

Malaysia: Illegalities in Forest Clearance for Large-scale Commercial Plantations

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Introduction

Forest Trends has started a four-year program of research into the nature, scale and extent of illegalities and irregularities in the process of forest clearance for large-scale agricultural estates and ranch-lands in order to gauge the scale of the trade in commodities grown or reared on land illegally cleared of forests. As a first step, Forest Trends has commissioned individual country assessments for ten countries across Asia, Africa and Latin America. These studies intend to examine the current knowledge of the nature, scale and recent history of forest clearance for large-scale agriculture in each country. The studies aim to profile key companies, outline the legal and regulatory environment and summarize the available evidence of illegalities and irregularities.

For the Malaysian case study Forest Trends commissioned a local firm, Resource Stewardship Consultants Sdn Bhd (RESCU) to assess the extent of illegality in clearance of natural forests (including secondary and degraded forest, whether or not classified as 'forest' under national regulations) for large-scale commercial agricultural developments. This research focuses on large-scale commercial oil palm plantations, rubber plantations, timber plantations and pulpwood plantations but not small-scale subsistence agriculture.

The study reviews secondary sources, including published laws and regulations, government figures, company reports, NGO reports and newspaper reports. Additional information includes personal communication and correspondence with relevant persons, including government officials and NGO experts. No primary research was undertaken.

Status and History of Industrial Plantations in Malaysia

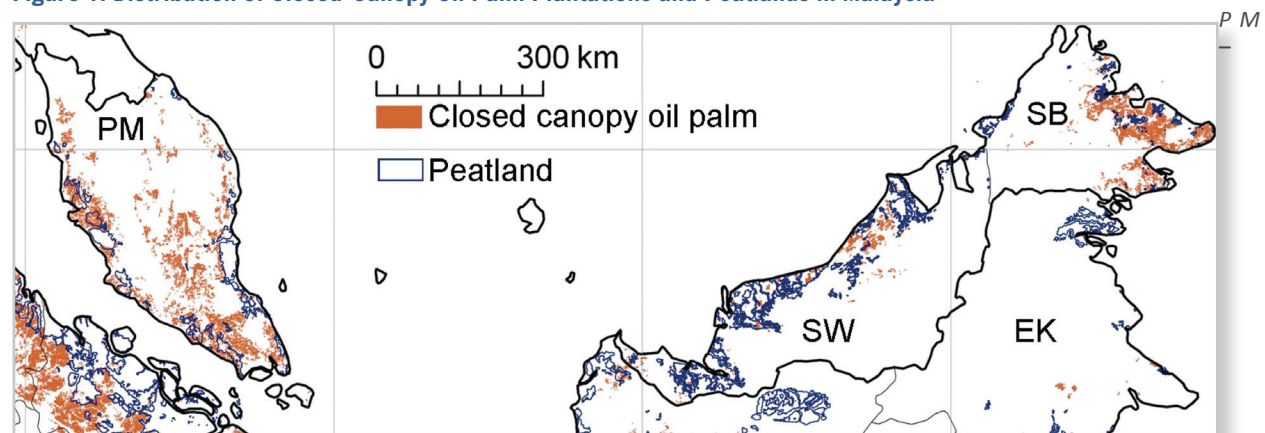
Overview

Malaysia is a federation of 13 states and three federal territories divided between the Malay Peninsula (on the southernmost tip of mainland Asia) and part of the Island of Borneo. Malaysia has an extensive forest resource including a range of dry inland forest, peat swamp forest and mangroves. As of 2009, official statistics give the total forest area as 18.25 million hectares or 55.3% of the national land area.¹ However, this figure appears to include tree plantations for timber production and independent satellite image analysis gives the proportion of forest cover as 45%.²

In accordance with Malaysia's Federal Constitution, the legislative control of land and forests is a state matter and the state governments have complete jurisdiction over their respective forest resources. However, the federal government does provide technical advice on forest management and development, undertakes research and education, and promotes industrial development of wood-based industries and trade. A National Land Council (NLC) exists to facilitate the adoption of a coordinated and common approach to land matters including the utilization of forest resources. However, the states of Sabah (Figure 3) and Sarawak (Figure 4) (in Malaysian Borneo) each have legislation related to land and forests that is distinct from the states of Peninsular Malaysia (that have relatively uniform laws).

The existing non-forest uses include 6.06 million hectares of agricultural tree crops (primarily oil palm and rubber plantations) and 8.67 million hectares of other land uses (see Figure 1). Under the various land and forest laws, more than three-quarters of Malaysia's remaining forests are designated as "Permanent Forest Estate" (PFE) to be either retained as "Protection Forest" where no logging is done or "Production Forest" which is for growing timber under the principles of sustained yield.

Figure 1. Distribution of Closed-Canopy Oil Palm Plantations and Peatlands in Malaysia³



Peninsular Malaysia; SW – Sarawak; SB – Sabah; EK – East Kalimantan (Indonesia)

A total of 2.38 million hectares of forest are designated as conversion forest — to be cleared for non-forest uses.⁴ In addition, natural forest inside the PFE's "Production Forest" zone is increasingly being cleared for timber plantations and pulpwood plantations. For example, in Peninsular Malaysia between 2007 and 2010 this deforestation inside PFE boundaries came to 22,267 ha in the state of Kelantan

¹ MTC (2011).

² Miettinen et al. (2011).

³ Adapted from Lian et al. (2011).

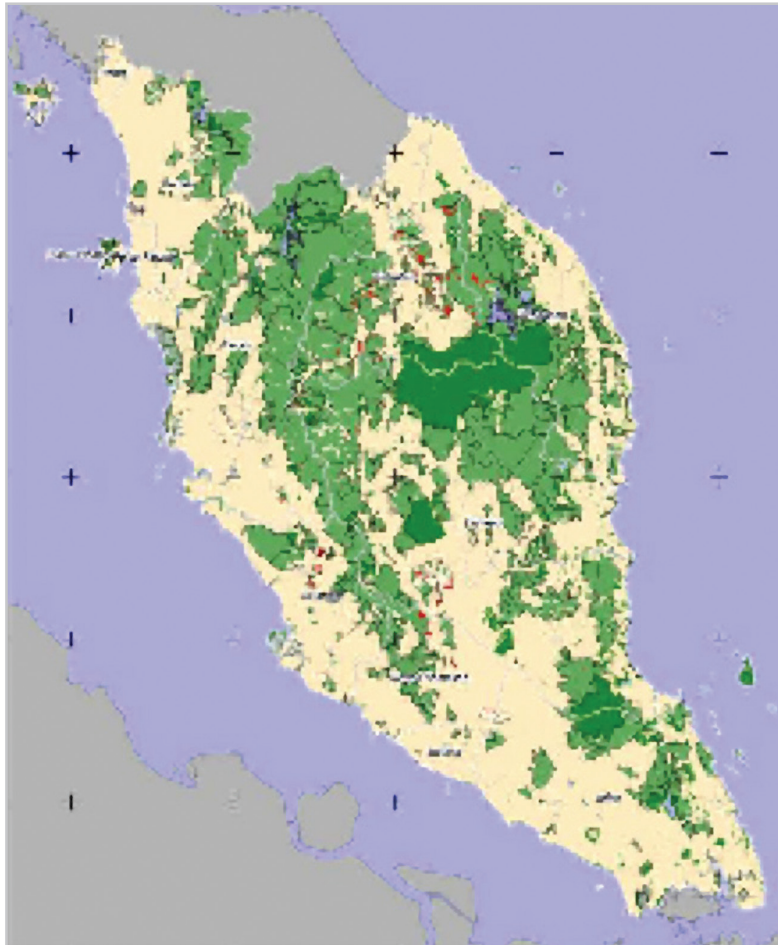
⁴ MTC (2011).

(4.6% of the state's forest in 2010) and 4614 ha (3.2% of the 2010 forest) in Negeri Sembilan (**Figure 2**).⁵ These plantations fit the United Nations definition of “forest” (which is endorsed by the Malaysian government).⁶

In addition, the planting of oil palm inside the PFE has been approved in Sabah and Sarawak on a case-by-case and conditional basis. In 2004 the Sabah Forestry Department approved the conversion by Yayasan Sabah of 109,600 ha of natural forest inside Kalabakan Forest Reserve and Gunung Rara Forest Reserve for oil palm plantation due to the industry's relatively attractive “economics and financial returns.”⁷ Similarly, in 2007, the Sabah Environmental Protection Department approved an environmental impact assessment (EIA) for planting oil palm on 10,389.62 ha inside Bonggaya Forest Reserve, Sandakan, Sabah.

In Sarawak, the Forests (Planted Forests) Rules 1997 allow 20% of a license area to be planted with oil palm for one cycle of 25 years.⁸ Forest cover in Sarawak declined from 8.98 million hectares in 2005 to 8.12 million hectares in 2010.⁹

Figure 2. Deforestation in Peninsular Malaysia (2007-2010)¹⁰



Note: Deforestation shown in red.

⁵ SarVision (2011b).

⁶ FAO (1998).

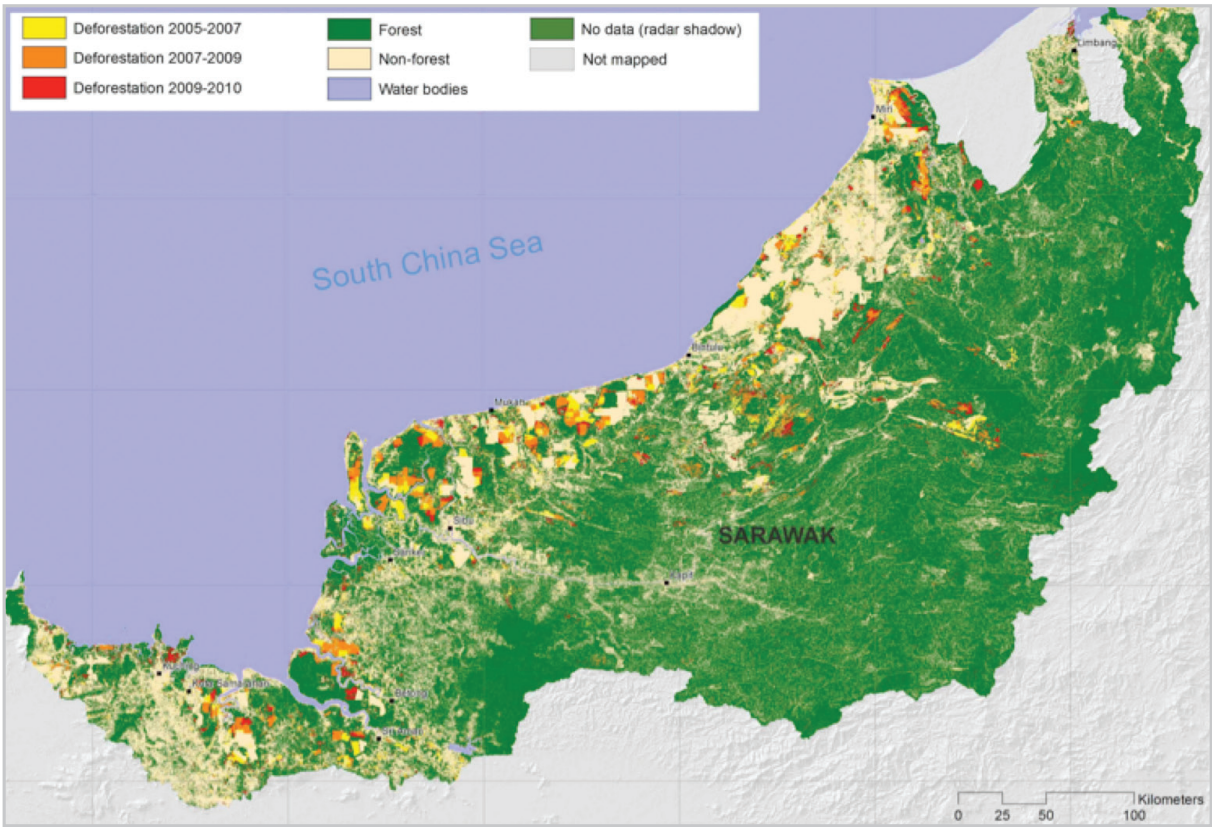
⁷ Chemsain (2005).

⁸ Official Website of the Forest Department of Sarawak <http://www.forestry.sarawak.gov.my/page.php?id=1010&menu_id=0&sub_id=245>.

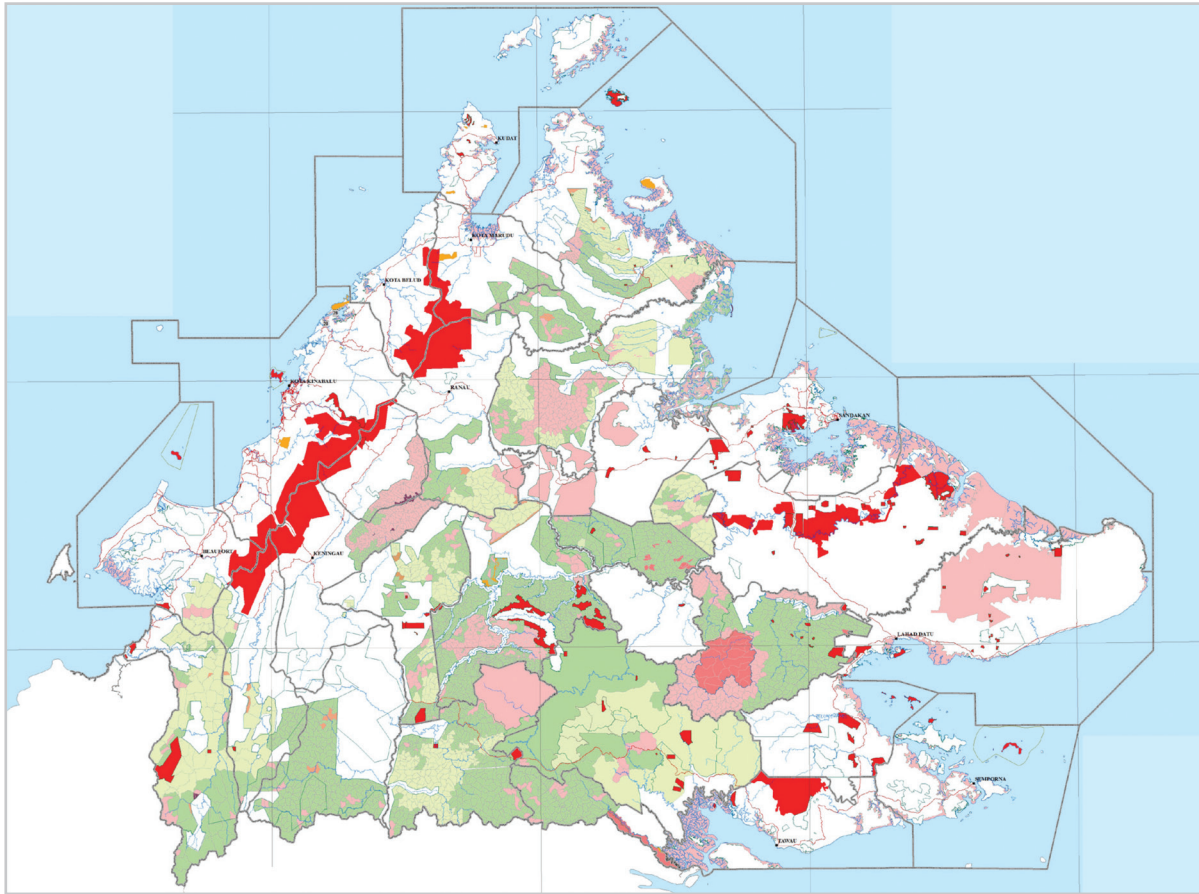
⁹ SarVision (2011a).

¹⁰ SarVision (2011b). NB. Forest is defined as old-growth natural forest, with more than 50% tree canopy cover, ranging from undisturbed to partially degraded by selective logging.

Figure 3. Deforestation in Sarawak Between 2005 and 2010¹¹



¹¹ Adapted from SarVision (2011a).

Figure 4. The “Permanent Forest Estate” of Sabah¹²

Note: Areas zoned as Protection Forest shown in red and pink and Production Forest shown in dark green for selectively logged “Natural Forest Management” and light green for clear-felled “Industrial Tree Plantations” (ITP) – the clearance of natural forests for ITPs is ongoing.

Oil Palm Plantations

The oil palm, *Elaeis guineensis* Jacq. (Palmae) is an erect monoecious plant indigenous to West Africa. Fruiting commences at about two and a half years and each palm can produce between eight to 15 fresh fruit bunches (FFB) per year weighing about 20 kg each.¹³ Each FFB contains about 1000 fruitlets, each consisting of a fibrous mesocarp layer, the endocarp (shell) and the kernel. The best palm varieties are capable of producing 40 t of FFB per ha and 8.6 t of palm oil. Actual yields from good commercial plantings are about 30 t FFB per ha, equivalent to about 4 t of crude palm oil (CPO), 0.5 t palm kernel oil (PKO) and 0.6 t palm kernel cake (PKC) per hectare per year on the average.

The development of oil palm as a plantation crop started in Southeast Asia, with the first seedlings planted in the Botanic Gardens in Bogor in 1848. The development of the industry in Malaysia is attributed to Frenchman, Henri Fauconnier who planted some oil palm seeds at his Rantau Panjang Estate in Selangor in 1911.

Following a recommendation of a World Bank Mission in 1955, the Malaysian government decided to promote the planting of oil palm to reduce the dependence of the national economy on natural rubber, which had faced declining prices and competition from synthetic rubber. In the 1970s, large-scale planting began in Sabah and Sarawak; and from around 1995 Malaysian companies extended their

¹² Adapted from SFD (2011).

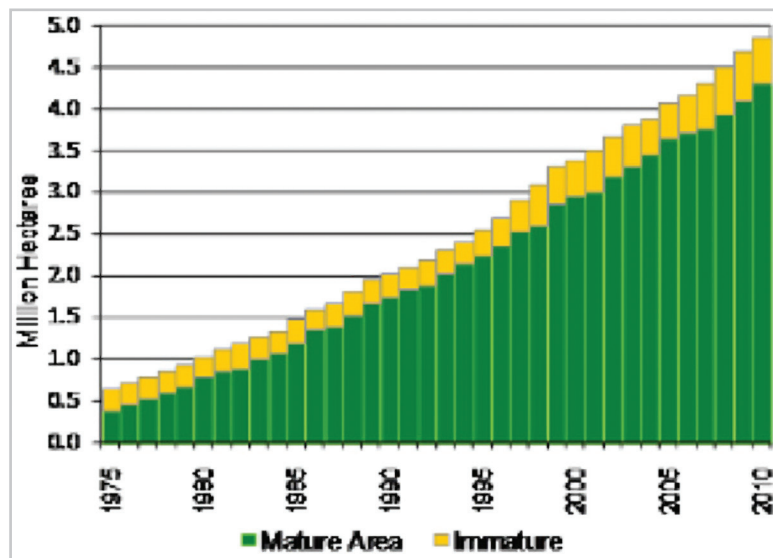
¹³ Hartley (1988).

upstream operations off-shore, particularly to Indonesia where the price of land and labor was lower than in Malaysia.

By 2010 the area of oil palm plantations in Malaysia had reached 4.85 million hectares and the government targeted further expansion to 5.6 million hectares by the year 2020.¹⁴ About 75% of future expansion is planned to be in Sarawak where two million hectares (15% of the state's land area) are zoned for oil palm (of which only about half – 971,611 ha – have already been planted).¹⁵

Much of the early expansion of oil palm in Peninsular Malaysia took the place of existing rubber plantations but most of the oil palm in Sabah and Sarawak was planted on land that had previously been forested. During the period 1990–2005, at least 55% of oil palm expansion in Malaysia occurred at the expense of forests.¹⁶

Figure 5. The Area of Oil Palm Plantations in Malaysia 1975-2010¹⁷



The structure of the palm oil sector in Malaysia is rather complicated, with different aspects of the industry being governed by different ministries and agencies. Malaysia's federal structure further complicates matters, with each state having agencies with responsibilities over palm oil. Despite this multiplicity, most statutory responsibilities for the industry are vested in the Malaysian Palm Oil Board (MPOB) and the Department of Agriculture. Some of the other agencies are listed in Annex 2.

About 60% of the planted area is under private ownership (mainly plantation companies), 30.5% is under government settler schemes and the remaining 9.5% is owned by individual smallholders.¹⁸ The largest upstream oil palm plantation player is the Federal Land Development Authority (Felda) which was established in 1956 with the socioeconomic mandate of developing agricultural land for the rural poor and landless.¹⁹ In 2012 Felda was listed on the Bursa Malaysia stock exchange as Felda Global Ventures Berhad.

¹⁴ MPOB (2011).

¹⁵ Chin (2011).

¹⁶ Koh and Wilcove (2008).

¹⁷ MPOB (2011).

¹⁸ Wakker (2005).

¹⁹ Ibid.

Other plantation companies vary considerably in size, from a few hundred hectares to more than 100,000 hectares. After FELDA, the two largest companies in terms of planted area are Sime Darby Berhad and IOI Corporation Berhad. Many present-day plantation companies were formed at the turn of the 20th century when English and other European entrepreneurs transformed forest land into tea, coffee, and rubber estates.

Amongst the 'old' companies are Sime Darby Berhad, Kuala Lumpur Kepong Berhad and United Plantations Berhad. Since the 1970s, several 'home grown' companies have entered the industry, the most notable examples being IOI Corporation Berhad which started from zero in 1983 to become one of the largest plantation companies today and Genting Plantations Berhad which is part of the group which runs Malaysia's only casino.

The equity of plantation companies in the country is largely under Malaysian ownership, the largest investors being the national equity corporation, Permodalan Nasional Berhad (PNB) and the Employees Provident Fund (EPF). PNB has substantial holdings in all the major plantation companies while EPF (which provides retirement benefits for its members) has made substantial investments in more than 14 plantation companies listed on the Bursa Malaysia. Only a few companies have substantial or controlling foreign shareholding, a notable example being United Plantations Berhad.²⁰

Expansion on FELDA schemes in the 1970s and 1980s were responsible for considerable deforestation in Peninsular Malaysia. However at present, there is relatively little room for further oil palm expansion in Peninsular Malaysia and current and future expansion is focused on Sabah and Sarawak.²¹ Sabah has allocated 100,000 ha (60% of which has been cleared) inside forest reserves for one crop of oil palm to provide cash to establish more long-term timber plantations.²²

Industrial Tree Plantations

Overview

Commercial establishment of forest plantations in Malaysia was undertaken as early as 1957 with the planting of *Tectona grandis* (teak) in the northern peninsular states of Perlis and Kedah where 1,726 ha has been established. In the late 1960s and early 1970s efforts were directed at establishing fast-growing tropical pines (*Pinus caribaea*, *P. merkusii* and *Araucaria* spp.) to produce long fiber pulp for the manufacture of paper at a mill that was to be established locally. In this context, the state Forestry Departments launched a program to encourage the rural community to plant trees on idle land. About 5,682 ha had been planted when the program was discontinued due to the cancellation of the envisaged pulp and paper mill.

A federal Compensatory Forest Plantation Project (FCPP) was launched in 1982 with the aim of planting fast-growing hardwood species (mainly *Acacia mangium*, *Eucalyptus camaldulensis*, *Gmelina arborea*) and pine on a 15-year rotation to supply general utility timber to meet the needs of the domestic market. This project planned to establish about 100,000 ha of forest plantations by 1995 but only 50,249 ha were eventually planted.

The federal government presently has a target to create 375,000 ha of commercial forest plantations nationwide under the *National Timber Industry Policy* (NATIP) by the year 2020. The companies listed as receiving federal government grants for "forest plantation development" include a mix of state-linked foundations and private companies:²³

²⁰ Teoh (2002).

²¹ Asia Times (2003).

²² Hong (2012).

²³ Forest Plantation Development Sdn Bhd website <www.fdpn.com.my> downloaded on 20 December 2012.

Table 1: Companies Receiving Federal Government Grants for “Forest Plantation Development”

Peninsular Malaysia	Sarawak	Sabah
Acacia Industries Sdn Bhd	Billion Ventures Sdn	Bornion Timber Sdn Bhd
Amanah Saham Pahang Berhad	Immense Fleet Sdn Bhd	Jayakuik Sdn Bhd
Anika Desiran Sdn Bhd	Limba Jaya Sdn Bhd	Lembaga Kemajuan Perhutanan Negeri Sabah (SAFODA)
Anjakan Wawasan Sdn Bhd	Pusaka KTS Forest Plantation Sdn Bhd	Maxland Sdn. Bhd.
Aramijaya Sdn Bhd	Rejang Heights Sdn Bhd	True Sunray Sdn Bhd
Aura Kurnia Sdn Bhd	Samling Reforestation (Bintulu) Sdn Bhd	TSH Resources Sdn Bhd
Beta Agresif Sdn Bhd	Shin Yang Forestry Sdn. Bhd.	
Eco Plantation Sdn Bhd	Ta Ann Plywood Sdn Bhd	
Everise Effort Sdn Bhd	WTK Reforestation Sdn Bhd	
Fleet Precissions Sdn Bhd		
Gagah Kukuh Sdn Bhd		
Green Gold Agriculture Sdn Bhd		
Hamid Sawmill Sdn Bhd		
Himpun Sensasi Sdn Bhd		
In-N-Out Plantation Management Sdn Bhd		
SBH Timber Sdn Bhd		
Schrader Forest Management Sdn Bhd		
Twins Plantation Sdn Bhd		
Upayapadu Plantation Sdn Bhd		

Peninsular Malaysia

The area of so-called “Forest Plantations” in Peninsular Malaysia increased from 71,283 ha in 2005 to 108,512 ha in 2008.²⁴ By 2011 the area of permanent reserved forest officially designated for the establishment of these plantations had increased to 185,794 ha (see **Table 1**).²⁵

²⁴ Wakker (2010).

²⁵ FDPM (2012).

Table 2. Areas of Forest Plantations (in hectares) inside Permanent Reserved Forest in Peninsular Malaysia²⁶

State	Designated		Licensed for Harvesting	
	2010	2011	2010	2011
Johor	43,859	43,859	1,429	128
Kedah	3,100	3,100	—	2,950
Kelantan	13,890	91,040	11,349	1,566
Melaka	35	35	—	—
Negeri Sembilan	3,000	3,000	—	—
Pahang	24,043	24,043	1,519	1,585
Perak	4,818	4,818	—	346
Perlis	671	658	—	—
Pulau Pinang	—	—	—	—
Selangor	11,381	11,381	—	—
Terengganu	3,860	3,860	—	—
Federal Territory	—	—	—	—
Total	110,667	187,805	16,307	8,586

Sabah

The development of commercial forest plantations in Sabah started in 1973. Initially, most of these were government funded (including SAFODA and Sabah Softwoods Sdn Bhd) due to the high capital outlay required in the establishment of forest plantations. The 1980's and 1990's witnessed the participation of privately-owned companies and individuals, largely on their own alienated land. At present there are about 30 organizations involved in forest plantations in Sabah with a total planted area of about 200,000 ha. About half of this planted area is situated within the forest reserves. In Sabah much of the land being converted to plantations has already been degraded by forest fires and selective logging.

Sarawak

The first License for Planted Forest (LPF) in Sarawak was issued in 1997 and by the end of 2011 a total of 43 licenses had been issued.²⁷ Most of these licenses were issued prior to 2003 and the present target for timber plantations in Sarawak remains at 1.2 million hectares.²⁸ By 2009 a total of 312,525 ha had been planted. This included 180,255 ha of Acacia; 82,884 ha of oil palm;²⁹ and 58,386 ha of other tree species. A further one million hectares (out of the 2.8 million ha licensed for planted forests) is to be planted, with a planting target of

²⁶ Ibid.

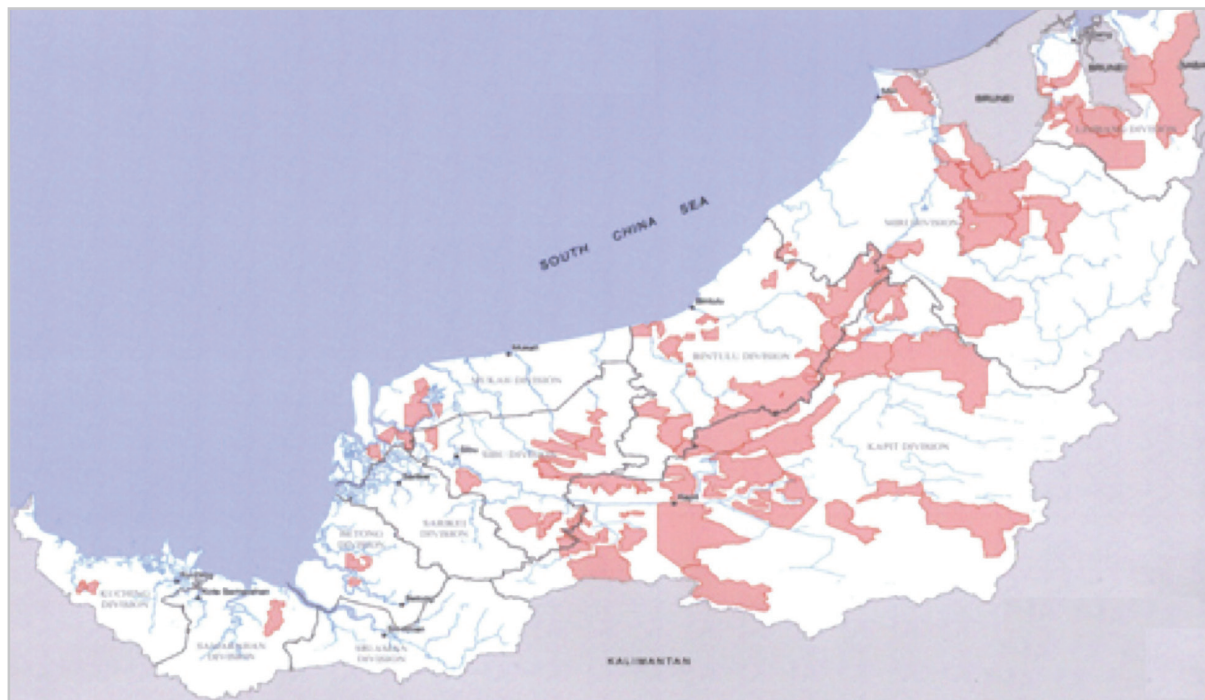
²⁷ Yap (2012).

²⁸ Ibid.

²⁹ The LPF holders are allowed to plant one 25-year crop of oil palm on 20% of the plantable area of their licence area "to allow flexibility in their cash flow management" (Ibid.).

2000 ha per year.³⁰ Almost all of this new planting would be at the expense of logged-over natural forest with some small community orchards and fields being affected too.

Figure 6. Location of 42 Approved Licenses for Planted Forests (LPF) Araes in Sarawak³¹



Note: 2.8m hectares are licensed, of which about 1.3m are plantable

Rubber Plantations

Originally from Brazil, the Malaysian Rubber Board has been breeding *Hevea brasiliensis* rubber clones for almost 100 years. The latex yield of modern clones average around 3000 kg/ha/year compared with about 500 kg/ha/year for unselected seedlings. Since the late 1980s, rubberwood furniture has gained acceptance and breeding aimed to produce rubber clones with a high timber volume increment as well as a high latex yield. The new “latex timber clones” (LTC) or “timber latex clones” (TLC) have a latex yield potential of up to 4000 kg/ha/year and a final wood volume of 2.0 cubic meters/tree.

This large-scale forest clearance for plantations is allowed because most forest reserves in Peninsular Malaysia fall into the default classification of “timber production forest under sustained yield” which is to be “descriptive of the purpose or purposes for which the land is being or intended to be used” (Section 10 of the National Forestry Act 1984). Rubberwood plantations are also explicitly included in the definition of “forest” given by the United Nations: “Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10% or trees able to reach these thresholds in situ ... Includes plantations primarily used for forestry or protection purposes, such as rubberwood plantations and cork oak stands” (FAO 1998).

Published statistics from Forestry Department Peninsular Malaysia (FDPM) stated that areas within PRFs planted with LTC increased from 2,195 ha in 2005 to 76,713 ha in 2009. FDPM has announced that there are proposals to expand this area to 439,189 ha – for example, in the state of Kelantan 199,000 ha of the PRF have been zoned for conversion to TLC (see **Figure 7**).³²

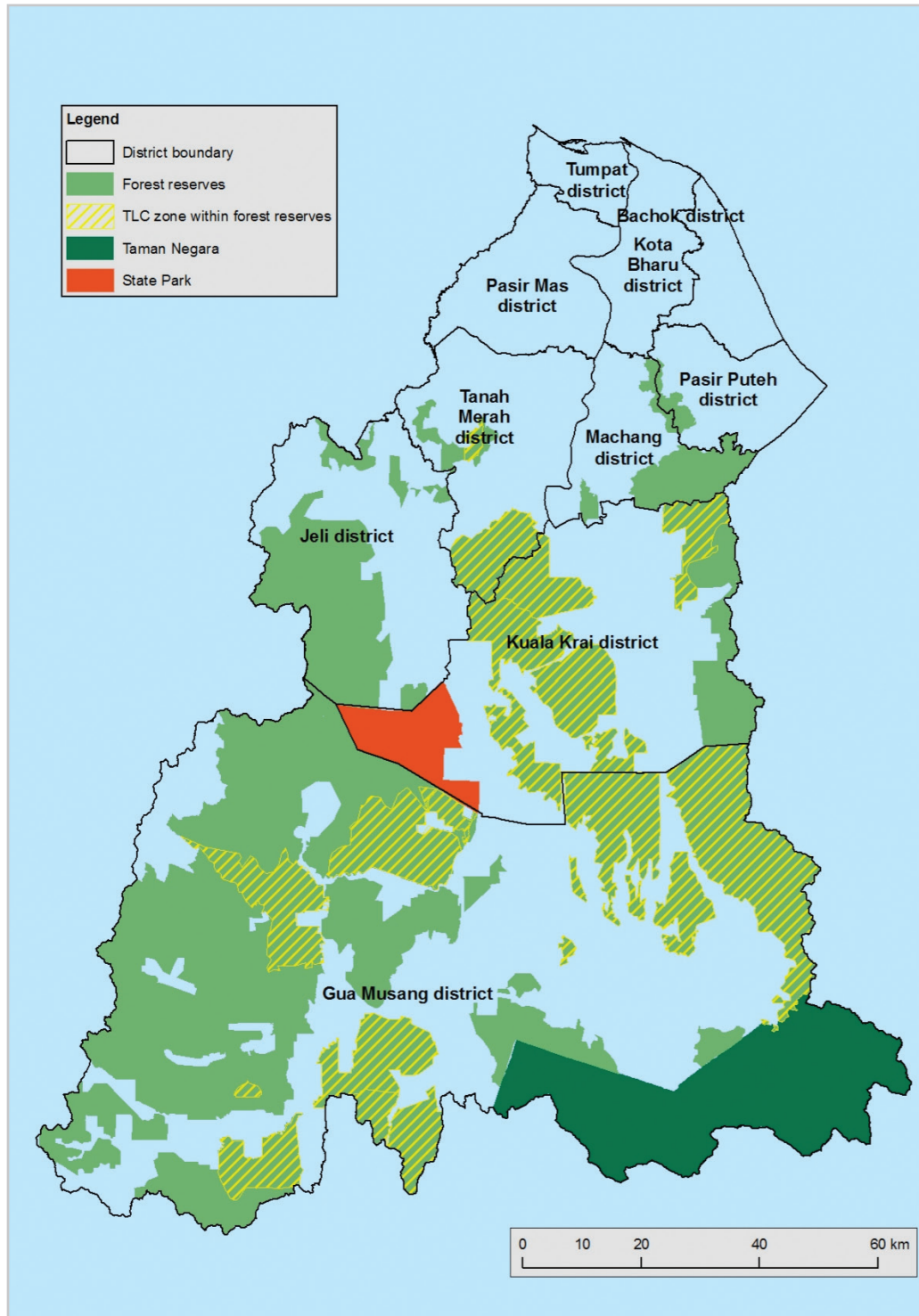
³⁰ Ibid.

³¹ As at June 2009 (Forest Department, Sarawak website <http://www.forestry.sarawak.gov.my/>).

³² Kelantan State Forestry Department, 2011 (quoted on 3 November 2012 by the RubberForests blog, <http://rubberforests.wordpress.com/>).

The TLC target for Peninsular Malaysia is 17% above the NATIP target for forest plantations of all species in Malaysia as a whole. TLC is also being promoted in Sabah for large-scale plantations inside forest reserves as well as through smallholders (e.g. in a community forestry program in Mangkuwagu Forest Reserve). However TLC is not one of the main species being planted in Sarawak.

Figure 7. Location of “Permanent Reserved Forest” Zoned for Timber Latex Clone (TLC) Rubber Plantations in the State of Kelantan, Peninsular Malaysia



Legal & Regulatory Arrangements

Overview

Legal System

Malaysia follows a federal system of government with divided responsibilities for federal and state Governments. Many of the matters pertaining to forest clearance for large-scale commercial plantations are on the State and Concurrent Lists of the Federal Constitution,³³ rather than the Federal List. The thirteen state governments have jurisdiction over their forest resources while the federal government (the Ministry of Plantation Industries and Commodities and the Ministry of Natural Resources and Environment) provides technical advice on forest management and the development of wood-based industries and trade. Other relevant matters such as agriculture, rivers and water resources, land and soil conservation and local government also come under the State List. The protection of wild animals, town and country planning, drainage and irrigation and the rehabilitation of land come within the Concurrent List. The National Land Council (NLC) is empowered under the Malaysian Constitution to formulate a national policy for mining, agriculture and forestry. A close relationship between the States and the Federal government exists regarding land and forestry issues.

Legislative Powers

Lawmaking in the form of legislation is carried out by Parliament at the federal level and by the various State Legislative Assemblies for their respective states. Laws enacted by Federal Parliament are referred to as Acts and laws made by State Legislative Assemblies are called Enactments. The state of Sarawak is an exception; its laws are called Ordinances.

Federal Constitution

The Federal Constitution is the supreme law of the Federation (Art 4(1)). Rights of people affected by the large-scale conversion of natural forest to plantations include the rights available to all citizens (such as the right to property) as well as some rights which are specifically applicable to native people. Of particular relevance to the rights of forest-dependent people is the general provision of the Federal Constitution which states that “no law shall provide for the compulsory acquisition or use of property without adequate compensation” (Art 13(2)). Special provisions are provided in the Constitution for indigenous peoples. In particular, there are about a dozen specific instances where the Constitution makes reference to aborigines and natives.

The Constitution provides for positive discrimination that gives “provision for the protection, well-being or advancement of the aboriginal peoples of the Malay Peninsula (including the reservation of land)” (Art 8(5) (c)). Such positive discrimination is also extended to permits, etc. in order to safeguard the special position of “Malays” and the natives of the States of Sabah and Sarawak (Art 153). The reservation of land for the “natives of the State in which it lies” (i.e. including Sabah and Sarawak) is also specifically provided for (Art 89(6)).

The Constitution defines “Law” as including “written law, the common law in so far as it is in operation in the Federation or any part thereof, and any custom or usage having the force of law in the Federation or any part thereof” (Art 160 (2)). Existing laws shall, until repealed, continue in force (Art 161 (2)).

³³ Federal Constitution (1957). Constitutions of the States: Johore 1895, Terengganu 1911, Kedah 1948, Kelantan 1948, Negeri Sembilan 1948, Selangor 1948, Perak 1948, Perlis 1948, Pahang 1948, Malacca 1957, Penang 1957, Sarawak 1963, Sabah 1964.

Forest Governance Laws

Overview

Forest clearance for large-scale plantations in Malaysia is governed by a number of laws depending on the state, the legal status of the land, physical attributes of the land and the extent of the plantation. The various laws cover different stages in the clearance process including the initial approval, licensing and permits, environmental impact assessment and long-term management of the plantation. The main relevant laws are highlighted below with a brief discussion of issues arising from their implementation.

Native Customary Rights Related to Forest Clearance

Native customary rights (NCR) are accepted as a source of law in Malaysia's constitution and have been upheld as valid laws by the courts. The specifics of customary laws vary among the dozens of tribal communities in Malaysia but several general principles have widespread application. A community (*kampung*) claims general rights over its traditional territory (*wilayah adat*) up to one day's walk from the main settlement. The territory is defined along natural boundaries such as streams and ridges. Within a community, individual fields (*ladang*) and orchards (*dusun*) are assigned to families belonging to the community based on who originally clears the forest and plants the area. Certain areas (particularly village water-catchments) are zoned as protected forest (*hutan tagal*) which is subjected to various controls and clearance is not permitted.

It is accepted that outsiders may enter the unprotected parts of a community's territory for hunting or the collection of forest produce. However, clearance of natural forest for plantations requires the consent of the community. NCR laws impose fines (*sogit*) for transgressions such as unlawful entry into a protected forest and for forest clearance without consent of the community. In Sabah and Sarawak native courts are empowered to try offences and determine the level of compensation required.

Forestry Statutes

There are several forestry statutes that have been enacted in the states of Malaysia since the 1890s. In Peninsular Malaysia the applicable law is the National Forestry Act 1984 (NFA), Revised 1993 (Act 313) is an Act to provide for the administration, management and conservation of forests and forestry development within the States of Malaysia and for connected purposes. This Act shall apply throughout the states of Malaysia once the state has adopted the Act (all states in Peninsular Malaysia have done so).

The agency in charge of enforcing this Act is the "Federal Forestry Department" (s 4(f)) [in effect, Forestry Department Peninsular Malaysia (FDPM), comprising the various Forestry Departments of the States of Peninsular Malaysia and FDPM Headquarters]. In Peninsular Malaysia, 4.7 million hectares have been gazetted as permanent reserved forest under this Act and the respective State forest enactments. All forest clearance for plantations involving the extraction of timber requires a license to be issued under this Act. For plantations established inside forest reserves, these licenses may contain provisions for environmental protection (stream buffers, steep zone exclusions, etc.). The Act also requires that all timber removed as a result of the forest clearance be subject to the payment of royalties to the state.

Sabah and Sarawak have not adopted the National Forestry Act 1984. Each of these states has its own forestry legislation. In Sabah, the primary forestry statute is the Forest Enactment 1968 (Sabah En. 2/68). The agency responsible for enforcing these laws is the Sabah Forestry Department. The enactment also provides for the issuance of "Sustainable Forest Management Licensee Agreements" (SFMLAs) (s 15(1)). The long-term SFMLAs allows license holders to establish designated Industrial Tree Plantations within the Forest Management Unit. The license agreements include some environmental protection provisions such as requiring buffer zones at least 30 m wide on all "perennial streams and rivers" and prohibiting felling on slopes greater than 25 degrees.

In addition to the Sabah Forestry Department, there is also the Sabah Forestry Development Authority Enactment 1981 (Sabah En. 24/81) with the goal of converting wasteland and marginal agricultural land to timber and rattan plantations, thereby increasing the State's productivity and providing rural employment. The agency responsible for enforcing this law is the Sabah Forestry Development Authority (SAFODA). SAFODA's original planting target was 250,000 ha. By 2005, a total of 202,494 ha had been established in Sabah by a combination of players in commercial tree plantations such as SAFODA, Sabah Forest Industries and Sy Lak Sdn. Bhd. SAFODA suffered fire damage including 5,565 ha in 1983, and 3,818 ha in 1998. In 2000, SAFODA reported planting 99,691 ha, mainly in the Bengkoka, Kota Marudu and Keningau districts, compared with about 31,417 ha with *Acacia mangium* in 1998, and 8,356 ha with rattan (this included 600 ha of rattan interplanted with rubber under the Kinabatangan Rattan Project carried out with RISDA). In the long term, Sabah has set a target of establishing half a million ha in forest plantations, which can sustain 25,000 to 30,000 ha of harvest a year, which translates into 5-6 million m³ of timber. About 30% of the plantation logs produced in Sabah in 2004 was exported to Indonesia, China, Vietnam and Japan.

In Sarawak, the main forestry law is the Forests Ordinance 1958 (Sarawak Cap. 126, 1958 Ed.). This law provides for the Constitution of Forest Reserves (Pt II), Protected Forests (Pt III) and Communal Forests (Pt IV) and controls the taking of forest produce (Pt V). In 2000, 23,095.5 ha had been reforested and 1,125,342 ha were in the process of being constituted as "permanent forests" (Forest Department Sarawak, Annual Report 2000). The agency responsible for enforcing this law is the Forest Department Sarawak but most of the operational work is carried out by the privatized Sarawak Forestry Corporation Sdn Bhd ("Sarawak Forestry") that is so empowered under the Sarawak Forestry Corporation Ordinance 1995 (Sarawak Cap. 17/95).

Sarawak Forestry has taken over most of the functions of the Sarawak Forest Department. These include the bulk of the activities previously carried out by the Forest Department in enforcing the Forests Ordinance 1958, Wildlife Protection Ordinance and National Parks & Nature Reserves Ordinance on the ground. It also includes regulation, inspection and issuance of permits and certificates in line with CITES, with notable enforcement successes in terms of seizures of illegal timber and wildlife.

Environmental Protection Laws

Water Act 1920 (Act 418)

This Act provides for the control of rivers and streams (applies to the States of Negeri Sembilan, Pahang, Perak, Selangor, Malacca, Penang and the Federal Territory of Kuala Lumpur). In Sabah and Sarawak, the following legislation applies: Drainage and Irrigation Ordinance 1956 (Sabah Ord. 15/56); Water Resources Enactment 1998 (Sabah En. 6/98); Water Supply Enactment 2003 (Sabah En. /03); Sarawak Rivers Ordinance 1993 (Sarawak Ord. 4/93); Water Ordinance 1994 (Sarawak Ord. 13/94). The agency responsible for enforcing this law is the Drainage and Irrigation Department (DID).

This law provides for:

- Control over development of riverine areas, acts affecting rivers, prohibition of diversion (except under license), prohibition of pollution, as well as restriction on construction of walls and buildings on banks of rivers or within flood channels.
- Prohibitions on the pollution of watercourses are also found in a number of related laws. These include the Local Governments Act 1976, Earthworks bylaws, Mining Enactments, the Mineral Development Act 1994 and State enactments such as the Selangor Waters Management Authority Enactment 1999 (SWMAE).
- Under the Waters Act, there is a prohibition on the pollution of rivers, inland waters and subterranean water resources (s 7A). Similarly under the SWMAE, there are prohibitions on the discharge of pollutants

to any water source. The Director may also issue a Water Protection Order if there is any serious risk of pollution or threat to the environment (s 122 SWMAE). The Local Authority may make bylaws to keep watercourses clean. Under the Earthworks bylaws, the Local Authority is responsible for the control of earthworks to prevent soil erosion and pollution.

The Sabah and Sarawak laws make similar provisions for the protection of river reserves. For example, the Sabah Water Resources Enactment 1998 (s 40) prescribes that river reserves of at least 20 m from the top of each riverbank be maintained along all rivers and streams more than three meters wide. However, these laws generally do not protect streams from the non-point sourced pollution that arises from erosion following the clearance of natural forest for plantations.

Land Conservation Act 1960 (Act 385) [and State Enactments]

This Act relates to the conservation of hill land and the protection of soil from erosion and the inroad of silt. It was adopted by all the States of Peninsular Malaysia in 1960. The agencies responsible for enforcing this law are the State Land Administrators, local authorities and local planning authorities. The Act provides for declaration of hill land (s 3), and Orders to control silt and erosion (Pt III). Under this Act, land has been gazetted as hill land in States such as Penang.

While the Act has been adopted by all states, its provisions have rarely been enforced. Part of the problem is the shortage of staff, the lack of awareness on the roles and the absence of guidelines to assist these agencies. To date, only parts of Penang Hill and Cameron Highlands have been gazetted as hill land under this Act. Another issue is the maintenance of gazetted hill land — demand for land has put pressure on States to de-gazette hill land for development. Parts of Penang Hill that were formerly gazetted have been de-gazetted.

Environmental Quality Act 1974 (Act 127) (EQA)

This is an Act relating to the prevention, abatement, control of pollution and enhancement of the environment, and for purposes connected therewith (applies to the whole of Malaysia). Subsidiary legislation: Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987. State legislation: Conservation of Environment Enactment 1996 (Sabah En. 14 of 1996), Sabah Environment Protection Enactment 2002 (Sabah En. 12/02); Natural Resources and Environment Ordinance (Sarawak Cap. 84, 1958 Ed.). The following are also of relevance: Public Health Ordinance 1960 (Sabah Ord. 7/60); and Protection of Public Health Ordinance 1999 (Sarawak Ord. 30/99). The agencies responsible for enforcing these laws are the Department of Environment (Federal), Environmental Protection Department (Sabah), and Natural Resources and Environment Board (Sarawak).

The EQA requires that an environmental impact assessment (EIA) be carried out prior to engaging in several prescribed activities (s 34A). Item No. 6 of the 1987 Order prescribes the following “Forestry” activities as requiring EIAs:

- Conversion of hill forest land to other land use covering an area of 50 hectares or more.
- Logging or conversion of forest land to other land use within the catchment area of reservoirs used for municipal water supply, irrigation or hydropower generation or in areas adjacent to state and national parks and national marine parks.
- Logging covering an area of 500 hectares or more.
- Conversion of mangrove swamps for industrial, housing or agricultural use covering an area of 50 hectares or more.
- Clearing of mangrove swamps on islands adjacent to national marine parks.

Amendments to the Environmental Quality Act, 1974 came into force on 1st August 1996. Section 34A (8) of the Act represents an extension of the legal provision for EIA and increases the penalty for offences committed under Section 34A of the Environmental Quality (Amendment) Act, 1996. Instead of a fine not exceeding MYR10,000 or imprisonment for a period not exceeding two years, the penalty has risen to a fine not exceeding MYR100,000 or imprisonment for a period not exceeding five years. The Environmental Quality (Amendment) Act 1996, also allows the DOE to request an environmental audit report from developers. This report should address an evaluation of the:

- Degree of compliance with regulatory environmental requirements,
- Environmental management system, and
- Overall environmental risk of the premises.

A number of EIAs for forestry activities have been carried out. Some of these EIAs have not been approved (e.g. a 2003 proposal for heli-logging in 122,798 ha in six areas in the Ulu Muda Reserved Forest, around the Pedu Dam, Kedah).

There is slight uncertainty over the constitutionality of provisions of this Act relating to forestry, as forestry is a State matter. The right of the states to control activities related to forests and land has been upheld by the Courts in *Ketua Pengarah Jabatan Alam Sekitar & Anor v Kajing Tubek & Ors* and other appeals [1997] 3 MLJ 23 (see Gurdial, 1997; Harwant and Bujang, 2002). In Sabah and Sarawak, this has led to the establishment of state-level enactments and agencies to carry out EIAs for forestry and land conversion activities while the DOE covers EIAs related to other activities such as emissions from factories.

Sabah asserts its autonomy on land and forestry matters via the state-level Environmental Protection Enactment 2002 which provides for an Environmental Protection Department (EPD) and controls impacts via a series of regulations including the Environment Protection (Prescribed Activities) (Environmental Impact Assessment) Order 2005. This Order creates two schedules of prescribed activities for which a “Proposal for Mitigation Measures” (PMM) or “Environmental Impact Statement” (EIS) (the latter being more stringent) are required. In essence, most major land use activities trigger the requirement for an EIS (see **Table 2**). EIAs are carried out for most large plantation projects in Sabah (**Table 3**).

Table 3. Partial List of Activities Requiring Proposals for Mitigation Measures (PMM) and Environmental Impact Statements in Sabah

Proposal for Mitigation Measures	Environmental Impact Statement
Development of agricultural estates or plantations covering an area of 100 to 500 hectares (this includes palm oil)	Development of agricultural estates or plantations covering an area of 500 hectares or more
Conversion of wetland forests into agricultural estates or plantations covering an area of 20 to 50 hectares	Conversion of wetland forests into agricultural estates or plantations covering an area of 50 hectares or more
Felling or extraction of timber on an area of 100 to 500 hectares	Felling or extraction of timber on an area of 500 hectares or more
Development of forest plantation or reforestation on an area of 100 to 500 hectares	Development of forest plantation or reforestation on an area of 500 hectares or more
Development of housing/commercial/industrial estates on an area of 10 to 50 hectares	Development of housing/commercial/industrial estates on an area of 50 hectares or more
Conversion of wetland forests into fisheries or aquaculture development covering an area of 10 to 50 hectares	Conversion of wetland forests into fisheries or aquaculture development covering an area of 50 hectares or more
Creation of lakes or ponds for fisheries or aquaculture development on an area of 10 to 50 hectares	Creation of lakes or ponds for fisheries or aquaculture development on an area of 50 hectares or more
Quarrying within 200 meters of any streams or rivers	Agricultural programs involving the settlement of 100 families or more
Development of resorts or tourism facilities on an area of 10 to 30 hectares or within 200 meters from the high water mark in coastal areas	Development of resorts or tourism facilities on an area of 30 hectares or more or on slopes having a gradient of 20 degrees or more, or any golf courses
	Any mining covering 20 hectares or more

Table 4. Number of Proposed EIA Studies (“Terms of Reference”) Submitted to the Sabah Environmental Protection Department (2007-2009)

Proposal for Mitigation Measures	2007	2008	2009	Total
Selective Logging (Timber Extraction)	13	7	17	37
New Planting (Timber/Pulp/Latex)	6	2	4	12
New Planting (Oil Palm)	5	4	4	13
Replanting (Timber/Pulp/Latex)	0	0	1	1
Replanting (Oil Palm)	7	7	13	27
Quarrying/mining/dredging	16	23	7	46
Roads (upgrading)	2	1	3	6
Roads (new)	4	1	0	5
Dams	0	1	0	1
Other development*	50	23	26	99
Total	103	69	75	247

Source: Compiled from lists on EPD Website <www.sabah.gov.my/jpas>

Similarly in Sarawak, the Natural Resources and Environment (Prescribed Activities) Order, 1994 lists the activities requiring EIAs in that state. The relevant activities include the following:

- **Agriculture Development:**
 - Development of agricultural estates or plantations of an area exceeding 500 hectares -
 - from land under secondary or primary forests, or
 - which would involve the resettlement of more than 100 families; or
 - which would involve modification in the use of the land.
 - Conversion of mangrove swamps into agricultural estate having an area exceeding 50 hectares.
- **Logging:**
 - Extraction or felling of timber from any area exceeding 500 hectares which have previously been logged or in respect of which coupes have previously been declared to have been closed by the Director of Forests under the provisions of the Forest Ordinance (Cap. 126 - 1958 Ed.)
 - Extraction or felling of any timber within any area declared to be a water catchments area under section 8 of the Water Ordinance, 1994 (Cap. 13).

Upon completion of the EIA, the report is submitted to the relevant agency for approval and, once approved, an agreement is put in place for the proponent to implement mitigating measures prior, during and after the project. For example, some of the mitigation measures prescribed by recent EIAs that are relevant to forest clearance for plantations included:

Table 4. Mitigation Measures Prescribed by Recent EIAs

Impact Avoidance Measures	Impact Reduction Measures	Impact Compensation Measures
River Reserves	Planting of Cover Crops	Habitat Restoration (Compensatory Planting)
Steep Area Reserves	Phasing of Operations	Landscape Treatment (e.g. Green Corridor along Roads)
Salt Lick Areas	Installation of Silt Traps and Sedimentation Ponds	Provision of Rainwater Holding Tanks (for Villagers)
Wetland Reserves	Speed Bumps on Roads	
Wildlife Corridor Reserves	Road Spraying for Dust Control	
Protection of Fruit Trees	Reduced-Impact Logging	
Protection of Cultural Sites	Reduced Road Density	
Protection of Recreation Sites	Regular Road Maintenance	
Protection of Scenic Features	No Open Burning	
	Off-site Waste Disposal	
	Hunting Bans	
	Control Entry by Roadblocks	

Two particular measures (river buffers and slope protection) are common for most forest clearance projects. These two measures are intended to avoid impacts on the physical environment but also have significant socioeconomic and ecological benefits. This is important because given the complexity of the natural ecosystems, environmental consultants have difficulty identifying specific mitigation measures for the protection of certain rare and threatened species. Few proponents are willing to pay for expertise that addresses the full range of species found in a natural project site. There is no central source of practical information related to the distribution of rare species in Malaysia. Given this scenario, environmental consultants often address biodiversity conservation indirectly by focusing on keeping an area of natural habitat intact via river buffers and slope protection, with the occasional addition of token set-aside areas associated with salt-licks or swampy areas that would not be operable anyway.

Once mitigating measures are agreed upon, the environment agency then carries out compliance audits to ensure that the mitigating measures are implemented satisfactorily. However, the effectiveness of this process is often limited by manpower shortages and other constraints.

National Land Code (Act 56/1965) (NLC) and State Land Codes

The National Land Code is an act to amend and consolidate the laws relating to land and land tenure, the registration of title to land and of dealings therewith and the collection of revenue therefrom within the States of Johore, Kedah, Kelantan, Malacca, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu and the Federal Territory of Kuala Lumpur, and for purposes connected therewith (shall apply only in the “States of Malaya” [Peninsular Malaysia]). It came into effect in 1966. Subsidiary legislation: State Land Rules e.g. Land Rules (Kedah) 1966; Land Rules (Selangor) 2003. The agency responsible for enforcing this law is the Department of Land and Mines.

This law provides for Powers of disposal (s 42(1)); (a) to alienate (b) to reserve State land. Classification (s 51(1)): (a) land above the shore-line; and (b) foreshore and sea-bed. “Land above shore-line” further classified (s 51(2)): (a) town land; (b) village land; and (c) country land. Power of reservation of State land (s 62(1)).

This Act classifies land into three categories, namely agriculture, industry and building. An additional category

that is sometimes imposed is the 'nil' category that is applied to uses such as golf courses. These categories are applied to the land when the state alienates state land or if a private landowner wishes to convert (change category of use) land for development. Unlike other methods of development such as subdivision and amalgamation of land, the alienation and conversion process does not specifically require planning permission prior to the approval although in practice, most state authorities do consult the State Town and Country Planning Department before the application is approved. This creates an unsatisfactory situation whereby land may be alienated or converted to uses quite contrary to planning intentions.

With regard to indigenous peoples, the schedules of the National Land Code (which applies only to Peninsular Malaysia) make reference to aboriginal areas and aboriginal reserves, requiring any dealings related to such areas to make note of the number and date the areas were gazetted as such (e.g. Sch I, Form 5B). The National Land Code also notes that "except insofar as it is expressly provided to the contrary, nothing in this Act shall affect the provisions of any law for the time being in force relating to customary tenure" (s 4(2)(a)). This clause has been interpreted as having "left open the rights at common law of aboriginal title."³⁴ From the commencement of the National Land Code, a number of State enactments relating to customary rights were repealed, including the following:

- Dealings in Land (Malacca Customary Lands) (Occupation Period) Ordinance (41/1949);
- Customary Tenure of Land (Settlement of Malacca) Ordinance (10/1952); and
- Customary Tenure (State of Negeri Sembilan) Ordinance (33/1952).

Sabah and Sarawak have their own legislation to regulate the alienation and occupation of State lands. These are administered by the respective State Director of Lands and Surveys and the State Collector of Land Revenue. In Sabah, the Land Ordinance (Sabah Cap. 68/1930, s 15) states that "native customary rights" shall be held to be:

- Land possessed by customary tenure;
- Land planted with fruit trees, when the number of fruit trees amounts to fifty and upwards to each hectare;
- Isolated fruit trees, and sago, rotan, or other plants of economic value, that the claimant can prove to the satisfaction of the Collector were planted or upkept and regularly enjoyed by him as his personal property;
- Grazing land that the claimant agrees to keep stocked with a sufficient number of cattle or horses to keep down the undergrowth;
- Land that has been cultivated or built on within three years;
- Burial grounds or shrines;
- Usual rights of way for men or animals from rivers, roads, or houses to any or all of the above.

In Sarawak, the Land Code (Sarawak Cap. 81/1958, s 2) states that: "Native Customary Land" means –

- Land in which native customary rights, whether communal or otherwise, have lawfully been created prior to the 1st day of January, 1958, and still subsist as such;
- Land from time to time comprised in a reserve to which section 6 applies [i.e. a gazetted Native Communal Reserve]; and
- Interior Area Land upon which native customary rights have been lawfully created pursuant to a permit under section 10;

³⁴ Chandra Kanagasabai. 'Native Rights & Minority Rights: Promotion or Repression? A Commonwealth Review'. First presented at the 12th Commonwealth Law Conference at Kuala Lumpur in September 1999. *Malayan Law Journal* website: <http://www.mlj.com.my/free/articles/chandra.htm>.

Section 5 of this Land Code 1958 gives an extensive definition of “native customary rights,” the essence of which includes the following methods by which native rights may be acquired:

- The felling of virgin jungle and the occupation of the land thereby cleared;
- The planting of land with fruit trees;
- The occupation or cultivation of land;
- The use of land for a burial ground or shrine; and
- The use of land of any class for rights of way.

The original Land Code 1958 contained a number of provisions allowing for the extinguishment of Native Communal Reserves (s 6(4)) and for the extinguishment of Native Customary Rights (ss 94(2) and s 15). The original enactment has since been amended numerous times:

- In 1974 an amended s 5 (3 & 4) granted power to the Minister to extinguish native customary rights after six weeks’ notice by publication in the government Gazette.
- In 1988 an amended 33 (1)(a) allowed a fine to be imposed if land was not used consecutively over a three year period and the land then would later be re-classified as state land if title rights were not implemented. This amendment does not appear to take into consideration the fact that long-rotation shifting cultivation is required to maintain soil fertility.
- In 1994 an amended s 46 allowed for acquiring land for broadly defined purposes of ‘public utility.’
- In 1996 an amended s 5(3&4) shifted the burden of proof of ownership of native land from the government to the claimant.
- In 2000 an amended s 5(2) removed the possibility for native customary rights to be created by any lawful methods other than those specified in that section (the original s 5(2)(f) was a blanket clause that allowed for the possibility of other “lawful methods” being used to create native customary rights).

Planning Laws

Town and Country Planning Act 1976 (Act 172)

This Act provides for the proper control and regulation of town and country planning in local authority areas in the states of Malaya. Sabah and Sarawak have their own planning legislation “to make provision for the orderly and progressive development of land, towns and other areas whether urban or rural, to preserve and improve the amenities thereof, and for other matters connected therewith”, in particular: Town and Country Planning Ordinance (Sabah Cap. 141, 1950 Ed.); Town and Country Planning Ordinance (Sarawak Cap. 87, 1958 Ed.); each administered by the respective State departments.

The agency responsible for enforcing this law is the Department of Town and Country Planning which has approved a National Physical Plan (covering Peninsular Malaysia) and Development Plans (structure plans (state, district, local area plans) and detailed plans). These plans are made binding once they are gazetted by the state authority under Section 18(1) of the Town and Country Planning Act. It states that “no person shall use, or permit to be used, any land or building otherwise than in conformity with the local plan.”

These plans have several provisions of relevance to forest clearance for commercial plantations. In particular, the plans specify where plantations are allowed to be situated. The plans also identify environmentally sensitive areas (ESAs). The National Physical Plan states the following:

“The management of ESA shall be guided by the following criteria:

- ESA Rank 1 – No development, agriculture or logging shall be permitted except for low-impact nature tourism, research and education.
- ESA Rank 2 – No development or agriculture. Sustainable logging and low impact nature tourism may be permitted subject to local constraints.
- ESA Rank 3 – Controlled development where the type and intensity of the development shall be strictly controlled depending on the nature of the constraints.”

Labor Laws

In addition to the above, there are numerous laws relevant to social issues in general and to workers involved in the large-scale commercial clearance and plantation operations. A partial list of these labor laws is as follows:

- Children and Young Persons (Employment) Act 1966
- Contracts Act 1950
- Employees Provident Fund Act 1991
- Employees’ Social Security Act 1969
- Employment (Restriction) Act 1968
- Employment Act 1955
- Factory and Machinery Act 1967
- Food Act 1983
- Holidays Act 1951
- Human Resources Development Act 1992
- Human Rights Commission of Malaysia Act 1999
- Immigration Act 1959/63
- Industrial Relations Act 1967
- Malaysian Estate Staff Provident Fund Ordinance 1947
- National Wages Consultative Council Act 2011
- Occupational Safety and Health Act 1994
- Pesticides Act 1974
- Poisons (Agricultural and Industrial) Ordinance (Sarawak Cap.99)
- Private Employment Agencies Act 1981
- Protection of Workers Ordinance 1939
- Trade Unions Act 1959
- Wages Council Act 1947
- Workers’ Minimum Standards of Housing and Amenities Act 1990
- Workmen’s Compensation Act 1952

In addition to the above, the states of Sabah and Sarawak have state-level labor enactments and ordinances that are not fully equivalent to those in force in Peninsular Malaysia.

Evidence of Non-Compliance

Overview

Evidence of illegalities in forest clearance for large-scale commercial plantations comes from direct and indirect sources. Direct sources include assessing the number of forest offences that are alleged, reported and successfully prosecuted. Using direct methods, based on official forestry department reports, studies by WWF and the World Bank in 2001 found that Malaysia's legislative framework and political scenario provides adequate support for effective forest law enforcement, with the level of illegal logging (from selective felling and forest conversion) being "small (in the order of 1% or less) compared to the legal wood products trade."³⁵ A study funded by the American Forest & Paper Association in November 2004 (also looking at both selective- and clear-felling) stated that "NGO allegations of illegal domestic forest activity in Malaysia are likely overstated as regulations for timber operators and companies appear to be well-enforced."³⁶

Similarly, in response to alleged reports of "large scale and rampant illegal felling of timber" in the state of Sabah, the state Forestry Department director acknowledged that illegal felling did exist in Sabah but "nowhere near the scale and extent as allegedly reported."³⁷ The director justified this statement by referring to third-party auditing that was being carried out under the Malaysia-EU Timber Legality Assurance Programme (TLAS), claiming that "independent auditors would have detected such large-scale illegal felling." This statement interpreted reports of illegal logging in Sabah as being focused on unlicensed tree "felling" and responded accordingly by denying that such activities were a problem, the statement did not address concerns of illegalities related to large scale forest conversion by licensed companies. "Illegal felling" (as opposed to "illegal logging") appears to refer to unlicensed selective harvesting rather than clearfelling. Large-scale commercial clearfelling of natural forest for plantations in Sabah and elsewhere in Malaysia is indeed generally in compliance with the bureaucratic aspects of the legislation such as the requirements to obtain a license under the forestry statutes.

One indirect method used to suggest that illegalities exist in the supply of timber generally is mass-balance accounting. A Chatham House study found that wood-balance analyses for several years between 2001 and 2007 concluded that between 22-29% of Malaysian timber consumption and exports for these years could not be accounted for by legal domestic production and legal imports. It suggested that the balance had "in all probability" been "acquired illegally through either timber theft or smuggling from abroad" and that "illegal logging in Malaysia may be more prevalent than earlier though."³⁸ The combination of these studies with expert surveys concluded that illegal logging (both selective felling and clearance for plantations) remains a major problem in Malaysia with illegal harvesting being between 14-25% of total log production.³⁹

These mass-balance calculations looked at the timber supply and demand as a whole and did not provide separate estimates for timber from the clearance for large-scale commercial plantations. However, the Chatham House study did note that "plantation-grown rubberwood" is "unlikely to have been harvested illegally" — that is to say it was unlikely to have been sourced from "outright illegal logging" such as production from unlicensed areas or having been smuggled in from abroad.⁴⁰ Nevertheless, the same study did acknowledge that "less easily detected types of illegality" such as the "illegal issuance of licenses for forest clearance for agricultural or tree plantations" "now appear to represent the bulk of illegal logging in Malaysia". It is noted that such

³⁵ Blakeney (2001); Rusli and Amat (2001).

³⁶ STA (2009).

³⁷ Sam Mannan. Illegal felling claims will harm conservation efforts. Sabah Forestry Department Director, Press statement, Sep 7, 2012.

³⁸ Studies by D.W. Brown noted in Lawson and MacFaul (2010).

³⁹ Lawson and MacFaul (2010).

⁴⁰ Ibid.

infractions will not be captured by a wood-balance analysis and revenue and enforcement indicators would also fail to reveal them.⁴¹

Malaysian NGOs have also emphasized the importance of not confining the definition of “illegal logging” too narrowly:

“Mere compliance with national laws on logging does not mean compliance with higher standards of social and environmental sustainability. If you think about it, the concentration camps during the Holocaust were deemed to be legal then.”⁴²

NGOs have highlighted that defining legality based on statutes alone does not give adequate attention to the rights of indigenous people:

“The question of legality, as far as indigenous peoples are concerned, must be able to meaningfully resolve issues of their native rights at three levels. First, there are clear inadequacies in the land and forest related legislation in the different states, which allow logging and plantation licenses to be established on indigenous communities’ customary land without their free, prior and informed consent; secondly, the inability of the laws to establish mechanisms for resolving conflicts between the industry and indigenous communities; and lastly, the lack of transparency and openness in the issuance of such licenses.”⁴³

In summary, there are several types of illegality which do not usually occur in large-scale forest clearance in Malaysia. Operations generally have the requisite licenses from the forestry authorities and are usually in compliance with the relevant land laws (such as the need to pay land premiums). Operations are also broadly in compliance with the need to pay royalties per cubic meter of timber harvested. Plantation company staff generally comply with the criminal and penal codes and rarely take the law into their own hands. Similarly, the requirements to obtain an EIA are generally met if this is required by the environmental authorities.

On the other hand, the key types of illegality that are identified by the present study can be broadly grouped into the categories of corruption, violation of native customary rights (NCR), planning laws, labor laws and the implementation of forestry and environmental protection laws on the ground.

Corruption

In Malaysia, the Anti-Corruption Act includes strong penalties for corruption-related offences but few logging-related cases have been successfully prosecuted. The Malaysian Anti-Corruption Commission (MACC) has announced that it is giving special attention to illegal logging⁴⁴ and there have been a number of reported arrests of corrupt forest officials in Peninsular Malaysia. MACC has even participated in events organized by Transparency International Malaysia to highlight the importance of good forest governance.

Nevertheless, there is still a very high level of perceived corruption in Malaysia — especially related to the granting of land concessions by state governments. Numerous studies suggest that the main beneficiaries of concessions are politicians associated with state executives, their relatives, proxies, cronies and businessmen who have “bought” influence through “unrecorded payments to state officials, their proxies and the ruling political party.”⁴⁵

⁴¹ Ibid.

⁴² JOANGOHutan. Undated brochure (c. 2005). “Certifying Legal Timber First: But is Legality Enough?”. Network of Indigenous Peoples and Non-Governmental Organisations on Forest Issues, Subang Jaya.

⁴³ Yong (2006).

⁴⁴ ‘ACA will be more aggressive in combating corruption – DG’, Bernama, 17 April 2008; the Anti-Corruption Agency (ACA) has since been renamed the Malaysian Anti-Corruption Commission (MACC). MACC announced an initiative on illegal logging in early 2009 (‘MACC gets tough on environmental criminals’, New Straits Times, 28 January 2009).

⁴⁵ Jomo et al. (2003), WRM (1998).

In particular, there have been extensive allegations of corruption against the chief ministers of Sabah and Sarawak in the form of kickbacks and cronyism connected with the clearance of natural forest for plantations.⁴⁶ The high level corruption in the system allegedly “encourages corruption and illegal logging owing to the lack of accountability of the concessionaires and loggers.”⁴⁷ On the other hand, the fact that corruption is tolerated in the upper echelons means that mixed signals are being given to enforcers on the ground who are often not very well remunerated and “it is acknowledged that bribery takes place” at the enforcement level as well.⁴⁸

This report reviewed 52 cases of allegedly unlawful forest clearance for plantations in Malaysia (listed in Appendix I), of which 38 included allegations of corruption. Most of these cases were reported to involve political patronage, cronyism and nepotism by those involved in issuing land grants and licenses to clear forest for plantations. These decision makers usually were the chief ministers of the states concerned. Particularly numerous allegations being made against the chief ministers of Sabah and Sarawak. The MACC has opened files on these cases which have “yet to be resolved.”⁴⁹

Violation of Native Customary Rights (NCR)

NGOs argue that for forest governance and legality processes to be successful, they “must lead to Malaysia’s ensuring that its forest management system places not technical issues as its supreme guiding principles but rights, justice and equality”.⁵⁰ These processes, therefore, “must not shy away from addressing the customary land rights issue but instead show a determination to take the lead in resolving this key area of concern.”⁵¹

In 2006 the NGOs pointed out that “With over 150 land rights cases pending and few landmark judgments to provide clarity on the issue, the legality of the current concession system is in serious doubt.”⁵² There are presently around 200 cases now pending in the Sarawak courts related to conflict over NCR land.⁵³ Some of these cases are more than ten years old and new cases are being filed every year at a faster rate than the old cases are being dealt with.⁵⁴ NCR conflicts are a feature in almost every new plantation project in Malaysia, with the situation being particularly serious in the states of Kelantan and Sarawak.

The plantation and timber industry acknowledges that the laws regarding native customary rights in Malaysia are complex and problematic. In particular, the Sarawak Timber Association has admitted that governance reforms in that state in relation to native customary laws and native rights over land are “a lengthy process which lies beyond the ability of the industry to resolve individually.”⁵⁵

In Sarawak, the political opposition parties have identified that forest clearance for large-scale commercial plantations (mostly oil palm) controlled by outsiders and flooding for dams are the two main issues for local communities (see **Figure 8** on the next page and **Appendix I**).

⁴⁶ WRM (1998), Sarawak Report (2012): see Appendix I for list of specific cases.

⁴⁷ Jomo et al. (2003).

⁴⁸ Ibid.

⁴⁹ Pathmawathy (2012).

⁵⁰ Yong (2006).

⁵¹ Ibid.

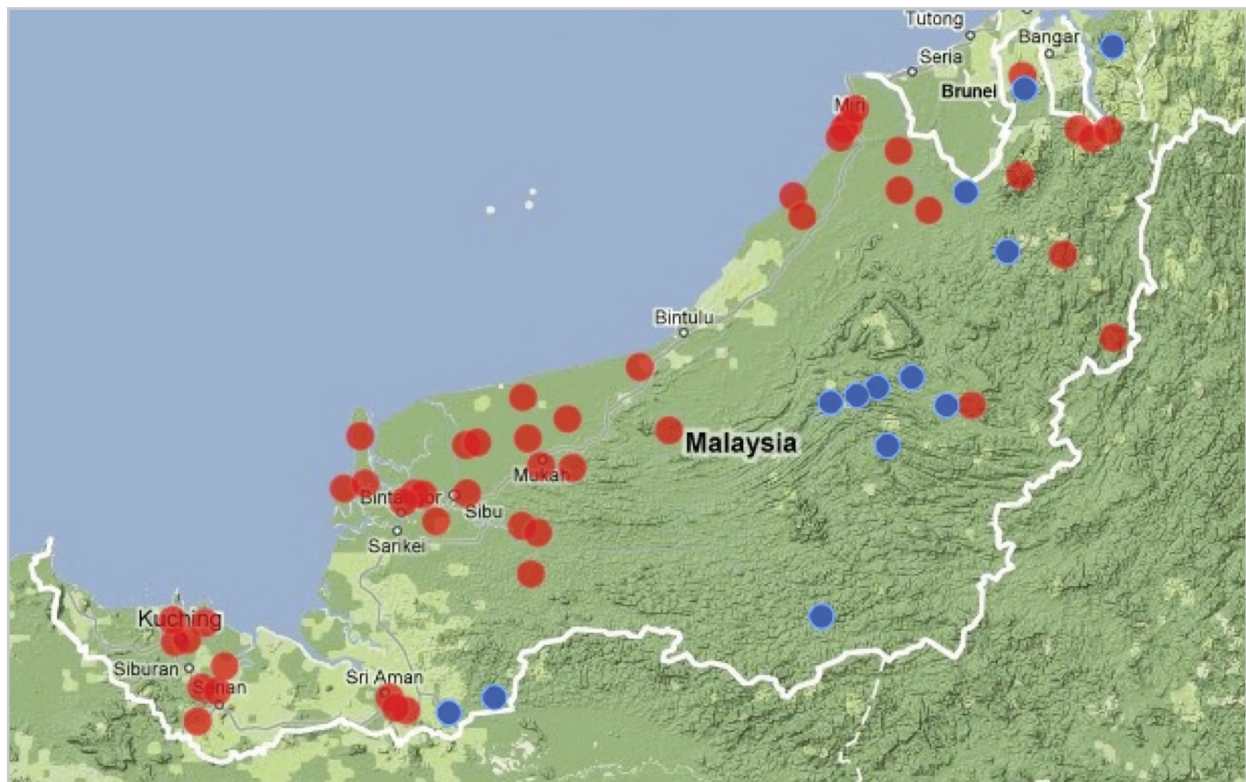
⁵² Ibid.

⁵³ “Another NCR land development failure”, The Broken Shield <<http://thebrokenshield.blogspot.com/>>, May 7, 2012.

⁵⁴ E.g. writ of summons against Samling Timber Company in the high court in Sabah and Sarawak at Miri in the State of Sarawak, Suit No. 22-46-98 (MR), 8 May 1998.

⁵⁵ STA (2009).

Figure 8. “Land Grab” Map Showing Controversial Oil Palm Plantation and Dam Projects⁵⁶



Note: Oil Palm Plantations shown in red; dam projects shown in blue.

In one prominent case, several NGOs and the local community of Long Teran Kanan, Tinjar, Sarawak, alleged that a large oil palm plantation company had violated their native customary land, engaged in illegal deforestation and failed to comply with a court ruling that the company should compensate the community for illegitimately occupying their NCR land.⁵⁷

The continued logging and development of large-scale commercial plantations on this land has been characterized as “theft” and “forest crime” by some native community representatives and NGOs.⁵⁸ There have been frequent allegations of human rights abuses perpetrated by the police and security forces against native communities in conflict with timber and plantation companies including “beatings, detention and ill-treatment in custody.”⁵⁹ Native groups often complain that large-scale commercial forest clearance pollutes their water sources and destroys fish populations in their customary lands.⁶⁰

Another case involves the residents of Kg. Tapat, Beluran, Sabah in a conflict with the Hibumas 2 oil palm estate concerning the ownership and use of their native customary land. The company allegedly destroyed community graves and farms during land clearing for new plantings in 2003, causing about 20 villagers to set up a blockade to halt further intrusion. As a result, the company brought in the police force to allegedly intimidate and scare protestors into abandoning their blockade. Villagers received a letter from the company in 2005 stating that the company would not destroy existing community graves and farms, but nevertheless the

⁵⁶ Sarawak Report, 2011, “We Release the Land Grab Data”, 19 March. An interactive version of this map is published here: <<http://map.sarawakreport.org/>>.

⁵⁷ D. Webber (RSPO Sec Gen) in lit. 3 May 2012.

⁵⁸ IDEAL (2000); GPI (2004).

⁵⁹ Global Witness (2011), WRM (1998).

⁶⁰ e.g. Dying tribe takes on timber giants over lost habitat, *The Times*, 5 May 2006, <http://www.timesonline.co.uk/tol/news/world/asia/article713387>.

villagers allege that further areas were cleared in 2008.⁶¹

A similar case occurred in September and October 2009 when native communities in Sarawak organized road blockades near their villages. They wanted to protect their forests from large-scale commercial plantation companies but instead several of the protestors were arrested.⁶² Ondie anak Jugah, 55, was arrested on suspicion of ‘masterminding’ a blockade at Rumah Umping Lepong in Balleh, Kapit, Sarawak, after three reports were made by the logging company, Melukun Sdn Bhd.⁶³

A total of 15 of the 52 cases listed in Appendix I are known to have allegations of violation of NCR laws. However, this report has not managed to get many details for many of these cases and it is likely that most of the other cases also have an NCR dimension that has yet to be publicized.

Violation of Planning Laws

The National Physical Plan and the various development plans under its jurisdiction give extensive provision for forest protection through the spatial zonation of the country’s protected areas. However, in practice there appear to be extensive and regular breaches of these provisions. In this report six prominent cases have been identified (Appendix I) in which state forestry departments issued permits for large-scale forest clearance in violation of the “Environmentally Sensitive Area” status of the area as designated by the development plans. The Department of Town and Country Planning is rarely consulted before the decision is made to proceed with conversion to plantations inside forest reserves.

The “National Physical Plan” only applies to Peninsular Malaysia. Of the six cases identified where there have been alleged breaches of the planning laws, all are in Peninsular Malaysia. The lack of allegations of breaches of planning laws in Sabah and Sarawak are due to the fact that the Town and Country Planning Act 1976 does not apply to those states and the lack of sophisticated and legally binding environmental provisions in the spatial plans for those states.

Violation of Labor Laws

A significant share of the workforce in Malaysia comprises legal and illegal foreign workers from Indonesia, Bangladesh and the Philippines.⁶⁴ One estimate indicates that there were or are more than 800,000 illegal workers in Malaysia.⁶⁵ The presence of illegal workers often signifies that other labor-related laws are ignored. For example, the quality of the housing and amenities available to fieldworkers often falls short of the standard prescribed by law. One study finds that more than 35% of estate families live in houses that do not meet the basic minimum requirement, regulated by the Workers Minimum Standards of Housing and Amenities Act 1990.⁶⁶

Violation of Environmental Protection Laws

As noted in section 3.14 (above), the law requires environmental impact assessments (EIAs) be carried out for large-scale forest clearance. In Peninsular Malaysia, very few EIAs for forest clearance for LTC and OPP have actually been produced since the Department of Environment rarely enforces this requirement and the Forestry Department deliberately facilitates projects to circumvent the EIA requirement by issuing

⁶¹ Vlist and Heringa (2010).

⁶² Press releases by The Bruno Manser Fonds (various news bulletins), 2009.

⁶³ News release Sarawak Dayak Iban Association (SADIA) October 23th, 2009.

⁶⁴ Wakker (2005).

⁶⁵ The Oil Palm Plantation Worker in Peninsular Malaysia: Trends and Problems. Gaku Takayama and Tomomi Matsubara. 2001.

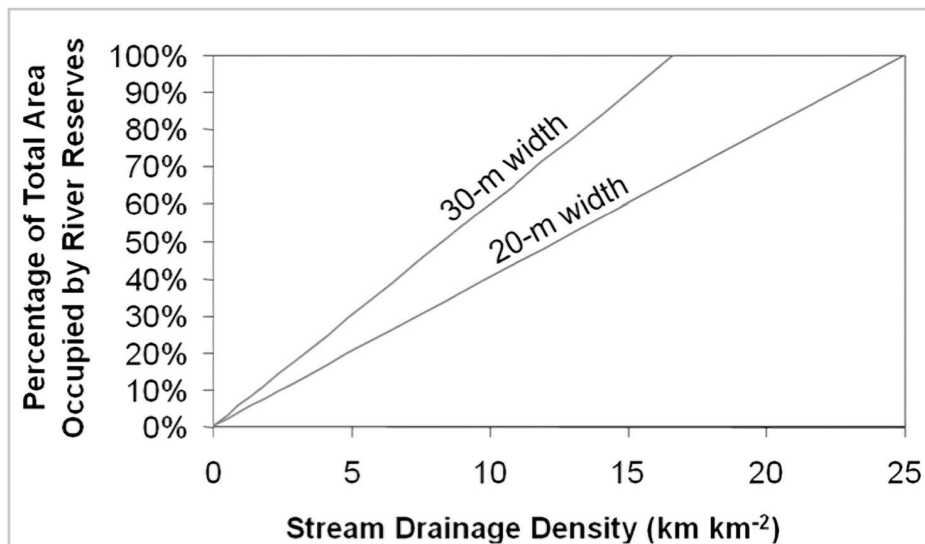
⁶⁶ Lyngkaran (1995).

licenses below the 500 ha threshold (even though the total project area is much larger such as in the Ladang Umno case⁶⁷). Recent audits by the Malaysian Auditor General and reports in local newspapers have highlighted six prominent cases in Peninsular Malaysia where the Environmental Quality Act 1974 is alleged to have been flouted by failure to produce an EIA or failure to comply with prescribed mitigating measures (**Appendix I**).

In Sabah and Sarawak most forest conversion projects do produce EIAs. In Sabah, it is estimated that about 80% of oil palm plantations submit EIAs for new plantings and some companies apply for EIAs retrospectively (after the forest has been felled).⁶⁸ Around 90% of EIAs submitted are eventually approved with a number of mitigation measures prescribed.

However, in practice, there is considerable non-compliance with mitigation due to ambiguities regarding the implementation of these measures. Given a fixed plot of land with fixed sales prices and land premiums being payable, river reserves reduce the profit of the plantation company. Minor increases in the width of river reserves or the method of demarcation would cause a plantation company to forgo millions of ringgit in lost revenue from harvesting timber and also harvesting future plantation crops (see **Figure 9**).

Figure 9. Relationship Between Net harvestable Area and River Reserve Width Given Various Drainage Density Scenarios

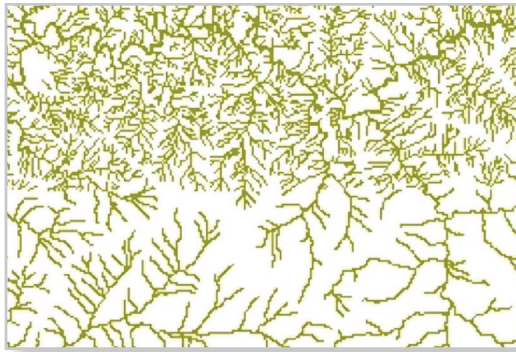


At the extreme, applying the letter of the law could result in the reduction of net operable area to zero. This is because some areas of Malaysia have an exceptionally high rainfall which leads to the presence of a great number of streams. A study in Danum Valley, Sabah, found a drainage density of 20 km per km² (Walsh and Bidin, 1995) — at this rate, 30-m wide buffers would not leave any harvestable area left; even 20-m buffers would cover 80% of the area.

Given such a scenario and the ambiguities of the law, proponents naturally attempt to minimize the area of river reserves on their land. Environmental consultants are under pressure to underreport the extent of rivers on a project area. This can result in the use of maps digitized from low-resolution originals which under-state the drainage density (**Figure 10**). In addition, small streams on the ground are often bulldozed over rather than protected. River reserves are even ignored along the banks of Sabah's largest river, the Sungai Kinabatangan, where smallholders have often cleared the forest and planted oil palm right up to the water's edge.

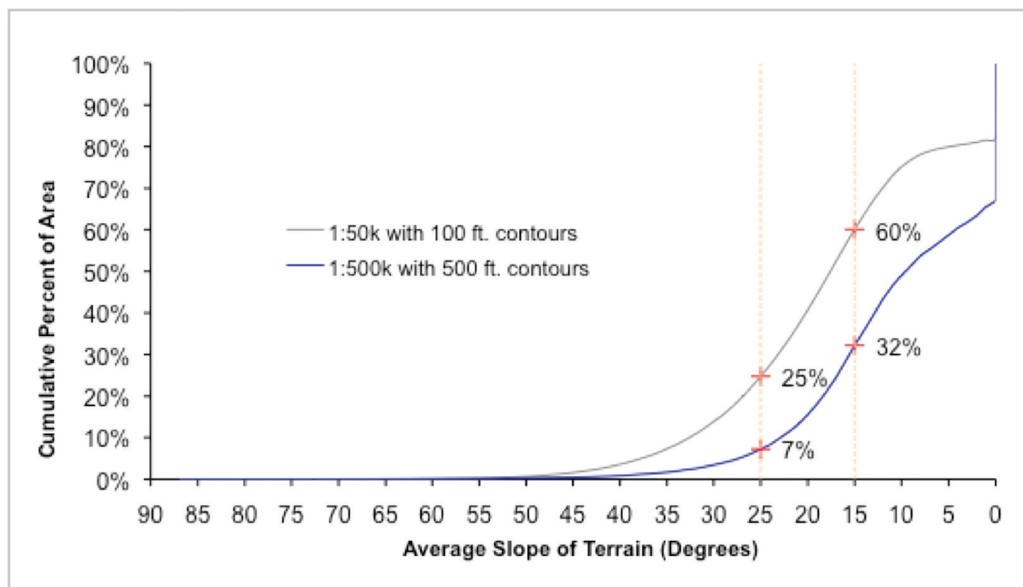
⁶⁷ Beh, L.Y. 2003, "DOE has no explanation why EIA not done on Ladang Umno", Malaysiakini, 20 August.

⁶⁸ Unpublished 2010 study by Resource Stewardship Consultants Sdn Bhd.

Figure 10. A Map of Streams⁶⁹

Source: Part of the Papar Catchment, Sabah (DID, 2003).

A situation similar to that of river buffers is found with slope protection, another measure designed primarily to mitigate against soil erosion. Environmental license conditions usually limit plantation development and conventional bulldozer extraction to project areas with terrain slopes of less than 15°; in some cases no tree felling is permitted in areas with slopes above 25°. However, as with river buffers, slope protection areas subtract from the total operable area and if implemented according to the letter of the law would make many project sites unprofitable. This leads proponents to pressure environmental consultants to underreport the steepness of project sites. A similar trick of using low-resolution maps is used to make the terrain of project sites appear flatter (**Figure 11**).

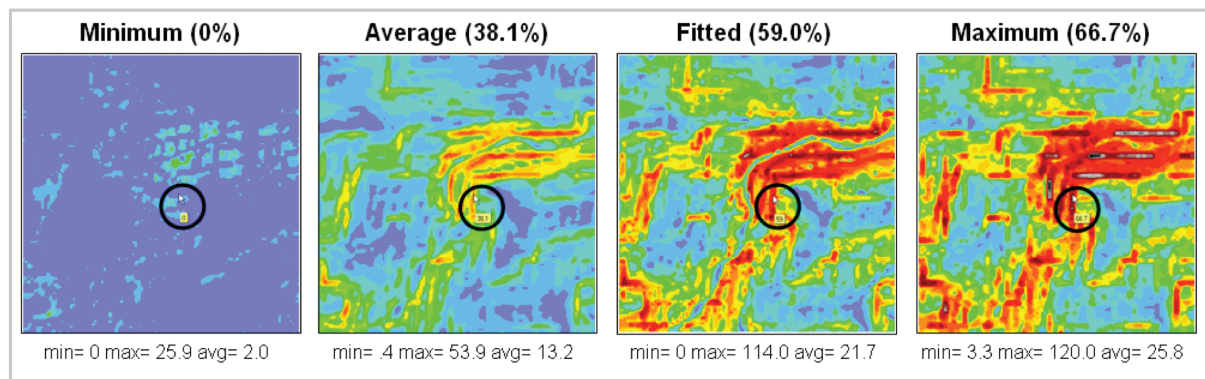
Figure 11. Cumulative Slope Distribution for Tambunan Catchment, Sabah⁷⁰

In addition to using low-resolution maps, another trick used by some environmental consultants is to change the algorithm used to develop slope maps for a project site. Most slope maps are developed using grid-type Digital Elevation Models (DEMs). However, no standard procedure is prescribed and a variety of options are available, with each choice of slope calculation method resulting in significantly different proportions of a project site being zoned for protection (**Figure 12**). Furthermore, the demarcation of steep areas on the ground is problematic.

⁶⁹ Digitized From on 1:50k Scale Maps (top) and 1:500k Scale Maps (bottom).

⁷⁰ Digitized from 1:50k Scale Maps and from 1:500k Scale Maps (DID, 2003)

Figure 12. Slope Maps for the Same Area using Different Terrain Slope Algorithms (Hickey 2000)



The environmental authorities face a number of challenges in enforcing the mitigation measures highlighted above. They recognize that streams and slopes identified by 1:50k scale maps inadequately represent the reality on the ground. However, the maximum fine for non-compliance is limited (in Sabah this is only RM20,000 per compliance audit visit). Such fines are hardly a deterrent when the additional revenue gained by non-compliance can be in the order of hundreds of millions of ringgit. Sabah's EPD has only 13 enforcement officers to monitor more than 300 active projects.

Recommendations for Further Research

Overview

Further research in Malaysia relevant to forest clearance for large-scale commercial plantations includes activities in the following four areas:

- additional research into known or suspected cases of illegalities/irregularities
- additional research into scale and nature of development of a specific commodity
- additional research into the legal and regulatory arrangements governing development of a specific commodity
- any other relevant research considered worthwhile

Specific recommendations are highlighted below.

Cases

Additional research should include an exercise to obtain maps of known forest clearance plans (both specific concession maps as well as district- and state-level maps. Under the provisions of the MTCC timber certification system the state forestry departments are required to demonstrate transparency for proposed logging activities. These maps of planned plantations can then be overlain with the maps of areas for which special provisions are given by law:

- areas zoned for protection under the National Physical Plan;
- areas for which EIAs may be required under the prescribed activity list (e.g., in Peninsular Malaysia, location of hill forest land, location of catchment area of reservoirs used for municipal water supply, irrigation or hydropower generation; and location of state and national parks); and
- areas which are claimed as NCR land.

Such a mapping exercise could be carried out on two levels. A top-level assessment can be made for each of the three regions (Peninsular Malaysia, Sabah and Sarawak). In addition, a local-level assessment can be made for a prominent case study in each region.

For areas where EIAs have been produced, additional research could include a systematic ground assessment of sample concessions of whether EIA requirements were actually being followed in individual concessions — e.g. whether buffer zones are being respected, pollution control and monitoring measures implemented, etc.

Commodities

As noted, there is ongoing conversion of natural forest to timber plantations. In Peninsular Malaysia MTCC has announced that this can be up to 5% of the area of existing forests. However, details on the location of planned conversion areas is not yet available. Additional research should be made into the scale and nature of the development of timber plantations (particularly LTC plantations) in Peninsular Malaysia, with a special emphasis on identifying which existing forest reserves and NCR areas are planned to be converted to these plantations.

Legal Arrangements

Several aspects of the legal and regulatory arrangement governing the development of industrial tree plantations deserve additional research. In particular, the question of whether rubber plantations and oil palm plantations can be permitted inside forest reserves needs to be examined in more detail. This appears to be a gray area, with the authorities granting permission on an ad hoc basis, but further research is needed to clarify the legal basis for this.

Another issue relates to the legal basis for the constituting of forest reserves with the free and prior informed consent of local communities. In Sarawak, this process results in the extinguishment of the NCR inside the forest reserves. It would be worth researching whether the existing process of gazette notification can be considered an adequate legal justification for extinguishing the NCR, or whether additional steps to inform local communities are required before NCR can be said to have been lawfully extinguished.

Other Research

Further research can be carried out on the legal basis for NCR rights inside forest reserves. It is known that many forest reserves (especially those constituted pre-1984 in Peninsular Malaysia and Sabah) have explicit provisions for granting NCR to local communities inside the reserves (this is stated in the gazette notification of each forest reserve). However, the extent of these NCR rights does not appear to have been systematically compiled for the approximately 200 forest reserves in Peninsular Malaysia. WWF Malaysia has already assembled the relevant gazette notifications and what would be needed for the relevant NCR information to be entered into a database and eventually put into a GIS.

To follow up on such an exercise, further ground-truthing would be needed to determine whether local communities are still actually exerting NCR in such forest reserves. The findings of a recent national-level inquiry by the national human rights commission (SUHAKAM) can be examined to see how the complaints made tally to the provisions of the forest reserve gazette notifications.

Some states (such as the State of Selangor) have made a start on the NCR projects highlighted here but no national-level (or at least Peninsular-level) exercise has been attempted. The lack of this information is one reason for the high level of conflict when it comes to the development of plantation projects on forest land.

Bibliography

- Ansari, A.H. (2004). 'Legal Issues in Forest Management in India and Malaysia: A Critical Appraisal'. Malayan Law Journal. [2004] 2 MLJ liii.
- Asia Times. (2003). The Price of Malaysia's Palm Oil Expansion. The Asia Times Online, May 3, 2003.
- Blakeney, J. (2001). Overview of Forest Law Enforcement in East Malaysia. WWF Malaysia, Petaling Jaya. 18 pp.
- Blakeney, J. (2001). Overview of Forest Law Enforcement in East Malaysia. WWF Malaysia, Petaling Jaya. 18 pp.
- Callister, D.J. (1992), Illegal Tropical Timber Trade: Asia Pacific. A TRAFFIC Network Report, Cambridge UK: TRAFFIC International. 83 pp.
- Chemsain (2005). Special Environmental Impact Assessment (SEIA) for "Proposed Oil Palm Plantation (OPP) and Industrial Tree Plantation (ITP) Development At Benta Wawasan I and Benta Wawasan IIC, Yayasan Sabah Forest Management Area, Kalabakan and Gunung Rara Forest Reserves, Tawau District, Sabah". Jabatan Perlindungan Alam Sekitar, Kota Kinabalu, 2005. Chemsain Konsultant Sdn. Bhd CK/ EV103-370/04., p. C1-1.
- Chen, H.K. (2004). Report on Forest Law Enforcement and Governance in Malaysia in the Context of Sustainable Forest Management. TRAFFIC International, Cambridge. Paper prepared for the Government of Malaysia for submission to ITTO at the 37th Session of the International Timber Trade Council, 13–18 December. 27 pp.
- Chin, J. (2011). Sarawak's palm oil industry: the next catalyst for growth. Borneo Post (Sarawak), September 18.
- DID (2003). *Review of existing management measures for logging activities with respect to impact on water resources in Sabah*. DID/WRS Background Paper 2004/2. Capacity Building for Integrated Catchment Planning. Water Resource Section, Department of Irrigation and Drainage, Sabah, Malaysia
- FAO. (1998). Forest Resource Assessment 2000. Food and Agriculture Organization of the United Nations, Rome.
- FDPM (2012). Annual Report 2011. Forestry Department Peninsular Malaysia, Ministry of Natural Resources and Environment. Kuala Lumpur. 192 pp.
- Global Witness. (2011). Pandering to the loggers: why WWF's Global Forest and Trade Network isn't working. Global Witness, London. 24 pp.
- GPI (2004). The Untouchables: Rimbunan Hijau's world of forest crime and political patronage. Amsterdam: Greenpeace International.
- Hartley, C.W.S. (1988). The Oil Palm. 3rd ed. Longman, London. 761pp
- Hickey, R. (2000). Slope angle and slope length solutions for GIS. *Cartography*, 29(1): 1-8.
- Hickling, R. H. (2001). Malaysian Law: An Introduction to the Concept of Law in Malaysia. Pelanduk: Kuala Lumpur. 231 pp.
- Hong, C. (2012). Sabah government goes into oil palm. The Straits Times (Singapore), 10 July.
- IDEAL (2000). *Not Development but Theft – The testimony of Penan Communities in Sarawak*. Sibui: IDEAL.
- JAWIC. (2005). Study on Impact of Forest & Environmental Policy on Forest Products Sector of Malaysia. Japan Wood Products Information and Research Center (JAWIC), Tokyo.

- Jomo, K. S., Chang, Y. T., Khoo, K. J. et al. (2004). *Deforesting Malaysia — The Political Economy and Social Ecology of Agricultural Expansion and Commercial Logging*. London and Geneva: Zed Books and UNRISD. 253 pp.
- Jukka Miettinen, Chenchua Shi and Soo Chin Liew. (2011). Deforestation rates in insular Southeast Asia between 2000 and 2010. *Global Change Biology* 17, 2261–2270.
- Koh, L.P. & Wilcove, D.S. (2008). “Is oil palm agriculture really destroying tropical biodiversity?”, *Conservation Letters*, Volume 1, Issue 2, pp. 60-64.
- Lawson, S. and MacFaul, L. (2010), *Illegal Logging and Related Trade: indicators of the global response*. London: Chatham House. 132 pp.
- Lian Pin Koh, Jukka Miettinen, Soo Chin Liew, and Jaboury Ghazoul. (2011). Remotely sensed evidence of tropical peatland conversion to oil palm. *Proceedings of the National Academy of Sciences of the United States of America*, 108: 5127-5132.
- Lim Kit Siang. (1987). DAP proposes a one-year moratorium for all political parties where no racial, language, cultural or religious issues will be created or raised for every Malaysian to concentrate on the national priority of achieving economic recovery and growth. Speech by Parliamentary Opposition Leader, DAP Secretary-General and MP for Tanjung in the Dewan Rakyat on Monday, Oct. 26, 1987 on the 1988 Budget. <http://bibliotheca.limkitsiang.com/>.
- Lim, T.W. (2011). A Critical Review of Forest Regulatory Frameworks and their Implementation in Malaysia: The Impact of Recent Reforms on Forest-Dependent People, with Special Reference to Revisions of the Sarawak Land Code 1958. pp. 51-57. In: Scheyvens, H. (ed). *Critical Review of Selected Forest-Related Regulatory Initiatives: Applying a Rights Perspective*. Institute for Global Environmental Strategies (IGES), Japan.
- Lyngkaran, N. (1995). Estate health and vision 2020: Plenary lecture. In J. Devaraj & J. Nadarajah (Eds.), *Estate health and vision 2020, Proceedings for the seminar on estate health and vision 2020* (pp. 1-7). Kuala Lumpur: MMA
- Majid Cooke, Fadzilah (1999). *The Challenge of Sustainable Forests: Forest Resource Policy in Malaysia, 1970–1995*. Sydney and Honolulu: Allen & Unwin and University of Hawaii Press.
- MPOB. (2011). Malaysian Palm Oil Board <www.mpob.gov.my>
- MTC. (2011). *Malaysia: Forestry & Environment (Facts & Figures)*. Malaysian Timber Council, Kuala Lumpur. 36 pp.
- Pathmawathy, S. (2012). Probes against Taib, Musa ‘yet to be resolved’. *Malaysiakini*, 31 May.
- Rusli Mohd and Amat Ramsa Yaman (2001). *Overview of Forest Law Enforcement in Peninsular Malaysia*. WWF Malaysia, Petaling Jaya. 17 pp.
- SAM. (2007). *Sarawak Indigenous Communities: Background Situation and Challenges*. Briefing Paper III. Submission for the European Union delegation for Forest, Law, Governance and Trade (FLEGT). Sahabat Alam Malaysia - Friends of the Earth, Malaysia, January 17.
- SarVision. (2011a). *Impact of oil palm plantations on peatland conversion in Sarawak 2005-2010*. Summary report dated 25 January 2011. SarVision, Wageningen. 14 pp.
- SarVision. (2011b). *Rapid Assessment of Deforestation in Peninsular Malaysia 2007-2010*. Final summary report dated 19 April 2011. SarVision, Wageningen. 7 pp.
- SFD. (2011). *Sabah Forestry Department Annual Report 2010*. Sabah Forestry Department, Sandakan.
- STA. (2009). *Myth, facts & reality of EU FLEGT VPA: Sarawak’s perspective*. Sarawak Timber Association, Kuching. 98 pp.

- Teoh Cheng Hai. (2002). The Palm Oil Industry in Malaysia: From Seed to Frying Pan. WWF Switzerland.
- Vlist, L. van der and S. Heringa. (2010). Impacts of the Dutch economy on indigenous peoples: the import of soy from Brazil and palm oil and tropical timber from Indonesia and Malaysia. Netherlands Centre for Indigenous Peoples (NCIV), Amsterdam. 81 pp.
- Wakker, E. (2005). Greasy palms: The social and ecological impacts of large-scale oil palm plantation development in Southeast Asia. Friends of the Earth, London. 52 pp.
- Wakker, E. (2010). Rubbery Certification: A Critical Review of the Endorsement of the Malaysian Timber Certification System (MTCS) by the Dutch Timber Procurement Assessment Committee (TPAC). Amsterdam: Aidenvironment. 126 pp.
- WRM (1998). High Stakes: The Need to Control Transnational Logging Companies: a Malaysian Case Study. Montevideo and London: World Rainforest Movement and Forest Monitor. 57 pp.
- Yap, J. (2012). S'wak moving towards pulp, paper industries. Borneo Post (Sarawak) November 28.
- Yong, C. (2006). Forest governance in Malaysia, an NGO perspective: recommendations for a Voluntary Partnership Agreement with the EU. JOANGO Hutan for FERN, Moreton in Marsh. 39 pp.

Appendix I. Selected Cases of Allegedly Unlawful Forest Clearance for Plantations in Malaysia

Location	Allegations	Plantation	Source
Various localities, Kelantan	Violation of EQA, NFA	OPP, ITP, LTC	Wakker, 2010: National Auditor report Kelantan, 2008
Lesong Forest Reserve, Pahang	Violation of EQA, NFA	ITP	Wakker, 2010
Ladang Umno, Nenasi, Pahang	Violation of NLC, EQA, TCPA, Corruption	OPP	Beh, 2003, "DOE has no explanation why EIA not done on Ladang Umno", Malaysiakini, 20 August.
Besul FR, Dungun, Terengganu	Violation of NFA	OPP	Wakker, 2010; Jabatan Audit Negara, 31 December 2008
Sungai Jelok FR, Selangor	Violation of EQA, TCPA	LTC	Wakker, 2010; Jabatan Audit Negara, 2009
Rantau Panjang & Bukit Tarek FR, Selangor	Violation of NFA, Corruption	LTC	Wakker, 2010; Jabatan Audit Negara, 2008
Kluang FR, Johor	Violation of NFA	OPP, LTC	Wakker, 2010: National Auditor report 19 February 2009
Semberong FR, Johor	Violation of EQA, TCPA	LTC	Wakker, 2010; Jabatan Audit Negara, 2008
Labis Timur FR, Johor	Violation of TCPA, Corruption	LTC	Chiew, 2009 "Broken Spine" The Star, 31 March
Kg Guling, Gua Musang, Kelantan	Violation of NCR	LTC	Lai, 2012 "Orang asli in dire straits", The Star, 28 December.
Kuala Betis, Gua Musang, Kelantan	Violation of NCR	OPP, LTC	Aw, 2012 "K'tan Orang Asli Land", Malaysiakini, 28 December.
Lojing, Gua Musang, Kelantan	Violation of TCPA, EQA	OPP, LTC	New Straits Times, 2007 "Lojing Highlands loggers 'did not break law'", 19 September.
Jeram Padang FR, Negeri Sembilan	Violation of TCPA, Corruption	OPP	Rafizi & Kumar, 2012 "Skandal Pengurusan Tanah Negeri Sembilan", Press Release 23 October.
Sipitang, Sabah	Corruption	ITP	Brown, 2001, "Why Governments Fail to Capture Economic Rent: The Unofficial Appropriation of Rain Forest Rent by Rulers In Insular Southeast Asia Between 1970 and 1999", University of Washington PhD Thesis
Setuan, Sarawak	Corruption	OPP	Pengayau, op. cit.
Sungai Takan & Nyatak, Tatau, Sarawak	Corruption	OPP	Pengayau, op. cit.
Ulu Mukah, Sarawak	Violation of NCR, Corruption	OPP	Sarawak Report, 2011, "Taib's Balingian is the Epicentre of his Land Grab Corruption", March 16.

Location	Allegations	Plantation	Source
Sungai Bawan, Sarawak	Corruption	OPP	Pengayau, op. cit.
Sungai Sikat, Mukah, Sarawak	Corruption	OPP	Pengayau, op. cit.
Kenyana, Sarawak	Corruption	OPP	Pengayau, op. cit.
Sungai Retus, Sarawak	Corruption	OPP	Pengayau, op. cit.
Batang Lebaan, Sibu, Sarawak	Corruption	OPP	Pengayau, op. cit.
Batang Lassa, Sarawak	Corruption	OPP	Pengayau, op. cit.
Jin Matu, Daro, Sarawak	Corruption	OPP	Pengayau, op. cit.
Pulau Bruit, Sarawak	Corruption	OPP	Sarawak Report, 2012, "Hii Family Connection to Asia Plywood and Taib Family", 2 Feb.
Palo, Sarawak	Corruption	OPP	Pengayau, op. cit.
Sungai Machan Tengah, Sarawak	Corruption	OPP	Pengayau, op. cit.
Sungai Selepong, Sarawak	Corruption	OPP	Pengayau, op. cit.
Sri Aman, Sarawak	Violation of NCR, Corruption	OPP	Sarawak Report, 2012, "Spotlight on Masing", 12 March.
Simunjan, Sarawak	Corruption	OPP	Pengayau, op. cit.
Batang Sadong, Sarawak	Corruption	OPP	Pengayau, op. cit.
Kg Gerunggang, Lundu, Sarawak	Violation of NCR, Corruption	OPP	Sarawak Report, 2012 "BN Bosses Fight over NCR Landgrab", 24 November.
Sebangan, Sarawak	Violation of NCR, Corruption	OPP	Sarawak Report, 2012 "Stand up for your rights - a win for Sebang", 21 May.
Kg Lebor, Serian, Sarawak	Violation of NCR, Corruption	OPP	Sarawak Report, 2012, "More Very Dirty Datuks", 2 March.
Long Terawan, Baram, Sarawak	Violation of NCR, Corruption, Criminal Intimidation	OPP, ITP	Sarawak Report, 2011, "How Len Talif Salleh - "Objective" Civil Servant/BN Politician/ Timber Company Boss - Swindled Long Terawan", 22 May.
Rumah Umping Lepong, Balleh, Kapit, Sarawak	Violation of NCR	OPP	SADIA, 2009, News release by Sarawak Dayak Iban Association (SADIA), 23 October.

Note: NCR – Native Customary Rights; NFA – National Forestry Act; TCPA – Town and Country Planning Act; EQA – Environmental Quality Act; NLC – National Land Code; SWO – Sarawak Water Ordinance; OPP – Oil Palm Plantation; LTC – Latex Timber Clone; ITP – Industrial Tree Plantation; FR – Forest Reserve.



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