

CHAPTER 2

BUSINESS SOLUTIONS FOR SUSTAINABLE FORESTRY IN BORNEO



Summary

- The forestry sector manages the most land of any sector operating inside the HoB, and therefore has the greatest opportunities for sustainable use, but also the greatest risks in the absence of good practice.
- Sustainable logging of natural forests is a good example of how the standing forests can provide long term revenues while maintaining a large proportion of the forests values.
- Plantation area is increasing across Borneo to meet the growing demand for timber, and fibre for paper mills. It is essential that the expansion of mill capacity is matched by commensurate increases in sustainable plantations. Critically, to ensure supply meets demand without putting pressure on high conservation value forests, plantations need to be planned, sustainably located and planted long before pulp mills are constructed.
- International demand for sustainable forest products is increasing, WWF's GFTN member companies trade over USD 70 billion of forest products every year, 40% of which is FSC certified, an estimated USD 28 billion of FSC materials.

Recommendations

- Logging activities should be avoided in high conservation value forests, and elsewhere reduced impact logging and sustainable forest management should be implemented to minimise environmental impacts.
- Plantations should not replace high conservation value forests, and should instead be cultivated on the available idle land. WWF's 'New Generation Plantations' programme can provide the basis for good plantation management.
- Investors, traders and consumers should help drive sustainable management through financing and sourcing FSC certified production.

More information can be found in the solutions sections:

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Introduction

Borneo's forests provide a valuable resource for the governments of Indonesia, Malaysia, and Brunei. Sales of timber and other forest products have contributed to economic growth, and the exploitation of the forests has helped lift many households out of poverty over the last two decades. However, unsustainable logging rates, combined with prevalent illegal activities, have meant that this valuable resource is declining. A new model of sustainable forest use is required to ensure that the governments, companies and communities of Borneo can continue to rely on their forest resources to provide revenue without reducing the potential for future growth.

The HoB Declaration recognises the fact that Borneo's forests are unique and valuable. However, the on-going degradation of timber concessions in Borneo through over-exploitation puts increasing pressure on remaining high conservation value forests, many of which lie within the HoB. The forestry sector manages the most land of any sector operating inside the HoB, and therefore has the greatest opportunities for sustainable use, but also the greatest risks in the absence of good practice. In order to realise the HoB's vision for conservation and sustainable use, the forests inside the HoB will need to be carefully managed and protected from illegal and unsustainable logging. As part of this, a shift to sustainable forest management, independently certified through the FSC or other equivalent standard, will result in improved environmental performance and allow long term revenues from a given area of forest to be maintained. As has been demonstrated in Sabah, governments have an important role in moving towards more sustainable production, and this should be encouraged and driven by the actions of consumers and financiers.

Forestry Production

Natural Forest Management

Changes in the production of Indonesia's and Malaysia's timber industry illustrate the need for an urgent shift towards a sustainable extraction model. Figures 1.1 and 1.2 show the roundwood¹⁴ production in Indonesia and Malaysia from 1970 to 2009.¹⁵ Both countries have suffered a reduction by a half relative to their respective peaks of production. Indonesia's roundwood production has been in decline since the early 1970's from more than 200 million m³ to about 100 million m³ in 2009. Malaysia's production continued to increase through the 1970's and 1980's, but has since declined from almost 50 million m³ to a little over 25 million m³ in 2009.

In Brunei the Forest Resources and Strategic Planning Study (1984) predicted an acute timber deficit by 2015, when the mixed dipterocarp forests, the country's main source of timber supply, would be completely logged-over. To avert this, the Forestry Department halved the annual allowable cut from 200,000 m³ to 100,000 m³ per annum starting from 1990. Partly as a result of these measures, Brunei's forestry production has followed a similar trend to that seen in Malaysia and Indonesia, but on a much smaller scale. Production of sawn wood for example increased from 40,000 tonnes in 1970 to a peak of 90,000 tonnes in the mid 1990's, followed by a decline to about 45,000 tonnes per annum in 2005.¹⁶

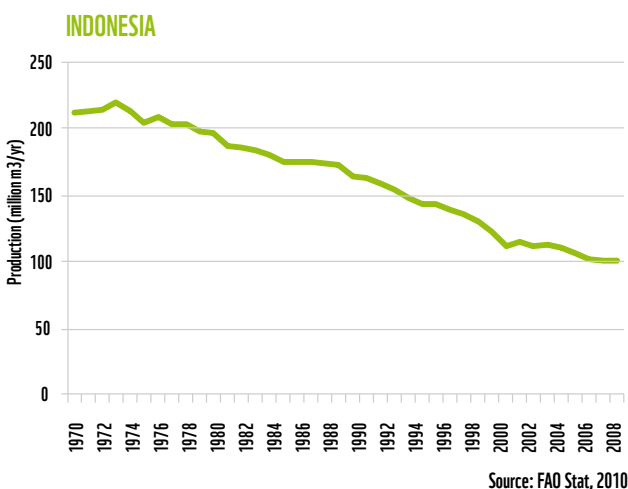


FIGURE 2.1: ROUNDWOOD PRODUCTION IN INDONESIA 1970 TO 2009

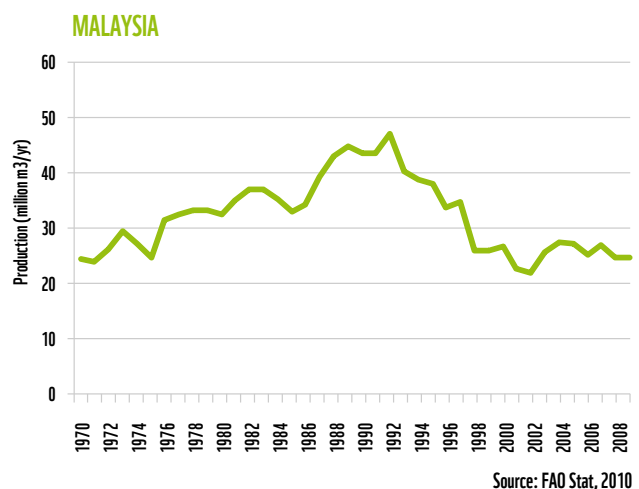


FIGURE 2.2: ROUNDWOOD PRODUCTION IN MALAYSIA 1970 TO 2009

¹⁴ Wood in its natural state as felled, or otherwise harvested, commodities included are sawlogs and veneer logs, pulpwood, other industrial roundwood (including pitprops) and fuelwood.

¹⁵ Production includes harvests from plantation forestry, however this is considered to only contribute a small proportion of the total, except towards the end of the time series where plantation production may be responsible for the levelling off of the trend. Illegal production may not be fully recognised in these figures

¹⁶ FAO Stat; www.forestry.gov.bn/stats_20.gif

At a state level, in Sabah and Sarawak total log production (a sub-set of roundwood production) in 1990 was 8.4 million m³ and 18.9 million m³ respectively, but by 2008 this had decreased to 3.9 million m³ and 10.1 million m³, respectively.¹⁷ Similar trends are seen in Kalimantan, for example, in East Kalimantan, which represents 55% of Kalimantan's, and almost a third of Indonesia's forest concession area¹⁸, log production from natural forests declined from 5.4 million m³ in 1997, to 1.7 million m³ in 2008.¹⁹

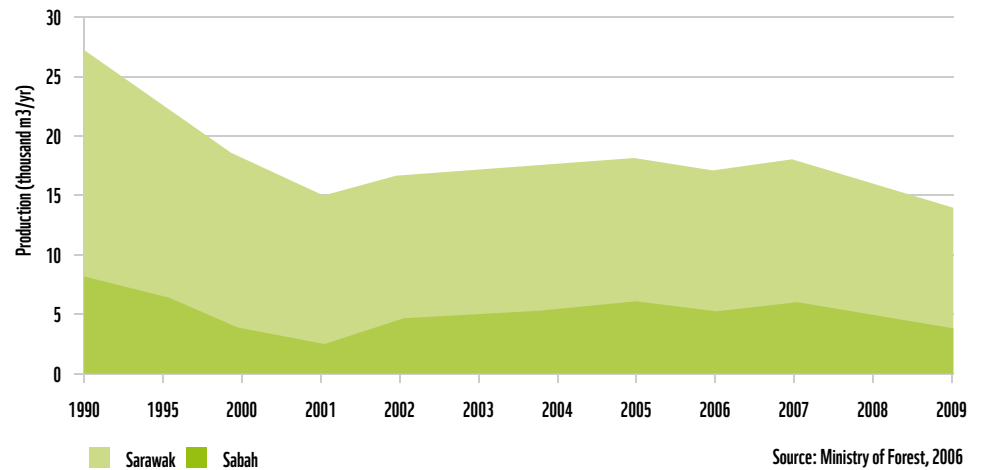


FIGURE 2.3: THE DECREASE IN LOG PRODUCTION FROM NATURAL FOREST MANAGEMENT IN SABAH AND SARAWAK



FIGURE 2.4: TRANSPORT OF LOGS FOR PROCESSING

¹⁷ FDPM, FD-Sabah, and FD-Sarawak. Data available in "Statistics on Commodities 2009"

¹⁸ In 2008 there were 6,581,712 ha of forest concessions in East Kalimantan; 12,275,773 across Kalimantan, and 26,169,813 ha across all of Indonesia. BPS, 2008.

¹⁹ Kalimantan Timur dalam Angka, 1997 and BPS Kalimantan Timur Dalam Angka, 2009

Timber Plantations

While production from natural forests is generally on the decrease due principally to scarcity and the increased cost of harvesting in inaccessible areas, production from plantations has increased rapidly in an effort to meet demand. Plantations have the advantage of providing a predictable supply at a known cost.

Sarawak in particular is undergoing an extensive replanting policy, with annual log production from plantations projected to increase from 2 million m³ between 2006 and 2010 to 15 million m³ between 2016 and 2020.²⁰ This supply is to be created through annual plantings of 375,000 ha per year until 2020. However, thus far these targets have not always been met because of difficulties sourcing available land and slow local government approval processes.²¹

In Indonesia, plantations are also starting to represent a more important proportion of timber supplies; in the 6 years from 1999 to 2005, timber production from industrial plantations increased from 190,000 m³ to 12.8 million m³. This increase has principally come from plantations located in Sumatra, however plantation area is now starting to increase in Kalimantan also.²²

In Brunei, the Forestry Department began the sawn timber plantation development programme in the 1990s with the objective of developing 30,000 ha of plantations at a rate of 1,000 ha per year. It was predicted that at maturity the sawntimber plantations would yield about 200,000 m³ per annum, more or less equivalent to the annual demand of the local timber industry.

Pulp and Paper

At a regional level, a major driver of demand for plantation development and wood-fibre in general, has been the pulp and paper industry. China has been behind much of the increase in demand for pulp and paper, with imports increasing more than tenfold between 1995 and 2005.²³ The capacity of pulp mills in Indonesia has expanded to meet this demand, with increases from about 1 million tonnes in 1990²⁴ to more than 7 million tonnes per annum in 2008²⁵. However, most of the expansion to date has occurred in Sumatra as the mills have been expanding much faster than their plantations. This growth has come at a significant cost in terms of natural forest cover; CIFOR estimate that 70% of pulp wood supply has been met through clearance of natural forests.²⁶

In Borneo the pulp industry is still relatively undeveloped, but the expansion of the industry is widely anticipated. Currently, there is a single major mill in East Kalimantan, Kertas Nusantara (previously Kiani Kertas), with a capacity to process half a million tonnes of pulp annually (and 200,000 tonnes of fibreboard). There are also a number of smaller pulp mills, including one in Sabah which has recently expanded its capacity up from 180,000 tonnes to 240,000 tonnes, and two in Sarawak each with a capacity of less than 100,000 tonnes.²⁷

The Indonesian government's 'Roadmap for Forest Industry Revitalisation' targets significant growth in the pulp industry, with capacity reaching 16 million tonnes by 2020, achieved through USD 15 billion of public and private investment. Proposals are reportedly under consideration for up to 8 new pulp mills in Kalimantan. While it is unlikely that all of these will be built, those that are could put increased pressure on the remaining natural forests of Kalimantan²⁸ unless careful regulations are put in place to stop approval of any extra pulp capacity that cannot demonstrate sustainable supply and with monitoring of pulp supply chains.

To avoid the loss of natural forests which occurred in Sumatra, and reduce the pressure on the HoB's natural forests, the expansion of pulp mill capacity needs to be matched by commensurate increases in fibre volumes from sustainable plantations. Critically, to ensure supply meets demand without putting pressure on natural forests, plantations need to be planned and planted before pulp mills are constructed. Plantations should not replace high conservation value forests, but should rather be cultivated on the available idle land after careful land title and tenure rights checks. Idle land is land which does not have a current use and also no clearly designated land use, it also has low conservation value and low carbon value.

As part of Sarawak's plantations programme fast growing acacia species are being cultivated to supply new pulp mills. For example, Sarawak Planted Forest Sdn Bhd will supply 3.2 million cubic metres of wood pulp to a 750,000 tonne capacity mill being planned by Acacell Cellulose International Sdn Bhd in Bintulu. In addition, a Chinese consortium is looking to invest RM 3.3 billion (approx. USD 1 billion) in Sarawak to set up a 200,000 ha forest plantation to supply pulp mills in mainland China.²⁹

²⁰ Malaysian National Timber policy 2009-2020

²¹ Malaysian National Timber policy 2009-2020

²² Ministry of Forest (2006). Executive, Strategic Forest Data (2006); as cited in A Roadmap for the Revitalisation of Indonesia's Forest Industry

²³ Increase from 750,000 tonnes in 1995 to 7.2 million tonnes in 2005; UN Comtrade, 2007

²⁴ www.pulpmillwatch.org/countries/indonesia/

²⁵ CIFOR, Indonesia's Pulp & Paper Industry: Overview of Risks and Opportunities 2008

²⁶ CIFOR, Indonesia's pulp and paper industry: overview of risk and opportunities, 2005

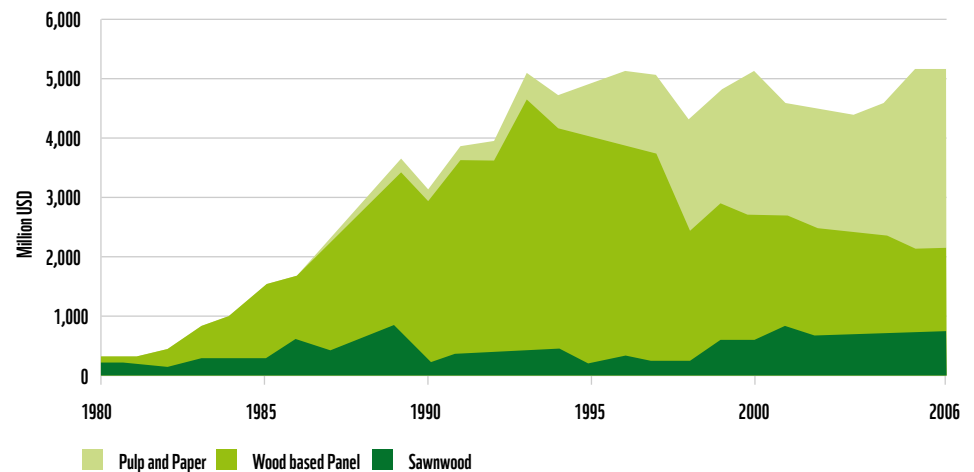
²⁷ CIRAD, Feeding China's Expanding Demand for Wood Pulp, 2007

²⁸ Verchot et al. Reducing forestry emissions in Indonesia. (CIFOR, 2010). South Kalimantan: Putra Adil Laksana; East Kalimantan: Kaltim Prima PGP, Sinar Mas; Central Kalimantan: Tranindo Sinar Utama; UFS; West Kalimantan: Korindo; Garunda Kalimantan; Karawang Ekawana.

²⁹ Interview by Sarawak Chinese Chamber of Commerce and Industry president Sia Hiong Ngiein The Star, September 2010.

Industry Revenues

Despite the decline in timber production, both Indonesia and Malaysia have been able to maintain their forestry export revenues. This has been achievable through industry diversification; in Indonesia pulp and paper has filled the gap of declining timber exports (Figure 2.5), and in Malaysia sales of furniture have helped maintain export revenues. Export revenues in Indonesia totalled USD 6.7 billion³⁰, and in Malaysia USD 6.8 billion in 2008³¹.



Source: FAO, 2008

FIGURE 2.5: INDONESIAN EXPORT VALUES OF WOOD PRODUCTS, 1980 TO 2006

Direct exports from Indonesia and Malaysia are principally to other Asian states, with less than 6% of exports to Europe.

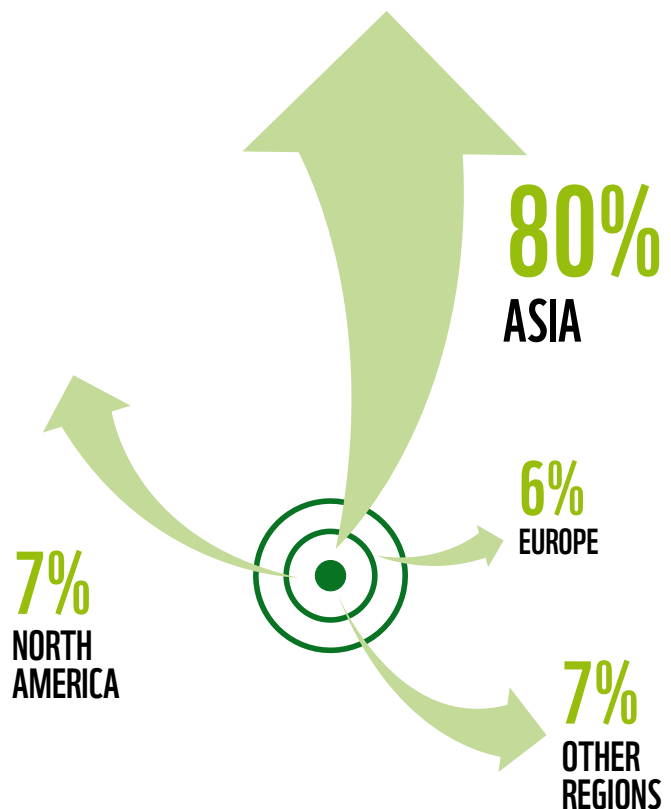


FIGURE 2.6: DIRECT EXPORTS BY DESTINATION FOR FOREST PRODUCTS FROM INDONESIA AND MALAYSIA

³⁰ FAO Stat, 2010

³¹ National Timber Industry Policy 2009-2020

Forest products contribute 2.1% of Indonesia's³² and 3% of Malaysia's³³ national GDP; a relatively modest proportion given their rich forest resources. Indeed, both countries are seeking greater value added from their forestry activities. The 'Malaysian National Timber Industry Policy' lays out plans for annual growth of 6.4%, more than doubling revenue to 2020. This is to be achieved by further increases in downstream processing (principally from, flooring, laminated veneer lumber, laminated timber, furniture, and joinery products such as doors, windows and mouldings), such that they represent 60% of the value in the industry, up from 40% today. In Indonesia they are also looking at downstream industries, but the focus of their strategy is on timber supply, in particular from the expansion of plantations.³⁴



FIGURE 2.7: LOGS ARE LOADED ONTO SHIPS FOR EXPORT

Forestry and the Heart of Borneo

Decreasing availability of natural forests as an economic source of timber puts increasing pressure on remaining intact forests. There are currently 5.8 million ha of logging and plantation concessions inside the HoB.³⁵ To ensure these activities do not compromise the governments' vision for the HoB it is important that they are sustainably managed.

³² BPS National Income of Indonesia, 2008

³³ Malaysia's National Timber Industry Policy 2009-2020

³⁴ A Roadmap for the Revitalisation of Indonesia's Forest Industry, 2007

³⁵ Malaysia 3.2 million ha (Source: Sabah, Sabah Forestry Department presentation, HSBC Forum, July 2010; Sarawak, Project Implementation Framework (PIF) Sarawak, August 2009); Indonesia 2.6 million ha (WWF data); Brunei 138,000 ha, (source: Feasibility Assessment Report for Financing the Heart of Borneo Landscape, pg 31)

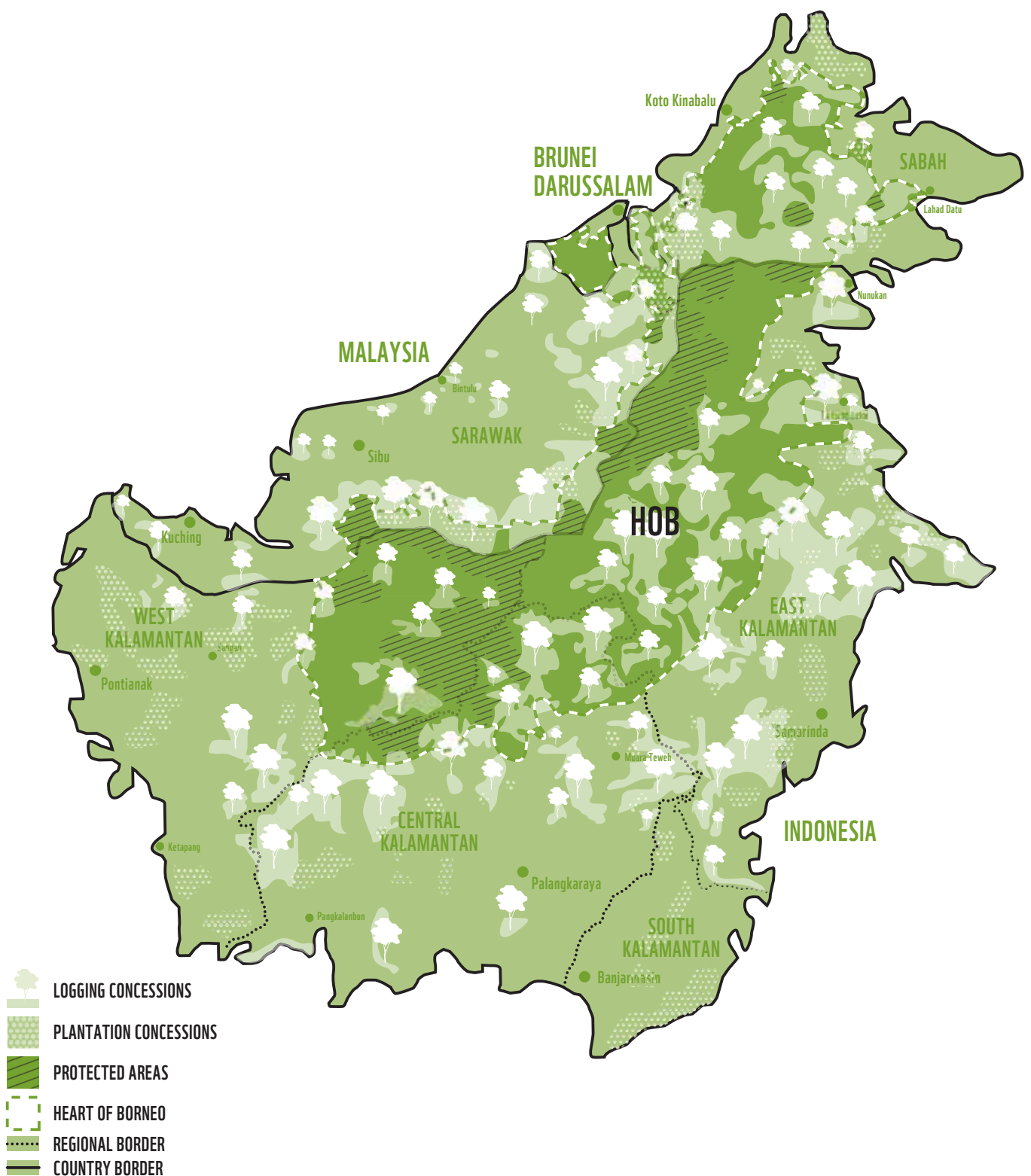


FIGURE 2.8: ILLUSTRATIVE MAP OF LOGGING AND PLANTATION CONCESSIONS IN BORNEO

NB: This map provides an illustrative estimate of the location and size of concessions based on publicly available information; it is not intended to be a precise representation.

Amongst the states of Borneo, Sabah is currently leading the way on sustainable forest management. Following the decline in available natural timber resources, and growing environmental concerns, Sabah Forest Department has mandated that all forest management units must be independently certified by 2014, for example through the FSC. In addition, the state has imposed more stringent limits on the annual allowable cut and enlisted an independent firm to monitor all natural forest management areas under the Reduced Impact Logging Approach. There are currently over 270,000 ha of certified logging concessions (FSC or MTCC certified) within the Sabah region of the HoB, with the balance of 1.5 million ha within this area aiming to meet the challenging 2014 timetable for certification. As a result of these moves towards sustainable production levels, annual log production from natural forests is likely to decline moderately in the near term but, if the aims of the programme are met, continuing production should be truly sustainable and continue to deliver value to government, companies and communities over the long term.³⁶



FIGURE 2.9: FSC STAMPED TIMBER

In Sarawak the planned production from natural forests is set to remain at the current level of about 10 million m³ per year. Much of this is likely to be produced from the 1.7 million ha of active timber concessions within the HoB.³⁷ The implementation of sustainable practices will be important to ensure that a reasonable level of production can be maintained without sacrificing future supplies and the delivery of the HoB vision. To this end, WWF is helping Ta Ann to work towards FSC certification for their concession in Sarawak, it hopes to be the first company in the state to achieve FSC certification.

The Indonesian forestry roadmap emphasises the need to temporarily reduce production until adequate sustainable sources of timber can be provided. There are currently 2.6 million ha of logging concessions inside the HoB boundaries in Indonesia. In September 2010 the Ministry of Forestry issued a decree that all forest management units in Indonesia must now be assessed under the Indonesian Timber Legality Assurance System.

Several private forestry companies were already pursuing more sustainable practices and some are moving towards formal certification. For example, WWF's Global Forest Trade Network is working with 9 forestry companies operating in Borneo, representing more than 1.3 million ha of logging concessions, and 36 manufacturers and exporters across Indonesia and Malaysia, to support sustainable logging practices and move towards greater uptake of FSC certification.³⁸ Despite this assistance, consultations indicated that progress towards certification can be slow, in some cases limited by conflicting state and national regulations, or by uncertain long term tenure.

³⁶ National Timber Industry Policy 2009-2020

³⁷ Project Implementation Framework (PIF) Sarawak, 2009

³⁸ http://gftn.panda.org/gftn_worldwide/asia/indonesia_ftn/

Illegal logging

The good intentions of governments and companies increasingly interested in sustainable forest management are however threatened by illegal forestry. The UN Office on Drugs and Crime estimates that Indonesia loses between 1.6 and 2.8 million ha of forest annually to illegal forest clearance.³⁹ However, illegal logging is thought to be decreasing; for example, estimated consumption of illegal roundwood by mills halved between 2002 and 2005 from 42.5 million m³ to 20.3 million m³.⁴⁰ Government efforts to halt illegal logging have no doubt contributed to this decline. For example, in Sabah 245 cases of illegal logging were under investigation in 2008 (193 people arrested and 106 sentenced) and 150 vehicles seized.⁴¹ Bans on the export of roundwood logs greater than 30cm in diameter in Indonesia and Malaysia are also thought to have contributed to reductions in illegal logging.



FIGURE 2.10: ILLEGAL TIMBER BEING TRANSPORTED DOWN RIVER

International agreements are also pushing for greater control on the forest value chain. Most notably the EU Forest Law Enforcement, Governance and Trade (FLEGT) law, which comes into force in 2013, aims to ensure none of the timber entering the EU is illegally sourced. The law sets up bilateral agreements between forest nations and the EU to work together to tackle illegal logging. The bilateral agreements with Indonesia and Malaysia focus on promoting harmonization of national and regional legislation, capacity building in the Forestry Ministries and auditing bodies to improve forestry management and promote sustainable techniques. In addition the bilateral agreements set up provisions for third party auditing of forestry licences and the value chain to ensure its legality.

³⁹ quoted figures from the Indonesian Ministry of Forestry - <http://www.unodc.org/unodc/en/frontpage/2010/June/illegal-logging-in-indonesia-the-link-between-forest-crime-and-corruption.html>

⁴⁰ A Roadmap for the Revitalisation of Indonesia's Forestry Industry

⁴¹ Sabah Forestry Department Annual Report 2008

ENVIRONMENTAL AND SOCIAL CHALLENGES AND SOLUTIONS

The continuing expansion and developments in Borneo's forestry sector demands that ever more careful attention be paid to environmental and social concerns, especially given the presence of logging and plantation concessions inside the HoB.

Better environmental practices are being implemented by leading companies who are also seeing revenue opportunities through good management of environmental risks. State, national and international governments, NGOs, investors, and consumers can also help to drive the changes, and provide the appropriate technical assistance, regulatory frameworks, and price signals.

Table 2.1 outlines some of the key potential environmental issues which can arise from poor management of forestry activities.

Habitat loss	Logging Natural Forests:	Clear-felling removes the whole forest ecosystem, resulting in severe reduction or complete loss of habitat and ecosystem values. The impacts associated with selective logging are less adverse, but can nevertheless be significant if managed poorly.
	Plantations:	Plantations demand large areas, and their monocultures have very limited biodiversity. If plantations are built by clear-felling natural forest they lead to a severe loss of habitat and ecosystem values.
Carbon emissions		Borneo's forests are a carbon sink of global importance; however, deforestation releases this carbon. Fire is often used to clear forest, which can spread uncontrollably. The 1997/8 fires burnt 9.7 million ha of land, releasing huge quantities of carbon dioxide. ⁴² Plantations on cleared land only sequester a small proportion of these emissions.
Land erosion	Logging Natural Forests:	Clear felling exposes the land to soil erosion, and poorly implemented selective logging can also result in serious soil degradation. Heavy rain and wind removes exposed and disturbed topsoil rendering the land less productive for agriculture, and severely impacts the prospects of forest regeneration in the area.
	Plantations:	Without proper management plantations suffer from soil erosion and land degradation, especially where large expanses of land are cleared and then not subsequently planted.
Degradation of watercourses	Logging Natural Forests:	The clearance of watershed forest cover can degrade the quality of watercourses, leading to unpredictable and severe flash floods and mudslides that endanger downstream settlements.
	Plantations and Processing Operations:	Plantations often use chemical fertilisers and pesticides. In addition, effluent waste from paper processing can contain high concentrations of bleaches that are toxic if not properly treated. This can leach into groundwater, affecting drinking supplies for the local communities and downstream urban areas. The overuse of water and diversion of watercourses can lead to shortages elsewhere.
Social Issues		The allocation of logging and plantation concessions does not always take into consideration the traditional land rights of indigenous and other communities. These communities may use the land for crops and fruit trees, or for social activities. Logging and plantation expansion can result in conflict and displacement.

TABLE 2.1: POTENTIAL ENVIRONMENTAL ISSUES DUE TO POOR FORESTRY MANAGEMENT

The issues noted above are addressed in the following solution boxes. These highlight the appropriate practical actions that different stakeholders can take to reduce their impact and therefore their risks. In addition, the solutions identify how WWF can help companies and governments successfully implement more sustainable practices.

⁴² <http://www.restorpeat.alterra.wur.nl/download/Fires%20in%20Indonesia%201997-2006%20Hotspots%20RSS.pdf> (detected by NOAA, ATSR & MODIS)

What's the issue?

High Conservation Value Forest

Forests are valuable for many reasons; regulating water flow, preventing floods and land slides, storing carbon and providing habitat for endangered species. Logging high conservation value forest (HCVF) reduces these sources of forest value and clear felling results in their near total loss. If valuable areas are not identified and appropriately managed the economic and environmental damage may outweigh short term financial returns.

What did you tell us?

Need for better and quicker services to identify and manage HCVF - HCVF assessment can be a slow process in Borneo due to lack of assessors, and there is a need for better industry specific management guidance.

Cooperation for conservation - Wildlife corridors and conservation initiatives need to be planned at a landscape level requiring potentially complex multi-stakeholder cooperation.

Restricting access - HCVF are often in relatively remote areas; restricting access from small scale and illegal actors can cause conflict and be resource intensive.

Solutions and guidance

The distribution of high conservation value forests needs to be considered prior to allocation of forestry concessions and long before any clearance and planting. In situations where some habitat fragmentation is unavoidable, wildlife corridors connecting fragmented forests should be set up and maintained to allow migration and ensure population viability. WWF and FSC guidelines do allow for some reduced impact logging in HCVF but firmly recommend that new forest plantations do not replace HCVF or any area required to maintain or enhance HCVF.

See: www.hcvnetwork.org for the latest tools and guidelines for HCVF identification and management

See: www.wwf.or.id/berita_fakta/publications/?13160/Panduan-Identifikasi-Kawasan-Bernilai-Konservasi-Tinggi-di-Indonesia for Indonesia's HCVF toolkit

See: www.wwf.org.my/media_and_information/publications_main/?9920/HCVF-Toolkit for Malaysia's HCVF toolkit.

What's the issue?

What did you tell us?

Solutions and guidance

Logging specific - Restoration Concessions

Forest degradation is a serious problem in Borneo. Concessions that are inactive can be subject to illegal logging and encroachment. The loss of value from degradation may then result in them becoming idle and being abandoned completely; lack of proper management and access restriction in such cases can result in degradation to the point where the forest cannot recover and the area becomes a wasteland.

In Kalimantan for example there are an estimated 34 concessions covering an area of 3.2 million ha considered at high risk from inactivity.⁴³ Concessions might be inactive for several reasons:

- High concentration of low value timber and low concentration of the most valuable species;
- Poor access or difficult terrain with steep slopes rendering harvesting uneconomic; and
- Third party issues such as those associated with encroachment (legally and illegally) for other types of activities (mining, plantations, or residential).

Need technical expertise – Forest restoration requires more technical know-how than logging operations and so companies need support.

To address the problem of idle land and abandoned concessions the government of Indonesia introduced a new type of forest concession in 2008, 'Restoration Concessions' (Minister of Forestry Regulation No. P61/Menhut-II/2008). This concession type is designed to protect the abandoned concessions so they can recover to a point where they are again viable for timber harvesting. Often these might be adjacent to active concessions making it easier for companies to restrict access, monitor their restoration, and subsequently commence logging activities. Two such concessions have been licenced in Indonesia and 12 permits are pending. The WWF Global Forest and Trade Network (GFTN) is actively helping Indonesian foresters to locate and manage restoration concessions. The GFTN has a target to assist 2 million ha of abandoned forest concessions to be approved for restoration status by 2015.

This will involve:

1. Identification of potential sites in need of restoration forest management;
2. Assessment of the local social sensitivities;
3. Promotion and marketing to generate support for the restoration concession ;
4. Facilitation of companies that are seeking restoration concessions in the area;
5. Development of the business model; and
6. Development of a scheme to manage all of the remaining forest concession that are currently abandoned with the purpose of avoiding further degradation and deforestation.

This comprehensive program should help return the health of the standing stock so that it may be utilised in the future as production forest.

GFTN members PT. Alas Kusuma Group and PT. Sumalindo have each applied for an abandoned concession adjacent to their existing logging concessions. Once the forest quality has been restored, these may then be appropriate for revenue generating sustainable logging practices.

Financing restoration concessions remains one of the biggest challenges, as the permits have the same cost as other extractive licenses. New financial incentives will therefore be important in ensuring the success of restoration concessions.



FIGURE 2.11 GFTN WORKSHOP

⁴³ WWF, unpublished analysis, Solutions to dormant and abandoned concessions in Indonesia

What's the issue?

What did you tell us?

Solutions and guidance

Plantation specific - Responsible Cultivation Areas

Just as there are areas of forest with high conservation values, there is also a lot of available land, particularly in Kalimantan, that has relatively low conservation value; usually because it has been heavily degraded by past activities and then abandoned. This idle land can in many cases be used to gain the economic and social benefits of forestry plantation development without serious environmental trade-offs once land titles and tenure rights are clarified.

In the past, some forestry plantation concessions that have been awarded on forest lands have not been planted following clearance. It is important that idle or cleared lands such as these are prioritised for any new plantations.

Regulators play an important role – “Central and local government need to clarify and harmonise spatial plans and the guidelines for land allocation.”

Adequate compensation is needed – “If we are awarded a concession, what incentive is there for us not to use it?” – Suitable replacement plots should be provided where forest concessions are given up and support for relocation will be needed.

Better access – “Many of these areas have poor transport links, and it is more expensive to reach mills.” – The attractiveness of existing plots of idle land for use as forestry plantations can be enhanced by providing improved infrastructure and access to markets.

The allocation of land is a government process which is why WWF are working hard with the government in Indonesia and Malaysia to support good land use planning which takes the value of standing forests into account.

1) Use of idle lands

Areas with low conservation value and idle land can provide ideal sites for new plantations if land title and tenure rights have been clarified.

As part of WWF's efforts to support the sustainable growth of the sustainable biofuels industry we supported Ecofys in the development of a tool to help identify areas which may be suitable for responsible plantation cultivation, including those which:

- Have low conservation values;
- Have low carbon storage;
- Have resolved any land tenure issues; and
- Have appropriate land use designations in the national and local spatial plans.

This was developed for energy crops but we aim to continue to develop this tool to make it relevant to other plantation crops as well as combining it with our HCVF tools to offer useful high level information on areas with high and low conservation value across landscapes important to WWF.

See: www.ecofys.com/com/publications/documents/EcofysRCAMethodologyv1.0.pdf

The World Agroforestry Centre (ICRAF) rapid tenure assessment tool also provides more information on how to assess land tenure issues in the siting of a plantation.

See: www.worldagroforestry.org/sea/projects/tulsea/inrmtools/RaTA

2) Land swaps:

One new idea with a potentially high impact is to work with government and business to swap concessions from high value forest land to low value idle lands. If this proves acceptable to business, communities and government it has the potential to secure many hundreds of thousands of hectares of currently allocated forest lands, whilst maintaining the economic growth and opportunity associated with the forest plantation industry. It is also possible that the significant carbon savings associated with these swaps could be converted into carbon credits and used to compensate communities and businesses for any costs associated with the swap.

WWF are currently involved in discussions to identify a pilot area and an implementation coalition soon, look out for news on our website.

3) See HCVF solution above for guidance on identifying and managing HCVF

What's the issue?

What did you tell us?

Solutions and guidance

Species Management Practices

Borneo is home to some of the world's most charismatic species, such as the pygmy elephant, orang-utan and rhino. There are 511 IUCN Red List threatened species in Borneo which are in danger of further decline without careful management.⁴⁴

The perceived conflict between the forestry industry and some of Borneo's most charismatic species and has caused significant negative international publicity for the industry in Indonesia and Malaysia.

Animals can cause damage – Some of the animals found in Borneo can eat or trample young saplings causing disruption to plantation activities and costing operators money.

Environmental and social sustainability – Consultations indicated that the rights of local communities should be the priority; WWF agrees that human well-being should be the top priority but also asserts that with good species management humans and animals can coexist comfortably and both local communities and animal populations can benefit.

Multi-stakeholder process – Species conservation requires consideration at the landscape level which requires cooperation between landholders.

WWF has developed toolkits and training for companies who have important species in and around their logging concessions and plantations. These solutions can help to reduce the impact of plantations on key species as well as avoiding animal conflict which can be costly for plantation owners; for example, by outlining measures to reduce the likelihood that large animals cause damage to plantations.

See: wwf.panda.org/borneo/greenbusinessnetwork for links to specific species management resources.

WWF Indonesia through GFTN-IND has a collaboration program to support good species management. For example, WWF, with Fauna and Flora International, has worked with PT SJM in their Rongga-Perai concession to carry out HCVF assessments and develop species management plans, WWF will apply the lessons of this work to assist other companies.

⁴⁴ www.iucn.com

What's the issue?

What did you tell us?

Solutions and guidance

Certification

The forestry sector in Borneo has received considerable negative international publicity for its perceived impacts on the rainforests of Borneo. WWF recognises that there are forestry companies that want to run their businesses responsibly and in balance with communities and the environment. The Forest Stewardship Council (FSC) was created over 15 years ago and has worked together with the industry and social and environmental NGOs to develop a set of principles and criteria which companies can use to ensure they strike that balance and to prove this to their stakeholders, including buyers, regulators, and financiers. WWF estimates that nearly 10% of global trade in industrial round wood is FSC certified and that over 26% is covered by one of the certification schemes (e.g. FSC, PEFC etc).

Technical capacity – “Certification bodies set stringent standards which are difficult to meet on the ground.” – Assistance is needed for the implementation of new techniques requiring specialist knowledge to help producers meet the guidelines of the certification body.

Greater incentives required – “Changing management practices and incorporating sustainability factors is expensive.”
“The European market is small relative to the Asian market.”

WWF recommends the use of the FSC certification system or equivalent standards. Both Indonesia and Malaysia have national certification schemes, the LEI and MTCC. These schemes are working closely with the FSC to strengthen their conditions and processes and gain greater international recognition, and thus greater price premiums. A WWF assessment showed that while FSC timber from Borneo could achieve a price premium of 10% to 15%, premiums for MTCC were only around 1% to 5%.⁴⁵

Environmental guidelines in the major certification standards include requirements for careful management of logging concessions, such as through Reduced Impact Logging. For plantations, guidance is provided to help foresters on issues such as land and erosion management, the use of chemical fertilisers and pesticides, control of run-off and waste, and the protection of watercourses and other surrounding features.

There are many ways that both small and large companies can access support to move towards sustainable certification:

- WWF's GFTN gives support to create a stepwise plan to achieve FSC certification, see: www.gftn.panda.org
- The Borneo Initiative gives grants to companies willing to sign up to a time bound plan towards FSC certification, see: www.theborneoinitiative.org
- The Forest Trust (TFT) works in forests and factories, helping companies and communities to implement sustainable practices and robust timber tracking systems. TFT guides partners along the path to achieve independent third party verification of legality and certification to FSC standards and helps to bring responsible wood products to the market by linking responsible buyers, suppliers and producers. On the island of Borneo TFT is currently assisting the managers of more than 550,000 ha of production forest to improve forest management practices and to achieve legality and sustainability certification. TFT works with natural forests, timber plantations and supply chains for timber and pulp and paper, see: www.tft-forests.org/product-groups/page.asp?p=6283

CASE STUDY - SFI OBTAINS CERTIFICATION

The Issue

SFI is part of a large multinational company and is required to manage its business in accordance with international standards of social and environmental responsibility alongside providing a fair return for its investors.

The Response

SFI enlisted TFT to review their different options to meet their requirements, concluding that certification through FSC best met their corporate responsibility objectives and would also allow them access to protected markets for sustainable forest products.

The Results

With the assistance of TFT, SFI's operations were compared with the FSC Controlled Wood (CW) standard and a number of shortcomings, or gaps, were identified. In particular, to achieve certification SFI needed to ensure its operations provided the appropriate protection to high conservation value forests (HCVF). Lacking in-house expertise and resources to complete a HCVF survey, SFI sought the help of WWF Malaysia to do this for them. WWF, using their own experts together with those from the Sabah Museum, University Malaysia Sabah, Yayasan Sabah, and the Sabah Forestry Department's Forest Research Centre, was able to work with SFI to produce a report that met the FSC-CW requirements for HCVF. Good cooperation from employees and contractors allowed the other gaps to be closed and in February 2010 SFI was awarded an FSC-CW certificate for a period of 5 years by SmartWood, the certifying body of the USA based Rainforest Alliance.

⁴⁵ WWF, 2007 Natural Capital, Financing Forest Certification in Malaysia

What's the issue?

What did you tell us?

Solutions and guidance

Logging specific - Reduced Impact Logging

Poor forest management practices cause unnecessary damage to the surrounding forest and also reduce regeneration rates and thus future revenues. Reduced Impact Logging (RIL) is a collection of harvesting techniques that reduce the damage to the surrounding forest by as much as half⁴⁶, and reduce carbon emissions⁴⁷, allowing periodic harvesting and sustained forestry revenues.

RIL requires preparatory activities to ensure the subsequent harvesting operation is efficient and minimises forest damage. Pre-harvest activities include gathering information on the location of valuable trees, which is used, together with knowledge of HCVF and sensitive areas (such as sloped land), to produce a comprehensive harvesting plan. The harvesting operation itself might include other techniques to reduce damage to the forest, such as cutting connecting vines, and reducing the number of skid trails used to extract felled trees.

Incentives are needed - Reduced impact logging can be more expensive and difficult to implement in the short term. "Some companies call it Reduced Income Logging because of the impact it has on returns."

Long term view - Short forestry licences and uncertain tenure reduces the attractiveness of RIL over more intensive options. "Why should we be concerned with preserving long term revenues when we can only secure a short term licence."

WWF is working with government in Indonesia to call for longer concession licences to make investment in long term sustainable management more attractive.

RIL can be combined with certification programmes allowing companies to access markets offering a price premium for sustainable products (see Certification solution above). In 2006 PT. Sumalindo Lestari Jaya II received FSC certification for their 267,600 ha natural production forest unit in East Borneo, a process which involved demonstrating their ability to consistently practice RIL.

For advice and information on RIL organisations such as WWF's GFTN and The Tropical Forest Foundation can help:

www.gftn.panda.org

www.tropicalforestfoundation.org

To find out more about the potential costs and benefits try the RIL cost calculator:

www.blueoxforestry.com/rilsim

⁴⁶ Marsh et al., Reduced Impact Logging: A Pilot Project in Sabah, Malaysia, CIFOR, 1996

⁴⁷ Putz et al., Improved tropical forest management for carbon retention, PLoS Biology, 2008

What's the Issue?

What did you tell us?

Solutions and guidance

Plantation specific - New Generation Plantation Project

Poorly designed or managed plantations may threaten the rights or livelihoods of local peoples and degrade valuable ecosystems but WWF believes that responsible production can contribute positively to local economic and social development.

New Generation Plantations are forest plantations that:

- Maintain ecosystem integrity;
- Protect high conservation value areas;
- Are developed through effective stakeholder participation processes; and
- Contribute to economic growth and employment.

Changing practices - "It is difficult to change from proven practices without confidence that the alternatives can be equally profitable."

WWF is promoting best management practices for pulpwood and timber plantations through the New Generation Plantations Project (NGPP).

The project brings together companies, governments and market stakeholders from around the world, including Sabahan company: SFI and the Sabah Forest Department. The NGPP responds to a growing need for a better understanding of the role that plantations can play in forest landscapes, by collecting examples of well-managed and appropriately located plantations, as key features of healthy, diverse and multi-functional forest landscapes, compatible with biodiversity conservation and human needs.

See the NGPP website www.newgenerationplantations.com for research papers the project has developed which respond directly to the needs raised by the plantation companies involved.

They include papers on:

- Stakeholder engagement;
- Ecosystem integrity; and
- High conservation value forests.

The FAO's Voluntary Guidelines on the Responsible Management of Planted Forests provide a further useful resource for plantation managers: www.fao.org/docrep/009/j9256e/j9256e00.HTM



FIGURE 2. 12: A WELL MAINTAINED PLANTATION

What's the issue?

What did you tell us?

Solutions and guidance

Responsible Finance

Timber companies must answer to their investors and shareholders and demonstrate that their money is being well spent. Many of the potential environmental impacts of logging and plantations can be avoided through the application of good management practices and investors can provide an important source of encouragement to implement these practices.

Incentive to act for larger companies – Larger companies seeking investment, particularly from international banks and investors, find responsible lending criteria to be an important incentive to act; 35% noted access to finance an important motivation for sustainability.

Local lenders less concerned – Smaller business investors and lenders are often less concerned about sustainability and smaller operators have less exposure to different forms of finance so financing criteria do not provide a strong incentive.

Some major banks active in the Borneo region have policies which prevent investment in unsustainable operations and promote investment in sustainable timber businesses.

WWF has produced detailed guidance to help financial institutions develop and implement a responsible timber financing and investment policy, see: <http://assets.panda.org/downloads/wwfinvestmentpol7oct03final.pdf>

The World Business Council for Sustainable Development and PwC also produced a toolkit to inform the responsible financing of activities which impact on forests: www.pwc.co.uk/pdf/forest_finance_toolkit.pdf

Further guidelines are available via the: UNEP Finance Initiative, UN Principles for Responsible Investment, and Equator Principles.

What's the Issue?

New Financial Incentives

Forests provide society with valuable ecosystem services; however, private companies often do not take these values into account when making decisions to log forests or clear them for plantations, resulting in a net loss of value to society. New financial incentives are being developed and implemented to encourage greater consideration of public forest values by private actors.

New financial incentives include payments for ecosystem services, payments for carbon credits generated through Reducing Emissions from Deforestation and forest Degradation (REDD+) and Clean Development Mechanism (CDM) projects, as well as accessing price premiums through certification bodies.

Examples of REDD+ programmes may be direct payments to foresters who reduce their carbon emissions from logging natural forests, either through sustainable forest management, reduced impact logging, or forest restoration and conservation. REDD+ currently operates via the voluntary carbon markets, however, efforts are underway to bring into effect an international mechanism for REDD+, with the aim of securing much greater financial flows. In the meantime, a USD 1 billion agreement between Norway and Indonesia is looking to place a moratorium on new forest clearance between 2011 and 2013. How these funds might be allocated to forest managers is currently under discussion. REDD+ could help to make FSC and RIL more financially attractive if a rigorous mechanism which supplements sustainable forest management income with carbon credit revenues can be developed.

What did you tell us?

Financial incentives – NGOs and governments need to help producers learn about the new financial incentives available and how to take advantage of them. “Traditional foresters are not familiar with being paid to not cut down trees!”

Solutions and guidance

WWF is working with the three HoB governments to help them to understand the value of the HoB forests and also how to sustainably finance the delivery of the HoB Declaration. In October 2010 the three governments launched a sustainable financing assessment for the HoB. This outlines finance sources which are available to support companies, governments and communities to meet the HoB Declaration, see our website for more details.

There are tangible advantages available from new financial incentives for forestry operators. For example, there are a number of REDD+ pilot projects in Borneo. The Rimba Raya Conservation project covers 91,000 ha in Central Kalimantan and is currently selling carbon credits through the voluntary market to Gazprom Marketing & Trading. The area was purchased by InfiniteEARTH to avoid forest clearance.

The Ramba Raya project is a ‘pure conservation’ example, however, REDD+ projects can operate alongside sustainable forest management. For example, the INFAPRO project in Sabah is rehabilitating 25,000 ha of degraded forest, and is also selling carbon credits through the voluntary market. Following restoration the forest will be sustainably managed for timber and other forest products. It also serves as a buffer for the adjacent Danum Valley Conservation Area.

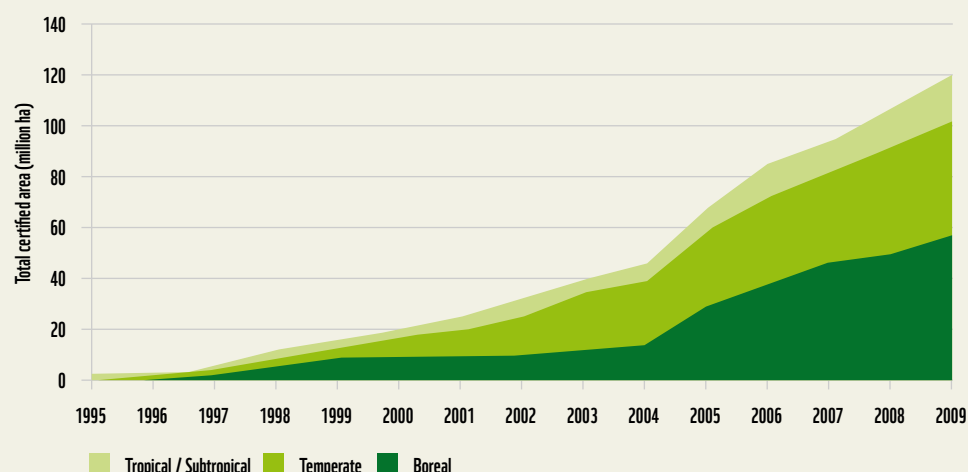
WWF has a number of initiatives underway to help producers, investors and regulators access new financial incentives. WWF US is also a partner in The Natural Capital Project – this project has developed a tool called INVEST (Integrated Valuation of Ecosystem Services and Trade-offs), a tool which helps to map and value the services provided by nature. We are working with the three HoB governments to use this tool in the HoB. Its outputs will be of interest to government policy makers and companies alike.

For more information see: wwf.panda.org/borneo/greenbusinessnetwork

What's the issue?

Driving Demand for Sustainable Forest Products

There is a growing awareness amongst consumers of the potentially negative environmental and social impacts associated with unsustainably produced forest products. As a result, demand for sustainably sourced products has increased significantly over the last 15 years. WWF's GFTN member companies trade over USD 70 billion of forest products every year, 40% of which is FSC certified; an estimated USD 28 billion of FSC materials. It is estimated that the current area of FSC certified forestry is now more than 120 million hectares (Figure 2.13). However, to encourage continued expansion of FSC certification price premiums are needed which in turn requires that demand for FSC certified material continues to increase at least in line with increases in supply.



Source: FSC, 2010

FIGURE 2.13: FSC CERTIFIED FOREST AREA

What did you tell us?

Lack of market information – Information on demand for certified timber and potential premiums needs to be passed up the supply chain to local producers. “Price premiums are only accessible by vertically integrated companies, small companies have less incentive to seek certification.”

Lack of demand in major markets – China and other areas of Asia (except Japan and Australia) currently seem less concerned with provenance of supply. “Certified production is chiefly for Europe, but this is only a small portion of the total market.”

Solutions and guidance

WWF believe that sustainable management of natural forests can be an important way to keep forests standing and that sustainably managed timber plantations, in the right places, can take the pressure off natural forests. WWF is working hard to ensure that demand for sustainable timber continues to increase to maintain and enhance the incentives to seek certification.

For example, all of the GFTN member companies have committed to move towards sourcing 100% sustainable, FSC certified timber. See: www.gftn.panda.org for more information.

WWF also recognises the need to do more to encourage the Asian markets to buy sustainable forest products and we now have active programmes to do just that in both countries. To find out more about progress visit: wwf.panda.org/borneo/greenbusinessnetwork

What's the issue?

What did you tell us?

Solutions and guidance

Buying Environmentally Friendly Paper

Growing paper consumption necessitates increases in the area of pulpwood plantations. Consumers and paper distributors can help increase the uptake of sustainable production methods through sourcing environmentally friendly paper.

Demand is key - "Unless buyers specify demand for certified paper there is no incentive to produce it, especially given the costs involved."

To reduce the environmental footprint of paper production and paper consumption, WWF has developed a one-stop 'paper toolbox' to guide paper producers as well as commercial and individual paper buyers: wwf.panda.org/how_you_can_help/live_green/at_the_office/reducing_paper/paper_toolbox/

We also published the 'Paper Guide' to help paper buyers and end consumers to adopt an environmentally and socially responsible approach to sourcing paper: http://assets.panda.org/downloads/wwf_paper_guide.pdf

In addition, the 'WWF Paper Scorecard' is a practical tool that assists paper purchasers to score the environmental footprint of the paper they buy, and allows responsible paper producers to demonstrate what they are doing to minimize negative environmental impacts of the paper products they sell: wwf.panda.org/how_you_can_help/live_green/at_the_office/reducing_paper/paper_toolbox/tools_for_paper_buyers/wwf_paper_scorecard/

The business case for sustainable forestry in Borneo

The economic case for reducing deforestation and improving environmental practices is increasingly being recognised at national and international levels based on the value which intact ecosystems deliver to society.

At the level of an individual company the business case for sustainable practices can be more complex. A range of challenges, often linked to cost and technical capacity, have been identified by producers and these are addressed in the preceding sections. Notwithstanding these challenges, the business benefits of improving environmental practices are increasingly recognised by some forestry companies in Borneo.

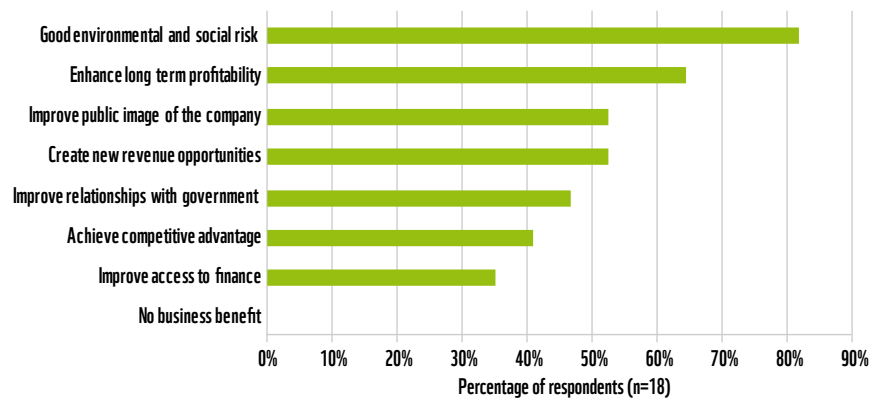


FIGURE 2. 14: BENEFITS OF GOOD ENVIRONMENTAL AND SOCIAL PRACTICES AS REPORTED BY FORESTRY COMPANIES IN BORNEO

Figure 2. 14 is based on interviews and surveys with 18 respondents from forestry companies operating across Sabah, Sarawak and Kalimantan. 82% of this group identified good environmental and social risk management as a benefit of sustainability activities while two thirds (65%) of respondents thought that sustainability activities would improve their profitability in the long term. More than half (53%) felt that their company would benefit from an improved public image and an equal proportion cited opportunities to create new revenue streams as a reason to pursue sustainable practices.

Furthermore, as indicated in the solution boxes on previous pages; from increasing demand for FSC certified forest products and new international funds for avoided deforestation; to heightened enforcement of existing regulation and new financing requirements from lenders; many factors are coming together to strengthen the business case for sustainable forestry in Borneo.