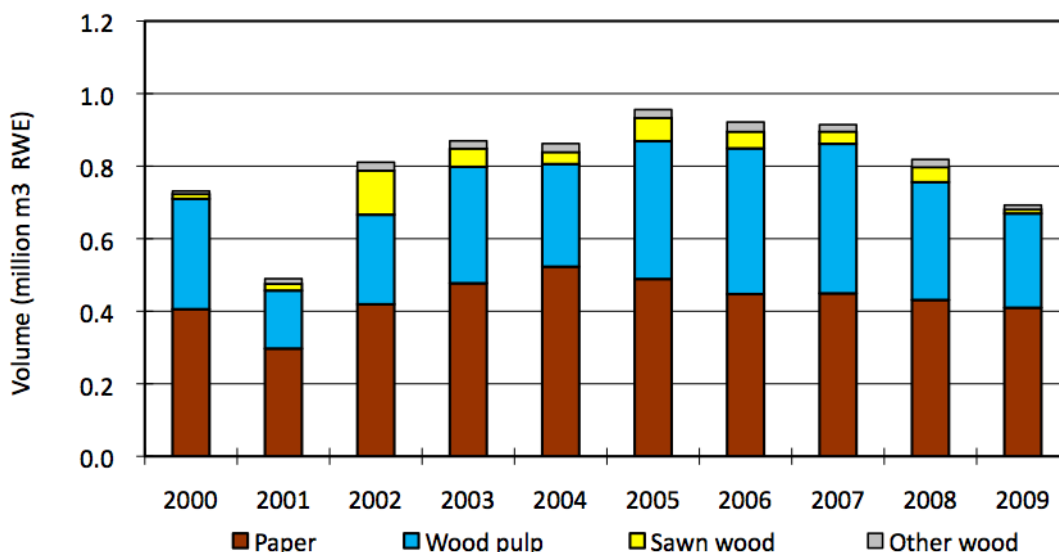
Source: European Forestry Institute, as compiled by James Hewitt, 2010.

Figure 30. Thailand Forest Products Imports from Canada by Volume (thousand m³ RWE)



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

Figure 31. Thailand Forest Products Imports from EU by Product (million m³ RWE)



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

5.2 Domestic Timber Production

5.2.1 Harvesting from Natural Forests

Information on wood production in Thailand is quite limited. Some information can be found on the amount of timber that the FIO confiscates from illegal operations and then sells, as well as volumes harvested from dead-wood/fallen trees in natural forests and from infrastructure development. These two categories add up to dramatically decreasing volumes since the early 2000s, at 45,000 m³ in 2000 down to just over 2,000 m³ by 2004 (RFD 2004).¹⁴ Illegal logging in natural forests still occurs, although to a lesser extent today than in the 1990s. Since 2005, information has been made available from the RFD and MNRE on the total number of illegal logging cases.¹⁵

5.2.2 Harvesting from Industrial Tree Plantations

Since the 1980s Thailand has embarked on developing its commercial tree plantation sector, which now produces large quantities of timber for domestic use as well as for export, including rubberwood to Malaysia. In addition to the three primary industrial species (rubber, eucalyptus, and teak) there are smaller plantation resources of *Acacia spp.*, *Albizzia lebbek*, *Leucaena leucocephala*, *Gmelina aborea*, and *Pinus spp.*

Thailand leads the regional countries in tree plantation development, with data from the early 2000s showing 4.9 million hectares of plantations, of which 2.8 million hectares are non-rubberwood tree plantations (Katsigris

¹⁴ These figures for illegal timber seized and auctioned by the FIO are general figures and should be seen as only somewhat reliable.

¹⁵ Available at: <http://web2.forest.go.th/stat/>; <http://web2.forest.go.th/stat/stat52/stat2552.html>; <http://www.dnp.go.th/statistics/>.

et al. 2004).¹⁶ This places Thailand as a leading country in the Mekong region with tree plantation development, with plantations covering about one-fourth of the tree-covered area nation-wide. There is inadequate information on Thailand's growing stock of tree plantations, for example, the annual planted areas, survival rates, age class distributions, total volumes, annual growth increments, and so forth.

The Thai plantation sector can be split between corporate plantations on purchased or leased land, government-managed plantation zones (including the FIO, RFD, and military holdings), medium-scale landowners, and smallholder plots.¹⁷ In the rubber sector, 93% of the holdings belong to smallholder rubber tappers, with an average size of 2.08 hectares (FAO 2009:42). FAO reports that medium-size rubber plots in Thailand average 9.6 hectares, representing 6.7% of the total area (no threshold definitions provided for small or medium-scale holders). Rubber is a strategic rural industry, especially in southern Thailand. Rubber tapping provides approximately US\$3.3 billion per year in income for over 800,000 rural households (or US\$4,125 per household) (FAO 2009:42), a figure which does not include the additional income earned from the sale of over-mature rubberwood timber.

The expansion of smallholder's engagement in tree planting of higher value timber species has been limited by the required long growth periods. Typically it is only the medium to larger-scale farmers that have the option to wait for returns from planting longer rotation species such as teak. Many small-scale farmers in northeastern Thailand cannot afford to wait even the 5 years for a rotation of eucalyptus due to their constrained cash flow, or an indebted status. Rotations for some smallholder eucalyptus farmers have been reduced to 4 or even 3 years, and the industry now accepts trees down to 2.5 cm diameter.

5.2.3 Area and Standing Volumes of Rubber Plantations

Although rubber trees in Thailand are most often planted and managed for latex production, rubberwood has become a popular species for a plethora of wood products: furniture, parquet flooring, particleboard, MDF, and plywood. As rubber is actually an agricultural crop, these plantations are under the jurisdiction of the Ministry of Agriculture and Cooperatives (MOAC).

Thailand holds a vast rubber timber resource, which should allow for continued domestic manufacturing and sizeable exports of semi-processed (sawnwood) and processed goods (furniture, panels and boards) over the medium to long term. FAO (2009:41) indicates a current total rubber acreage of 2.019 million hectares of which 84% is found in the Southern region and 11% in the Central region. The Thai Rubber Association (2008) has presented slightly different figures. In 2006 this organization estimated a rubber area of 2.29 million hectares according to the following geographical distribution: 76% in the south; 11% in the northeast (Isan); 11.5% in Central Thailand; and 1.5% in the north. More than 1 million households are involved in rubber planting. The development of newer hybrid clones as planting material has allowed for the expansion of rubber into the drier and cooler areas of northeast and northern Thailand in recent years. Data from FAO (2009:41) shows an 8 per cent expansion in the area of rubber planted in Thailand between 1995 and 2005.

Based on an average rotation of 25 years, with a resource base estimated at 2.1 million hectares, the long-term wood supply generated by rubber plantations in Thailand could average approximately 21 million m³ per year, assuming an average standing volume of 250 m³ per hectare. Actual harvesting rates appear to be significantly lower, with some estimates as low as 4 million m³ per year. Actual supply likely diverges from the planned sup-

¹⁶ This figure of 4.9 million hectares should be seen as open to dispute, given the poor state of Thai forest and plantation inventories.

¹⁷ The definition of "smallholder" is specific to different national contexts, and can range for example from less than 1 hectare (India) to 200 hectares (Austria). In the Thai pulpwood sector, Boulay (2009) uses 16 hectares as a cut-off for defining smallholder plots.

ply due to high rubber prices which causes farmers to delay replanting. Thus, high rubber prices can have serious consequences for rubberwood supply to Thailand's sawmilling and panel industries.

Along with Thai Bank for Agricultural and Agricultural Cooperatives (BAAC), the Office of Rubber Replanting Aid Fund (ORRAF) subsidizes the cost of rubber plantings, which is viewed as necessary to keep farmers from switching crops as has been the problem for other programs.¹⁸

5.2.4 Area and Standing Volumes of Eucalyptus and Other Pulpwood Plantations

Thailand's pulp and paper industry, a dominant aspect of the country's wood sector, relies exclusively on industrial tree plantation wood. There are two major company groups involved in eucalypt plantations production in Thailand: the Kaset Rungruent Perchopol Group (linked to Advance Agro Company), and the Siam Cement Group (Boulay 2009:58).

Estimates of the area of eucalyptus plantations range between 480,000 to 600,000 hectares.¹⁹ Smallholder farmers account for between 80-90% of this total pulpwood production zone (RISI 2008). Higher farmgate and factory gate prices for logs by Thai pulp and paper firms since 2006 have made eucalyptus planting a more attractive prospect for smallholders and contract farmers. Contract farming has become an important arrangement for smallholders for eucalyptus. The major Thai pulp firms are estimated to have more than 200,000 hectares under this type of contract according to the following breakdown: Advance Agro, 80,000 hectares; Phoenix Pulp and Paper, 108,000 hectares; and Siam Forestry, 44,800 hectares.

There is no evidence of natural forest wood entering into the Thai woodchip or pulp manufacturing supply chains (Barney 2005) and there does not appear to be any current major conflicts with plantations replacing natural forests in Thailand, as occurred in the mid- to late-1980s. To date, the Thai pulp companies or woodchip exporters have not directly invested in plantation concession projects in neighbouring countries (Laos, Cambodia and Myanmar) that could directly link these firms to illegal natural forest logging. However both Advance Agro and Phoenix Pulp — now owned by Siam Cement Group (SCG) — do have collection units for purchasing pulpwood logs in Laos.

5.2.5 Area and Standing Volumes of Teak

Since 1993 teak plantations have been increasing in Thailand, largely due to state subsidies to private planters. The Re-Afforestation Act of 1992 introduces some obstacles to private sector investment however; and once amended private sector planting is expected to increase (FAO 2009:47).²⁰

The FIO remains the most important state agency involved in teak plantation establishment. Up to 2000, 836,000 hectares of teak plantations was reportedly established by both private and public sectors (FAO 2001 cited in FAO 2009:46).²¹ The FIO maintains a teak plantation base of some 80,000 hectares. The long-term yield

¹⁸ According to FAO, ORRAF has started to even include non-rubber crops for the subsidy, such as teak and dipterocarp species.

¹⁹ Barney (2005) found a consensus for the area of eucalypt plantations of approximately 480,000 hectares. A 2007 estimate by a major Thai firm estimated a pulpwood production area of 600,000 hectares, including 50,000 hectares of new plantings in 2007.

²⁰ Mahannop (2002) cited a number of disabling policies. The Re-Afforestation Act and associated regulations was noted as difficult to implement and did not cover all tree species. Second, there were restrictions on the establishment of wood-based industries in the outer provinces (as opposed to the 10 central provinces where these restrictions do not exist). Lastly, the renting of Reserve Forest was noted as onerous and restricted to 50 rai per investor; and some species remain on a restricted export list.

²¹ This figure of 836,000 hectares of teak is open to dispute, given the poor state of Thai forest and plantation inventories.

potential of existing teak plantations in Thailand is estimated to be about 0.9 - 1.0 million m³/year, from both private and FIO-managed plantations.

The Thai wood industry still prefers Myanmar teak, as Thai plantation teak is of lower quality and possibly less in demand by the global wood product market.²²

5.2.6 Overview of Plantation Promotion Programs in Thailand

A primary obstacle to timber plantation development in the country has been smallholder farmer constraints. Poor, indebted farmers need faster financial returns than timber tree species can provide, and so they often are more interested in agricultural crops or short rotation tree species. For slower-growing timber species, only more wealthy and large-scale farmers can afford to wait until returns develop on mature trees.

In order to overcome these obstacles, both the private and public sectors (e.g., RFD and FIO) have been involved in timber plantation promotional schemes. Although teak is the highest-demand timber species, especially for the furniture and boat industries, its long maturity duration dampen its planting extent. Teak plantations are often established in agroforestry systems and limited to commercial plantations, especially by the FIO. Since 1992, numerous plantation development programs have been promoted by the RFD and FIO under the Private Reforestation Division. Nearly all of them did not have adequate monitoring programs to be able to assess success rates. In many cases, farmers did not maintain the tree plantations after their subsidies ceased since the farmers needed supplemental income until trees could be harvested.

Some analysts argue that such plantation programs can actually inhibit further development of the domestic plantation industry in Thailand, as they can result in problems of local oversupply and resultant price declines (Barney 2005:12; Mahannop 2002). The overall plantation promotional policy environment in Thailand is also restrictive on a number of issues. For example, a complex permissions process for harvesting some species of planted trees (Barney 2005:12) tends to act as a disincentive for smallholder commercial tree farming.

²² See also FAO 2009:45.

6. THAI FOREST PRODUCTS MANUFACTURING INDUSTRY

6.1 Overview

The FAO estimates that two thirds of the 2,500 wood-based industries operating in Thailand are furniture producers (FAO 2009:61-62). These manufacturers employ upwards of 260,000 people (11% of total manufacturing), and paid out approximately US\$560 million in wages and salaries. In addition, FAO estimates that there were 3,000 timber traders, 242 smaller scale sawmills, over 5,000 smaller scale woodworking operations, 22 particle board mills, 4 hardboard mills, 7 medium-density fiberboard mills in 2004. Assuming these figures have stayed roughly stable since 2004, plantations and wood processing can thus be considered as a strategic sector for the Thai economy.

With increasing liberalization and decentralization trends in Thailand, the private sector plays a larger role in the wood sector, furthering the gap between the public and private wood sector in terms of economic versus conservation goals. These divisions are in part represented by the split between old conservation laws governing the RFD and more recent regulations for the private wood sector, such as with customs and certification schemes.

The private sector procures wood from several sources. For domestic plantation wood, companies can purchase directly from smallholder tree farmers (as part of the RFD-sponsored programs), or directly from FIO (e.g. teak). For natural wood of higher quality necessary for export trade, Thai companies import wood from other countries.

Due to the more restrictive trading environment in Thailand compared to other countries in the region, Thai wood companies are voicing increasing concerns, and even relocating to other countries such as China and Malaysia, to secure cheaper raw materials and labor for export-oriented manufacturing.

All exported wood from Thailand must be value-added. No logs of natural trees of conservation value can be legally exported. The one exception is that the FIO can legally export logs, usually teak (often, but not exclusively, from plantations). Technically, the Minister of the Ministry of Commerce can give an exception to this law and allow another agency other than FIO to export logs. So far, however, this has not yet occurred. Non-natural/plantation tree species of no conservation value, such as rubber and eucalyptus, can be exported in log form, however.

6.2 Woodchips and Pulp and Paper Manufacturing

The largest segment of the wood processing industry in Thailand in terms of volume is clearly pulp and paper, followed by sawmilling and particleboard. The pulp and paper sector consumes almost all of the annual eucalyptus woodchip production in Thailand, with some volumes exported as woodchips. Overall pulp manufacturing in Thailand is currently about 1.25 million metric tonnes per year (RISI 2008). However, some of these companies (such as Panjapol Pulp Industry) rely predominantly upon access to recycled sources. The lack of capacity expansion in the Thai pulp sector has facilitated modest increases in woodchip exports in recent years.

Table 2: Major Pulp Producers in Thailand

Pulp and Paper Company	Location	Capacity in 2006 (tonnes)	Company Contracting Tree Farmers
Advance Agro	Prachinburi Province	515,000	Advance Agro
Phoenix Pulp and Paper	Khon Kaen	235,000	Phoenix Pulp and Paper
Panjapol Pulp Industry	Ayutthaya	110,000	-
SCG Paper ^a	Ratchaburi	100,000	Siam Forestry
Siam Cellulose	Kanchanaburi	86,000	Siam Forestry
Environment Pulp and Paper ^b	Nakhonsawan	100,000	-
Total		1,146,000	

^a Former Siam Pulp and Paper

^b Started up in October 2004

Sources: Modified from Boulay 2009; FAO 2008; and PRNewswire 2008.

Table 3: Major Thai Woodchip Producers

Thailand has six major plantation hardwood woodchip producers, some of which operate independently of pulp mills, with at least four of these targeting the export market.

Company	Location	Woodchip Production Capacity (BDMT/year)
Soon Hua Seng	Bangpakong Mill	200,000
Siam Tree Development (JV with Japanese Itochu Corp.)	Chonburi Province	200,000
Thai Wittawat	Surin Province	40,000-50,000
Kittawee	Surin Province	40,000-50,000 (mostly selling to domestic mills)
Thai Martin	Prachuab Kiri Khan Province	145,000 (mostly selling to Siam Pulp)
Siam Cement Group	Various provinces	N.A., but includes exports

Sources: Barney 2005; RISI 2008; and Jones 2010.

6.3 Wooden Furniture

Thailand's sawmilling industry has sharply changed since the logging ban due to great restraints on procuring hardwoods, such as teak. Thai plantation teak is often considered inferior in quality and size, and may have more difficulty being sold on the export market. The government is said to be very concerned about the country's wood furniture industry, given the declining availability of Myanmar teak. Most of the teak and mixed hardwood mills have been closed down as a result, with most mills (mostly owned by furniture companies themselves) now fitted for rubberwood. Since the Thai rubber sector is now oriented more towards maximizing latex production, not timber supply, this also represents a potential source of supply risk for the furniture industries.

Thailand's wooden furniture industry can be divided into solid rubberwood furniture (60%), hardwood furniture (10%) and furniture made of wood panels such as particleboard, MDF and plywood; and 90% of this latter category of products is also made of rubberwood. (FAO 2009:66). The traditional wood carving and hand-made furniture industry for domestic consumption and export (mainly EU) remains an important sector. This industry has suffered since the lack of availability of natural Thai teak, but continues to sustain itself through importing Myanmar teak, mostly overland.

Despite the high percentage of rubberwood furniture exported from Thailand, there is a substantial amount of furniture products (especially outdoor garden furniture) that uses tropical hardwoods, mainly Myanmar teak. In addition, other regional tropical hardwoods, such as high-value rosewood, are often used as veneer in composite products.

There are about 1,700 wooden furniture factories, of which about 10 to 15 are large-scale enterprises that specialize in regular export trade with foreign buyers, mainly US, EU and Japanese consumers (FAO 2009:66).

6.4 Wood-Based Panels

FAO (2009:63) estimates that there are about ten veneer and plywood mills in operation in Thailand, including the state-owned Thai Plywood Co. (a subsidiary of the FIO), with almost all of these operations relying upon rubberwood. The following firms are included within the major producers of particleboard and MDF in Thailand.

Table 4: Major Thai Panel Producers

Company	Location (Province)	Consumption Capacity (estimated, green tonnes)
Fibreboard Laemkao	Chachoengsao	528,000
Metro Fibre	Kanchanaburi	80,000
Vanachai	Chonburi	80,000
Thai Cane Board	Kanchanaburi	60,000
Total		748,000

Source: Barney 2005; RISI 2008.

6.5 Construction and Housing

The country's building construction sector also relies on both domestic and imported sawnwood. Most of the imported sawnwood feeds the country's building and construction sector. About 75% of Thai plywood production is used in building construction (FAO 2009).

7. CERTIFICATION AND VERIFICATION SYSTEMS

To date, the Royal Thai Government has been slow to institute programs to respond to the demand for certified wood products from major export markets. Many different government agencies are engaging on forest legality issues, and not necessarily in concert with one another, which could partially explain this lack of response. As a result, the private sector has begun to initiate innovative schemes as well as push public state agencies and business associations to take the lead on certification and verification schemes, leading to many different parallel agencies offering various wood certification programs.

Thailand currently has several existing systems of documentation that could be used as a foundation for the development of an internationally accepted timber legality assurance system. These include domestic government documentation systems, as well as a few instances of external certification / verification schemes such as Forest Stewardship Council (FSC). While these may form the foundation for a wood management system in place, there is no system to certify imported wood sources used by Thai industry.

The predominance of smallholder tree plantations in Thailand (mostly rubber and eucalyptus for the pulp and paper industry, but also for the rubberwood furniture sector) adds complexity to any national certification and verification system. One RFD official commented that big international certification schemes, such as FSC, etc., would undermine Thailand's small to medium wood companies as well as robust smallholder plantation schemes. While this may be an overstatement (FSC promotes group smallholder certification systems, as are being developed with teak plantations in Laos), there are additional challenges in ensuring the ability of smallholder tree farmers to compete in the market regulated by new legality systems. Community forestry, if firmly established and promoted, also presents new opportunities and challenges to fit into any verification and certification schemes.

7.1 Thai Government Documentation Systems

Several existing systems of documentation required by the RFD and Customs to get wood to the factory (either procured domestically or imported) could serve as *de facto* systems for chain of custody (COC), according to RFD officials.

FIO Plantations: The FIO manages just under 132,800 hectares spread across 124 forest management sites in Thailand. By species breakdown, the areas are dominated by teak (86,500 ha.), eucalyptus (19,150 ha.), and rubber (5,150 ha.). The FIO administers a national certification program for their tree plantations in Thailand (albeit not for private plantations), covering three tree species: teak (in the north), eucalyptus (northeast, or Isan) and rubber (in the south). The FIO has certified 149 locations, with a further 5 plantations to be certified by the end of 2010. The certified FIO plantations undergo an annual audit by a committee composed of the FIO, RFD and two Thai universities.

The only two companies that FIO sells to directly are the Sun Wood Company and the Sun Thai Company. After the setback of losing FSC certification for two of their forest management units in 2003, the FIO has gained FSC status for 4 forest other management units located in the north of the country (Lampang and Phrae provinces), covering over 11,000 hectares. FIO also exports plantation wood (and on more rare occasion natural forest wood), but this is most often teak logs to India for their domestic market, who do not require any certification documents.

In addition to the FIO certification program, and the RFD COO (Chain of Custody) system, there is an additional verification scheme being implemented by the Thailand Industrial Standards Institute (TISI), under the Ministry of Industry. These institutions have begun to work with large Thai wood companies to certify their wood products through ISO 14001. Both private and public sector can apply for this certification. Although this pilot pro-

ject began in 2001, no certifications have been awarded to companies; interest and momentum behind the TISI scheme appears to have stalled.

Non-FIO plantations: The RFD administers number 13 and 15 *Sor Por* documents (the former for cutting plantation trees, the latter for listing cut logs from plantations) for plantation teak and Dipterocarp wood. This entails registering the tree plantation with the RFD, with the owners themselves recording data, and informing the district RFD official when trees are cut. The system appears to have difficulty when natural teak and Dipterocarp species are mixed with plantation counterparts; while there appear to be many cases of such mixing, the volumes are relatively small.

Smallholder plantations: The Number 13 and 15 *Sor Por* documents, however, are not a specific COC or certification system for farmers' tree plantations. This is largely due to the fact that farmers' plantation trees are destined for the domestic market, not for the international market. There are no sustainable forest management (SFM) plans yet for smallholder plantations, although Thailand is currently ready to begin pilot projects under the ITTO's Criteria and Indicators (C&I) program. RFD officials appear interested in certification schemes for smallholder plantations, but express doubts about the cost effectiveness for small plantations.

In addition to the documentation systems listed above, the RFD has been developing a new paperless timber tracking system, in-line with ASEAN requirements and the Pan-ASEAN Timber Certification Initiative (see section 7.2.3 below).

7.2 External Certification Schemes

In late 2010, wood companies with good connections to the export market began to become more aware of their exposure to FLEGT Voluntary Partnership Agreements (VPAs), the US Lacey Act and the EU Timber Regulation. Many of the companies interviewed for this report in July 2010 asserted that due diligence systems have already been built into the Thai system for legal wood, so they do not believe that compliance will be a significant issue. A few large Thai furniture companies confided that they believe their good government connections will also ease any potential hurdles with due diligence issues. But others have become concerned about their exports to the EU and the United States and are playing a strong role in encouraging active industry and government to better understand the potential risks to exports and respond accordingly. Many believe that systems such as FSC will be economically unfeasible, and that the first FSC private teak plantation in Thailand was only possible due to RFD support. A few companies have already diversified their wood procurement portfolio away from an earlier focus on Myanmar teak products, or are focusing on new technologies to heat-treat hardwoods to have characteristics more similar to teak.

7.2.1 FSC Certification

The state-owned FIO secured FSC plantation management certificates for two sites in 2001 (Thong Pha Phum in Kanchanaburi province and Khao Kra Yang in Phitsanloulk province) but both were suspended in late 2003 by the independent auditor, Smartwood, due to the failure of the FIO to respond to a number of Corrective Action Requests.²³ FSC accreditation has not been re-issued to these forest management units since that time. In 2008, the FIO gained FSC certification for four other teak producing forest management units (Thung Kwian, Mae Mye, Wang Chin, and Khun Mae Kammee teak plantations, located in Lampang and Phrae provinces), totalling

²³ The Smartwood CAR's related primarily to requirements to improve the COC system for tracking certified logs, and a requirement to meet the Thai minimum wage standards for FIO employees. In a detailed study the World Rainforest Movement (2003) also identified numerous other problems with the certification process in Thailand. WRM stated in a press release that "...the [Thai FSC plantation certification] process is characterized by inadequate information, participation, consultation, transparency and basic social, political, cultural, economic and environmental research."

over 11,000 hectares (Smartwood 2008). This research did not discover how the certified FIO teak is being sold, or whether the certified chain of custody for these logs is being maintained. Recently, Siam Forestry (subsidiary of Siam Cement Group, or SCG) has organized group FSC certification for a number of their contracted pulpwood farmers.

By 2011, there were 35 Thai wood processing companies holding FSC Chain of Custody certificates. Interviews with FIO staff reveal their concern with the costs of FSC certification, with statements that FSC certification costs 1 million Thai Baht (US\$33,000) per plantation compared to 50,000 Thai Baht (US\$ 1,700) per year for an FIO-owned plantation certification. The cost difference is partially explained by using a Thai auditor for FIO certification scheme, whereas FSC uses an international auditor in combination with a Thai auditor.

There is the potential for developing FSC certification of community forestry areas in Thailand (e.g. Markopoulos 2003), which could involve certified local timber or non-timber production, as a means for promoting local livelihoods. FSC certification also holds some potential for leveraging the languishing community forestry process as a whole, through boosting the economic incentives in support of economic communal forest production. However, certification could also bring fast-growing commercial plantations into community forestry, a move that many of the community-oriented Thai NGO's and academics oppose on ecological and socio-economic grounds.

7.2.2 ITTO Project

Thailand has also submitted a proposal to ITTO in May 2009 for the sustainable forest management (SFM) and criteria and indicators (C&I) process, although they are still waiting for clearance. The RFD will start with pilot projects before scaling up to the national level, which will include plantations that are both private and public (FIO) operated, as well as for community forests (pending national legislation). This will also include documents for COC.

7.2.3 Pan ASEAN Timber Certification Initiative

The Thai government is also, along with other ASEAN countries, participating in the Pan-ASEAN Timber Certification Initiative, which aims to further collaborate on timber certification at regional and international levels to achieve sustainable forest management (SFM) by adopting a phased-approach timber certification scheme using internationally recognized criteria and indicators for SFM.

7.2.4 Ensuring Smallholder Participation in Certification Schemes

Smallholder plantation managers have rarely been able to participate in either private or public certification schemes, and may pose the most significant challenge to establishing timber legality assurance systems in the country. However, TISI currently offers a pilot project on "group certification" for smallholding plantations. In addition, the FSC offers group certification programs for smallholder forest producers. In Thailand, Siam Forestry (subsidiary of Siam Cement Group, or SCG) has organized group FSC certification for a number of their contracted pulpwood farmers.

7.3 Rules and Regulations for the Wood Industry

The RFD's Division of Permission plays an important role in the country's wood import and export industry. Companies must follow systematic procedures to obtain a wood export certificate, for example. Only the FIO, however, can get permission to export logs and sawnwood from Thailand.

The current legal wood system operating in Thailand requires the wood industry to follow the following specific steps:

- The origin of wood materials must be documented (e.g., certificate of origin, documents from FIO for domestic plantation wood);
- Clear documentation at customs for import/export (through RFD cooperation);
- RFD annual permits to operate lumber processing and wood furniture factories;
- Heavy regulation and monitoring of transportation of wood within Thailand, relying upon a transportation pass with wood volumes listed by species to show at highway checkpoints; and
- Factories recording and reporting wood manufacturing, among many other regulations.

“National Single Window” is a very new system ready for implementation that enables an online, one-stop service for all of the steps for wood import/export business. The National Single Window system is based on the system of COC Guidelines, following the Pan-ASEAN Timber Certification Initiative. The system will track the entire process of manufacturing the wood product, from the origin of the wood material purchased to selling of the product, whether for export or domestic consumption. It could also support Timber Legality Assurance System (TLAS) in the near future.

7.3.1 Issues Related to Cross-Border, “Overland Trade” and Chain of Custody

Overland timber trade, especially with Myanmar, is of continuing concern to Thai authorities, although less so since the late 1990s when it was much more of a common problem. As a way to minimize the risk of the possibility of illegally cutting wood in Thailand, sending it across the border, and then back again branded as originating in the neighbouring country (mirroring the “Salween Scandal”), Thailand has banned the import of logs or sawnwood overland. However, with parliamentary approval it can be possible to legally import logs across the border. Thai law also permits logs to float down the Mekong River for transportation, offering an alternative legal route for timber traders to transport logs from Laos to Thailand. This trade is happening along Chiang Saen border town in Thailand.

Furthermore, there are separate “Committees” (or border business associations) at border towns (Tak, Mae Hong Son, Rayong, and Sangklaburi) where Myanmar wood products are imported overland. The committees are composed of customs, RFD, and commerce department officials, and they facilitate business connections for cross border trade. These border committees now face some problems with some well-connected Thai businessmen who sometime facilitate the forgery of certificate of origin documents for Myanmar wood products when an official COO document cannot be produced. While the extent of this has not been systematically examined, COO forgery is sometimes needed because the timber is often cut by ethnic political resistance groups within Myanmar, and is not officially sanctioned by the Myanmar government.

Occasionally an outright cross-border trade ban has been implemented by either Thai or Myanmar border authorities due to political conflict in the vicinity of the official checkpoint. These temporary actions, which usually only last a few days or weeks, cut off cross-border wood imports. For example, in June 2006 at the Three Pagodas pass along the Thai-Myanmar border Myanmar authorities banned any cross-border timber flows with Thailand due to insurgent fighting in the area (Sai Silp 2006).

8. STAKEHOLDER ANALYSIS

8.1 Government

Ministry of Natural Resources and the Environment (MNRE)

Royal Forestry Department (RFD) is responsible for forest areas outside of protected areas, as well as promoting community forestry and private sector plantations. Since the establishment of the MNRE, RFD staffing has been limited in its key functions and relegated mainly to the provincial level. There is often confusion and overlap between the functions and tasks of RFD and the Department of National Parks, and according to ITTO (2006: 86) there exists a “lack of clear vision among public sector administrators of what the [RFD’s] mission is and what its functions and resources should be.”

Divisions of particular relevance for forest governance include:

Private Reforestation Division promotes private plantation investment by providing financial incentives to smallholders to establish tree plantations (reforestation and plantation establishment), targeting rural villages as a poverty alleviation measure;

Division of Forest Protection and Fire Control is responsible for illegal logging issues, along with the Division of Forest Law

Division of Forest Law is in charge of detailing national laws as they pertain to forest management in the country.

Community Forestry Division is responsible for the drafting and implementation of community forestry bills and programs. It supports local communities to manage their forests to some degree, but has been limited to pilot projects in the past. The Community Forest Division of the RFD supports local communities to manage their forests to some degree, although for now it only includes pilot projects until the Community Forestry Act is finally passed.

Permission Division: is responsible for regulating and monitoring the country’s systematic procedures in the country’s wood import and export industry, including methods to obtain a wood export certificate.

National Parks, Wildlife and Plan Conservation Department (DNP) is responsible for protected areas in Thailand.

Forest Industry Organization (FIO) is also an arm of the MNRE, but distinct from the Royal Forest Department.²⁴ It often acts as the business arm of the RFD, however. The FIO is a state-owned forestry enterprise, founded in 1947, involved in a wide array of forest activities, including plantation and resource management, industrial wood processing and marketing, tourism, conservation and social development. The FIO is involved in the selling of confiscated wood, reforestation, teak plantation development and management, and log exports. The FIO is the only agency in Thailand that can legally export wood logs, including teak (notably not allowed by the private sector); however, the FIO log export volumes are minimal. Prior to the logging ban, the FIO also managed logging concessions.

FIO receives governmental funds to operate special plantation projects, and must raise the revenues for all other operations. The FIO in general focuses more on rubber and eucalyptus plantations rather than teak in

²⁴ Although the RFD Director General sits on the FIO Board.

order to get quicker returns. In the past, the FIO has been suspected in corruption with logging and plantation projects. The institution also carries a high debt load, which constrains its ability to effectively expand or add value to its operations.

FIO supplies plantation teak to small and medium-sized furniture industries, which are concentrated in Phrae Province, and some of these industries are export-oriented (ITTO 2006:91). The FIO also runs the Thai Plywood Company, as well as an MDF mill.

Up to 20% of the FIO lands are occupied by local farmers who use the land for agricultural production. As a result there is a history of tensions between the FIO and local communities (ITTO 2006:91). In addition, some FIO plantations established in the 1960s, 70s and 80s were founded upon the eviction of existing farmers (see e.g. Barney 2001), and in some cases these disputes have continued to the present (Ekachai 2009; Prachatai 2009; Isaan Record 2011). One measure that the FIO has recently taken to mitigate these local land use issues is through the “Forest Plantation for Community” initiative. Villagers are able to form a group and make a request to the FIO to farm part of the plantation area pending FIO approval. Another FIO project, “Fund for Developing Forest Plantation”, gives 100,000 Thai Baht to the community for livelihood development.

Department of Marine and Coastal Resources (DMC) is the responsible state authority for mangroves and coastal forests.

Office of Natural Resources and Environment Policy and Planning develops natural resource and conservation management plans and policies.

Pollution Control Department regulates, supervises, directs, coordinates, monitors and evaluates rehabilitation, protection and conservation of environment quality

Department of Environment Quality Promotion carries out research, development training, and public awareness programs, and promotes the development of environment technology in natural resources management.

Ministry of Agriculture and Cooperatives (MOAC)

The management of Thailand’s rubber plantation sector and the production of latex rubber falls under the MOAC, whereas the conversion of rubberwood logs into value-added wood products is under the coordination of the RFD. The MOAC includes the following relevant agencies:

Department of Land Development Department (including forest land use planning)

Department of Agricultural Extension promotes the uptake of new agricultural and plantation sector technologies and knowledge by Thailand’s small-scale producers.

Rubber Research Institute is mainly involved in rubber latex productivity enhancement.

Agricultural Land Reform Office is responsible for the de-classification of state forest lands and redistribution to farmers.

Office of Agricultural Economics produces statistics and undertakes research on Thai agricultural issues including in the rubber sector and the non-forest plantation sector.

Office of the Rubber Replanting Aid Fund (ORRAF) is involved in the promotion, financing and control of the development of rubber plantations. ORRAF provides rubber plantation technology to farmers and subsidizes the cost of replanting rubber. Recently, other crops (including teak, dipterocarps and oil palm) have been included in the support program (FAO 2009:44). ORRAF is aware of the importance of wood revenue for farmers, but this is seen as a complementary element in the replanting phase. There is little coordination with Thailand's rubberwood processing industry although information on plantation areas has been made available to the wood industry.

Ministry of Interior

The policy of the Royal Thai Government is to promote decentralization²⁵ by strengthening lines of representation and downward accountability from provincial governors to districts (*amphoe*), sub-districts (*tambon*) and villages (*baan*). Many levels of decentralised state administration fall under the authority of the Ministry of Interior. For example, the Ministry of Interior's Local Administration Department includes the office of the Governor of the different provinces, who is responsible for the actions of provincial and district RFD forest officers. There is also a Forest Policy Unit of the Police Department who assists in forest protection and patrolling for illegal forest activities. Historically, there has been much bureaucratic competition between natural resource agencies such as the RFD and the Ministry of the Interior (Vandergeest and Peluso 1995).

The following levels of state administration which fall under the authority of the Ministry of the Interior are also relevant for the forest-land sector:

Department of Special Investigation – has the jurisdiction and has investigated illegal timber smuggling operations, sometimes in cooperation with National Anti-Corruption Commission that probes smuggling cases.

Provincial Administrative Organizations (PAO): There are 75 provinces in Thailand, each with a PAO that includes representatives from the MONRE and provincial representatives of the RFD.

District Authorities (Amphoe)²⁶: Along with the Provincial Forestry Offices, District Offices should be involved in approving local forest management plans. According to ITTO (2006:112) there has been little guidance on these matters, however. In terms of environmental governance, key local representatives of the Ministry of the Interior, such as the Provincial Governors or the District Heads (*nai Amphoe*), are often the key actors who adjudicate conflicts over natural resources (Garden et al. 2011:151).

Sub-District Authorities (Tambon Administrative Organization, TAO)²⁷: The TAO Council is the lowest level of the local government administrative structure. It is made up of the tambon chief (*kamnan*), the village headmen from each village in the tambon and the tambon health officer, and two elected members from each village in the tambon (ITTO 2006:89). There are more than 7,000 sub-districts in Thailand, and the capacities and resources available to different TAOs vary significantly. The sub-district heads (*kamnan*) and the village leaders (*phu yai ban*) are the key "local officials" that play key roles in natural resource management issues (Garden et al. 2011).

²⁵ Recent moves towards local decentralisation have at times been resisted by powerful state bureaucracies, and the decentralisation process in Thailand can be best described as an incomplete and ongoing process. Nevertheless the powerful National Decentralization Committee continues to push reforms forward, and Garden et al (2011:156) state that while decentralization has not been a panacea for more effective and accountable governance in Thailand, the empowered sub-district administrative councils (TAOs) have emerged as "a viable form of local government and an arena for relevant politics."

²⁶ There are 876 districts in Thailand, about 10 per province.

²⁷ Approximately ten tambons comprise an amphoe.

Elected Tambon Councils hold legal authority to develop and implement plans for the management and conservation of all natural resources within their administrative territories. For example, small-scale forest-lands are allocated to the local TAOs for reforestation and planting of trees (mostly teak and eucalyptus) (FAO 2009:30). TAOs include both legislative and executive branches. FAO (2009:32) notes that there is generally little Tambon Council support for local people to market forest products or to establish community-based commercial forest product enterprises (e.g. through the 1 tambon/1 product program), even though promoting local entrepreneurship is in the interests of the TAO authorities. The issue may relate to a lack of knowledge of the sector within the tambon councils, and/or that TAOs have prioritized other more lucrative local development initiatives.

Village Authorities: Village political administration includes the village headman (*phu yai ban*), two assistant village headmen and the village committee. Garden et al. (2011) report that in 2005, two thirds of Thailand's 63 million citizens lived in villages. Ten to twenty villages usually comprise a *tambon*. Village-level institutions or small clusters of villages would be most directly involved in community forest management initiatives in Thailand.

Ministry of Industry

Along with the Ministry of Commerce, the Ministry of Industry helps to promote forest-based industries for both domestic markets and export. The Ministry of Industry works on standardisation for Thai industries, including forestry. For example, there is an Office of National Standard under the Ministry of Industry that has established a forest certification committee. The Director of the MNRE's FIO is also on the board of the Ministry of Industry's Forest Certification Committee.

Ministry of Commerce

Along with the Ministry of Commerce, the Ministry of Industry helps to promote forest-based industries for both domestic markets and export.

Customs Department is responsible for the legality of wood imports and export. Customs officials have the responsibility of checking the customs forms (filled out and available online) and collecting the appropriate tax fees for the imported and exported wood items. If any irregularities are encountered, the RFD and any other responsible agencies are contacted.

National Economic and Social Development Board (NESDB)

The NESDB prepares and promotes the National Economic and Social Development Plans on a five-year cycle, formulates the policies to implement the plans and assesses the progress of forest development programmes to ensure their consistency with the plan. The current NESDP runs from 2007-2012.

8.2 Forest Industry Players

Woodchip Purchasers

The following include the major purchases of eucalyptus woodchips as of 2000.

Table 5: Major Eucalyptus-Purchasing Companies and Their Demand as of 2000

Company	Location	Use	Demand (Eucalyptus Logs in GMT*/year)
Siam Tree Development (STD)	Phimai Buying Center, Nakhon Ratchasima	Buying Center (Chip Mill)	60,000
Siam Tree Development (STD)	Payuhakiri Buying Center, Nakhon Sawan	Buying Center (Chip Mill)	10,000
Siam Tree Development (STD)	Factory Chonburi	Chip Mill	450,000
Panjapon Paper	Ayutthaya	Pulp Mill	300,000
Siam Cellulose	Kanchanaburi	Pulp Mill	600,000
Thai Plywood Company	Saraburi	MDF/Particleboard	n/d
Metro Fiber	Kanchanaburi	MDF/Particleboard	60,000
Wanachai Group	Chonburi	MDF/Particleboard	30,000
Bangpakong Chip Mill (may be a part of Advance Agro Group)	Chachoengsao	Chip Mill	600,000
Agro Lines (may be Advance Agro Supplier)	Chachoengsao	MDF/Particleboard	50,000
Advance Agro	Prachinburi	Pulp Mill	2,200,000
Kittawee	Surin	Chip Mill	250,000
Thai Wittawat	Surin	Chip Mill	250,000
Phoenix Pulp and Paper	Khon Kaen	Pulp Mill	1,000,000
			5,860,000 GMT/Year

Source: Barney 2005.

* Note: GMT = Green Metric Tonnes.

Plantation Firms

Thai Hua Rubber Company is a major rubber manufacturer in Thailand which also holds a joint venture for a rubber plantation concession in Laos.

Advance Agro Group is owned by Soon Hua Seng group. Advance Agro is Thailand's most prominent consumers of eucalyptus plantations, mainly for the production of pulp. The company sources most of its wood under contract farming arrangements, but also has significant pulpwood areas under direct management.

Suan Kitti Company Limited, with acting director former senator Kitti Damnernchanvanit, is a plantation management arm of Soon Hua Seng/Advance Agro.

Siam Forestry Company is a subsidiary of Siam Pulp and Paper (Siam Cement Group), is mostly involved in pulpwood plantations in Kanchanaburi province.

Phoenix Pulp and Paper, a subsidiary of SCG, organizes smallholder pulpwood outgrower projects throughout northeast Thailand.

Pulp and Paper

The Thai pulp and paper sector is split into a small number of major players.

Siam Cement Group owns subsidiaries involved in the pulp and paper industry, notably the Siam Pulp and Paper Company. In 2005, 30% of the shares of SCG were held by Thailand's Crown Property Bureau (CPB), which represents the investment arm of the Thai monarchy (Phorphant 2008).

Siam Forestry is the forestry arm of Siam Pulp and Paper. In 2004, it directly owned 1,280 hectares of plantation land in Khampeng Phet province and 160 hectares in Kanchanaburi (Barney 2005).

Siam Pulp and Paper, a subsidiary of the Siam Cement Group (SCG), is the largest integrated pulp manufacturer in Thailand. Siam Pulp and Paper manages pulp and paper manufacturing mills in Kanchanaburi and Rachaburi provinces. In 2005 SCG purchased Phoenix Pulp and Paper, another major pulp producer based in Khon Kaen province. Siam Pulp and Paper products include kraft pulp, printing and writing paper, corrugated paper, packaging paper and corrugated containers. SCG is a member of the Sustainable Forest Products Industry (SFPI) of the World Business Council for Sustainable Development.

95 per cent of Siam Pulp and Paper's wood supply is secured from 30,000 contract farmers, 80 per cent of which are smallholders with farm sizes of less than 10 hectares (Jones 2010). Siam Forestry, the forestry arm of the company, directly owns 1,280 hectares of plantation land in Khampeng Phet province and 160 hectares in Kanchanaburi (Barney 2005). In September 2010, 1,325 hectares of plantations in central and Western Thailand managed by Siam Forestry were certified by SGS accreditors as meeting Forest Stewardship Council standards. This is a group certification of 29 group members (each managing under 100 hectares of forestland) under the FSC-SLIMF group certification system. SCG has recently begun exporting woodchips to China (Jones 2010).

Advance Agro: With a manufacturing base in Prachinburi province and a supply zone that extends throughout central, eastern and northeast Thailand and into Laos, Advance Agro is the largest pulp producer in Thailand, accounting for a 44% of national production. Average round log requirements are between 2-3 million m³ in the production of BHKP- bleached hardwood kraft pulp.

Sawmilling Industries

After a forced restructuring in the sawmilling sector after the 1989 logging ban, most of the rubberwood sawmillers are now owned by furniture companies. The Thai sawmilling sector can be characterized as labour intensive using low technology, and recovery rates from roundwood to sawnwood are low—between 20-35 per cent. In the rubberwood sector: "The processing system is targeted at maximizing the throughput rather than at high conversion rates, or even less at optimization of the potential log yield" (FAO 2009:62).

Wood-Based Panel Producers

Although dated, the following list provides names for a number of major wood-based panel manufacturers in Thailand as of 2002.

Table 6: Thai Particleboard Factories: Capacities and Raw Materials Used

Company	Annual Capacity (m ³)	Raw Material Used
Thai Chipboard (extruded PB)	6,900	Sawmill waste
Dorospan	45,000	Rubber wood
Particle Planner	123,000	Rubber wood
Thai Particle Products	93,000	Rubber wood
MP Particleboard	70,000	Bagasse
Daiichi Particle	60,000	Rubber wood
Sahachai Particleboard	45,000	Rubber wood
Thainumsaeng	60,000	Rubber wood
SS Furnitech	15,000	Rubber wood
Molar Wood Products	75,000	Rubber wood
STA Particle Products	195,000	Rubber wood
Rayong Particleboard	54,000	Rubber wood
Pangnga Particleboard	60,000	Rubber wood
S. Kitchai	30,000	Rubber wood
Vanachai Panel Industries	300,000	Rubber wood
Siam Riso Wood Products	84,000	Rubber wood
Asia Planner	100,000	Rubber wood
Total	1,364,900	

Source: Lamsaek 2002.

Table 7: Thai Medium-Density Fiberboard (MDF) Factories: Capacities and Raw Materials Used

Company	Annual Capacity (m ³)	Raw Material Used
Khon Kaen MDF	66,000	Bagasse
MDF Planner	217,800	Rubber wood
STA Group	115,500	Rubber wood
Metro MDF	113,900	Rubber wood
Metro Group	115,500	Rubber wood
Thai Plywood	99,000	Eucalyptus
AgroMats	113,900	Eucalyptus
Total	841,6000	

Source: Lamsaek 2002.

Table 8: Thai Hardboard Factories: Capacities and Raw Materials Used

Company	Annual Capacity (m ³)	Raw Material Used
Thai Plywood Company (under the Forest Industry Organization)	66,000	Eucalyptus and plywood waste
Thai Caneboard	50,000	Bagasse
Metro Fiber	27,000	Eucalyptus
Agro Lines	38,000	Eucalyptus
Total	181,000	

Source: Lamsaek 2002.

Wooden Furniture Sector

There are about 1,700 wooden furniture factories, of which about 10 to 15 are large-scale enterprises that specialize in regular export trade with foreign buyers, mainly US, EU, and Japanese consumers (FAO 2009:66). While too numerous to list, the following Table 9 lists a selection of companies that are known to work with hardwoods.

Table 9: Furniture Producers Working with Hardwoods (2007)

Company	Product Type
EAB HUAT SENG CO.,LTD.	Teak veneer and moulding
EAB HUAT SENG SAW-MILL LIMITED PARTNERSHIP	Teak plywood and veneer
NAKORN PHRAE PARQUET CO.,LTD.	Teak parquet, miniature furniture, teak finger jointed and laminated materials
PTK Wood Co, Ltd	Teak plywood
TCK Furniture Co Ltd	Furniture, doors, veneer, decking
CHIANGMAI TUSNAPORN CO.,LTD.	Rosewood and teak furniture, woodenware
DISPLAY TECH (THAILAND) CO.,LTD.	Sawnwood timber and logs, including teak
DOUBLE P INTERNATIONAL LTD., PART	Teak furniture
Kenkoon Co, Ltd	Teak outdoor furniture
THAI SOM BOON INDUSTRIAL CO.,LTD.	Marine woodworks, wooden shower columns, teak decking
National Furniture, Ltd	Teakwood, parquet
Peter & Son Furniture Co, Ltd	Rosewood and teak furniture
Pinkrajai Furniture Company, Ltd	Furniture
PRAYUENYONG WOOD FURNISH CO.,LTD.	Teak furniture, MDF and particleboard; rubberwood, wooden furniture
Raysons and Associates Co, Ltd	Teak furniture and wood carvings
Selectform Furniture & Son Co, Ltd	Rosewood and teakwood furniture
Siam Golden Teak Co, Ltd	Furniture and accessories
Siam Woodteach Co, Ltd	Solid teak doors
Sirian Inter Co, Ltd	Pradu, teak and makha wood parquet and flooring
Sumitra Woodwork Co, Ltd	Teak furniture
Sumitra Carving Ltd	Teak furniture
ARAMAND CO., LTD.	Teak dining sets, tables and cabinets
Thai Teak Wood Veneer Co, Ltd	Teak furniture
Thai Charoen Phon Industry Co, Ltd	Teak furniture
Thai Pavin Co, Ltd	Teak furniture
TPS Garden Furniture Co, Ltd	Garden furniture, wood flooring
Andaman Dreams Corp, Ltd	Furniture
Ardesia Co, Ltd	Teak bedroom sets, garden tables and chair sets
BBB Export 999 Ltd	Doors, windows and wooden furniture
B.P.S.MILCOM CO.,LTD.	Tables, benches, sofas and chairs
Bangkok Chareonmit Co, Ltd	Rosewood furniture, rubberwood furniture, teak furniture

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Ruang Utai Suratthani (1991) Co, Ltd	Finished products, sawn timber, particleboard
Golden (Thai) Teak Co, Ltd	Furniture
Selectform Furniture & Son Co, Ltd	Rosewood furniture, teakwood furniture
Sala-Tanum Co Ltd	Outdoor furniture (sala tanum), garden furniture
Vanacharoen Co Ltd	Furniture, rosewood furniture and dining sets
Sirian Inter Company Ltd	Pradu, teak and makha wood flooring and parquet
Sun Wood Industries Public Co, Ltd	Building materials, floor tiles, garden and indoor furniture
Tha Sao Sawmill, Ltd Part	Timber, furniture, wooden doors, building materials, wooden windows
Raysons and Associates Co Ltd	Teak furniture, wood carving, paintings
Union Forest Co Ltd	Rosewood tables and dining sets, rubberwood tables and dining sets
National Furniture, Ltd Part	Teakwood, wooden parquet
Prayuenyong Wood Furnish Co, Ltd	Furniture – teakwood, MDR and particle board, rubberwood, wooden furniture

Compiled by lead author, 2007.

8.3 Forest Industry Associations

There are about ten associations involved in promoting the Thai forestry sector, and these organizations are relatively advanced in comparison with neighbouring countries. These include:

- Thai Pulp and Paper Industry Association
- Thai Furniture Industries Association
- Thai Federation of Industries Wood Processing Group
- Wood-Import Export Association/Timber Merchants Association
- Tree Farmers Association
- Thai Sawmilling Industry Association
- Sawntimber Trade Association (rubberwood)
- Thai Economic Private Forest Plantation Promotion Association\
- Board of Industries of Thailand (have Furniture Department)
- Thai Parawood Association

The Pulp and Paper Association and the Furniture Association are considered the strongest. In addition, local farmers associations exist, but are less well organized and funded (ITTO 2006:104-105).

In addition, Thailand participates in the ASEAN Furniture Industry Council (AFIC) and the ASEAN Forest Product Industry Club (AFPIC). Thailand in fact holds the Chairman, Secretary General and Secretariat functions for the AFIC during the 2011-13 term.

8.4 Civil Society

Domestic NGOs

Thailand has a robust civil society with many NGOs active on a plethora of domestic and regional issues. While environmental, conservation, and indigenous rights issues, among other related topics, are eagerly worked on by Thai NGOs, the forestry sector has been largely ignored since the logging ban in 1989. In the past 10 years, domestic NGOs has largely focused on the long-drawn out development and passage of the Thai Community Forestry Bill, with a key contentious issue being the rights of communities to live within protected areas (see Box 1). Possibly as a result of this contentious process, Thai civil society appears splintered on forestry and resource management issues. Even in 2006, the ITTO noted that “from the Government’s perspective, the fragmentation of the NGO community makes dealing with them somewhat cumbersome. It would be beneficial if the dialogue on the rural people’s role in conservation strategies could be enhanced among the NGO community as the Government is getting mixed messages on how policies on forest-dependent people should be designed and implemented” (2006:xix).

Some Thai NGOs do work on wildlife trade, however, so there is already some interest in legality of resource trade. Forestry as related to legality and verification, sustainability, and certification is to some degree also being examined by a select number of international NGOs and funding agencies with regional offices based in Bangkok, such as IUCN, WWF, USAID, etc.

Several domestic NGOs are active in conservation and the national protected areas sector, including:

- Thailand Environmental Institute (TEI)
- Dhammanaat Foundation
- Foundation of Education for Life and Society
- Seub Nakhasathien Foundation
- Promotion of Human Resources for Community Development Foundation
- Village Foundation
- Serving for the People Association
- Forest Restoration Research Unit (FORRU)

In addition, there are Thai NGO groups involved in the forest-land sector more generally from a land reform perspective, including:

- Land Reform Network of Thailand
- Northeast (Isaan) Land Reform Network

International NGOs and Inter-Governmental Organizations

WWF Thailand is active in the areas of wildlife trade, deforestation, overfishing, pollution, and Mekong watershed management issues. WWF have a particular area of focus on mangrove forest conservation in Thailand.

IUCN Thailand has been closely involved in protected areas management in Thailand, communities and forest conservation, as well as on coastal management, biodiversity values and to some extent, sustainable timber trade flow regulation.

Development Partner Engagement in the Thai Forest Sector

FAO (Forestry division)

The FAO has a long history of provision of support for Thai industrial forestry, dating from the period after World War II. FAO support for Thai forestry was particularly strong in the 1950s-60s, and included technical assistance; new extraction and processing technology; subsidies and aid; assistance for forest surveys, reservation and zoning; and knowledge production around professional forestry (Vandergeest and Peluso 2006). The FAO Regional Office for Asia-Pacific (FAORAP) is based in Bangkok.

ADB

The ADB has had a limited direct role in funding Thai industrial forestry since circa 1990. The ADB supports various conservation initiatives relating to the Greater Mekong Subregion (GMS) infrastructure development project, for example the Western Forest Complex Conservation Corridor (<http://www.adb.org/projects/gms-biodiversity/western-forest.asp>).

World Bank

The World Bank was a major supporter of the (shelved) Thai Forestry Sector Master Plan process in the 1990s (as part of the Tropical Forestry Action Plan). Presently the World Bank supports participatory watershed management in Thailand.

The European Community has been involved in some projects of potential cross-relevance for FLEGT activities such as a project supporting a credible Chain-of-Custody certification for raw rattan, as well as the establishment of a link to the European market.

SIDA (Sweden has in the past supported the FIO's certification process by funding SCC Natura (formerly Swedforest International AB), a Swedish forestry consultant company, to develop a business management plan. SIDA has previously supported the restructuring of the Thai Forest Industry Organization.

FINNIDA aid has been important in the recent past in Thai forestry. FINNIDA has supported pulp and paper mill planning; pulp mill equipment exports; pulp mill feasibility studies; and national forestry planning in Thailand (e.g. Thai Forestry Sector Master Plan, in coordination with UNDP, via Jaakko Poyry Consulting).

NORDIC PRIVATE SECTOR ACTORS have been important players in the Thai pulp and paper technology sector, including Sunds Defibrator Industries AB (Sweden), Kvaerner Pulping AB (Norway), and Ahlstrom Company (Finland) (Sonnenfeld 1999).

ITTO: Thailand has been a member of ITTO since its founding in 1986. As an ITTO producer country, Thailand is eligible for information and technical cooperation to develop a sustainable tropical timber trade.

JICA: Through the 1990s, Japan supported tree nursery establishment for reforestation, and extension programs, including the Thai Reforestation and Extension Project (1993-1997, 1999-2004).

The Bangkok-based REGIONAL COMMUNITY FORESTRY TRAINING CENTRE FOR ASIA-PACIFIC (RECOFTC) has been a major promoter of community-based forest management, in Thailand and throughout the region. Financial Support for RECOFTC has previously been secured through Swiss SDC, the ADB, Ford Foundation, Denmark, Canadian CIDA, Swedish SIDA, and the FAO.

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ANNEX 1. CUSTOMS PROCEDURES (JULY 2010)

When a shipment arrives or leaves Thailand, importers or exporters are required to file a goods Declaration with supporting documents to the Customs for cargo clearance. To speed up and facilitate the flow and movement of legitimate cargo, the Customs Department provides two clearance systems: manual and Electronic Data Interchange (EDI).

1. Documentation

1.1 Legal Persons: A legal person involving in import/export related business is required to apply for appropriate types of smart cards that are categorized into:

- (1) Gold Card for importers and exporters;
- (2) Licensed Customs Broker Card (Silver);
- (3) Owner or Manager Card (Yellow);
- (4) Attorney-In-Fact Card (Green); and
- (5) Customs Clearance Card (Pink).

The Customs Department has authorized a private company to issue smart cards to importers/exporters and relevant parties. For further information about smart cards, contact the company at the Ground Floor, 120-Year Building, Customs Department, Tel. 0-22402773-6 and 0-22402779.

1.2 Natural Persons: A natural person is required to submit any of the following relevant identification cards (ID) to the Customs during the clearance procedures:

- (1) Identification Card (ID);
- (2) Government ID Card for government officials;
- (3) State Enterprise ID Card for state enterprise officials; and
- (4) Passport for non-Thai residents.

2. Import Clearance Procedures

2.1 File an Import Declaration: The first stage of import clearance procedure is to submit an import Declaration (Customs Form 99 or 99/1) manually or through the EDI system.

2.2 Prepare Supporting Documents: The second stage is to prepare the following supporting documents (as prescribed in the Customs Notification No. 38/2543):

- (1) Bill of Lading or Air Waybill;
- (2) 3 Duplicates of Invoice;
- (3) Packing List;
- (4) Insurance Premium Invoice;
- (5) Release Form (Customs Form 100/1 or 469);
- (6) Foreign Transaction Form if the import value exceeds Baht 500,000;
- (7) Import License (if applicable);
- (8) Certificates of Origin (if applicable); and
- (9) Other relevant documents such as catalogues, product specifications, etc.

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2.3 Check the Declaration and Supporting Documents: The third stage is to submit the Import Declaration and all supporting documents for examination by Customs at the port of entry (in case of EDI Red Line or manual system). The Customs officials will check whether the Declaration is properly made out, and the supporting documents required are attached. In addition, Customs tariff, tax and duty calculation, valuation of goods are also examined at this stage.

2.4 Collect Import Duties and Taxes: The fourth stage is payment of applicable taxes and/or depositing guarantee. There are currently four means for payment of import duties and taxes:

(1) Payment at the Customs Department: Importers make payment at the Cashier Division at the port of entry. The Customs then issue them a payment receipt to be used for cargo inspection and release at relevant warehouses. Payment could be made either in cash or check. In case of check payment, it must be:

- Check issued by the Bank of Thailand (BOT);
- Cashier check;
- Check with banks' surety bond; or
- Draft or bill of exchange.

(2) Electronic Fund Transfer via the BOT's BAHTNET: Importers have been allowed to instruct their commercial banks to transfer payment, through the BAHTNET system, to the Customs Department since January 1, 1998.

(3) Electronic Payment at Krung Thai Bank (Teller Payment System): The Customs Department and Krung Thai Bank have been interfaced since September 1, 2000. The importers who want to use this service are required to:

Complete a Duty Payment Form as attached to the Customs Notification No 77/2543 with one duplicate; Submit the Form with payment at any branch of Krung Thai Bank to the Customs Department's account, Customs Branch. The Bank then returns the duplicate with payment confirmation number back to importers. The bank fee for each transaction is Baht 30.

Fill in the payment confirmation number on the 1st page of the Import Declaration and submit such Declaration Form to Customs cashiers so as to get payment receipt used for cargo inspection and release.

(4) Electronic Fund Transfer (EFT) via EDI: Under this automated system, the electronic payment is made among tax/duty payers (importers/exporters), broker banks (the banks where importers/exporters have accounts), Customs Banks, and the Customs Department. The EFT process via EDI is as follows:

- A tax/duty payer electronically instructs his broker bank to transfer payment to the Customs bank;
- After receiving electronic payment authorization, the broker bank will assign a Transaction Number to the tax/duty payer for future reference and then transfer the payment to the Customs bank;
- When the full payment is received through EFT, the Customs bank electronically transmits payment information to the Customs Department referring to the same Transaction Number given to the tax/duty payer by the broker bank;
- At the same time, the tax/duty payer also electronically transmits its payment information to the Customs Department by referring to the given Transaction Number;
- The Customs EDI system examines the payment information received from the tax/duty payer against that received from the Customs bank and compared them to the Declaration made;

- If all information is error free, the Customs Department will forward electronic message to the tax/duty payer notifying him to collect the payment receipt used for cargo inspection and re-release.

2.5 Inspect and Release Cargo: The last stage is to inspect and finally release cargo from Customs custody. Importers submit the verified Declaration together with the payment receipt at appropriate warehouses. Customs inspectors then inspect the imported cargo against the Declaration made. If the cargo inspected corresponds to the Declaration made, the Customs inspectors will record the inspection result to the computer system and release cargo to importers.

Nevertheless, the process of cargo inspection under manual system is different from that under EDI system. As regard to manual cargo clearance, shipments are inspected on a random basis as specified by the Customs Department. EDI system, however, requires that the cargo under profile be examined as deemed appropriate regardless of the random rate specified by the Customs Department for manual system (Customs Notification No. 47/2543).

3. Export Clearance Procedures

3.1 File an Export Declaration: The first stage of export clearance procedures is to file an Export Declaration (Customs Form No. 101 or No. 101/1) as prescribed by the Customs manually or through the EDI system.

3.2 Prepare Supporting Documents; the second stage is to prepare the following supporting documents:

- Invoice;
- Packing List;
- Foreign Transaction Form if the FOB value exceeds Baht 500,000;
- Export License (if applicable); and
- Other relevant documents (if applicable).

3.3 Check the Declaration and Supporting Documents: The third stage is to submit the Declaration and all supporting documents for examination by Customs at the point of export (in case of EDI Red Line or manual system). The Customs officials will check whether the Declaration is properly made out, and the supporting documents required are attached.

3.4 Collect Export Duties and Taxes (if any): The fourth stage is to pay applicable taxes and duties.

3.5 Inspect and Release Cargo: The last stage is to inspect and finally release cargo from Customs custody. The exporters submit the verified Declaration together with the payment receipt (if any) at appropriate warehouses. Customs inspectors then inspect the exported cargo against the Declaration made. If the goods inspected correspond to the Declaration made, the Customs inspectors will record the inspection result to the computer and release the cargo. In case the exporters utilize the EDI green line process, they will electronically submit the Declaration as mentioned in 3.1 to the Customs Department. The Customs Department then reviews the electronic Declaration through its EDI system. If the Declaration is properly made out and classified as Green Line, the Customs Department will assign Declaration Number to the exporters who will directly proceed to warehouses for cargo inspection and release.

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