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Impacts of Timber Certification on Tropical Timber Trade in Malaysia

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Abstract: This study analyzes the certified timber products production and trade, the effects of timber certification and the role of timber certification on tropical timber trade in Malaysia. Timber certification is an important role in the forestry sector and considered to be complementary to forest management policies and takes a major player in Malaysia's economic growth on tropical timber trade. Log export restrictions in Malaysia have been economically inefficient and have exacerbated environmental degradation by encouraging wasteful resource use. The significant of this study is to obtain the further development of timber certification in Malaysia.

Key words: Timber certification, tropical timber trade, certified timber products

INTRODUCTION

Timber certification emerged in Malaysia through direct initiatives of the states' forestry departments acting as trustees of Permanent Forest Estates (PFEs), for sustainable forest management between these departments and international bodies and through direct interest from individual forest concessionaires. Currently, certification is very much market-driven and is serving as a tool to promote sustainable forest management (Mohd, 2004). He has also stated that there are two certification programs in Malaysia: the Forest Stewardship Council (FSC) and the Malaysian Timber Certification Council (MTCC). Certification receives support from various stakeholders, including the government and the private sector. Support from the local community is growing in strength, particularly for the FSC.

Thang (2002) describes that the MTCC is working towards gaining the trust of the indigenous community, constrained by the issue of the native customary rights over forestland. Certification has provided a new dimension in forest management. Forest management is no longer principally the domain of state forestry departments; nor does it focus solely on the issue of sustainable timber production.

Forest management certification and labeling of forest products is useful tool for promoting sustainable forest management. Generally, there are four major certification schemes for forest certified products-Forest Stewardship Council (FSC), Programme for the Endorsement of Forest certification (PEFC), Canadian Standards Association (CSA) and Sustainable Forestry Initiative (SFI)-cover 323 million hectares worldwide (GTZ, 2005).

Timber certification systems and sustainability initiatives share the common goal of assuring the public that participating companies and landowners are committed to good forest stewardship (Baer, 2002). Timber certification involves the evaluation, monitoring and labeling of wood production from stump to end use. First, the management of a forest area must be certified according to a set of standards or principles of sustainable forestry for a particular forest region. The production and distribution of products from the stump to the final consumer must be con-firmed through the chain-of-custody associated with the final product. Finally, the label attached to the final product must reflect the degree or scope of the certification proclaimed.

Washburn and Miller (2003) stated that the attendees were concerned about the pressure population growth was putting on natural resources during the Earth Summit of Rio de Janeiro in 1992. Sustainability became a concept that needed to be applied in the forest management field. As a result, foresters, environmentalists and sociologist came combined to form the Forest Stewardship Council (FSC).

The idea of timber certification can be traced to the mid-eighties. The producer countries followed immediately with the assertion that the evaluation be applied to all of the International Tropical Timber Organization (ITTO) countries and that temperate forest countries should also be held to high standards of sustainability and global environmental responsibility. Two alternative international schemes have been put forward as options for timber certification: The Forest Stewardship Council (FSC) Principles and Criteria of

Sustainable Forestry and The International Organization of Standardization (ISO) 14000 series for environmental management systems.

The FSC has certification readiness developed especially for large tracts of forest. Representatives of economic and environmental interests are on the FSC Board of Directors, although environmental non-governmental organizations (NGOs) form the primary active component of the FSC (Oliver, 1996). The ISO is a worldwide organization which provides standards for consumer products and services based on international agreements. The ISO 14000 series evaluates the existence of and commitment to the achievement of internal goals under an environmental management system in a business.

Some studies have addressed that consumers in Europe and in the USA are willing to pay between 2 and 30% more sustainably produced, certified tropical timber (Baharuddin and Simula, 1996; Oliver, 2005).

Several studies have addressed the impact of trade liberalization and structural adjustment policies on the tropical forest. The model of the welfare gains of liberalizing lumber imports into the Philippines, showing the elimination of lumber import tariffs can contribute of forest preservation there by decreasing the incentive to harvest domestic timber (Wisdom, 1996). Manurung and Buongiorno (1997) have argued that log export restrictions in Indonesia have been economically inefficient and have exacerbated environmental degradation by encouraging wasteful resource use. Deacon (1995) also has argued that employment policy and not log export policy is the key element in the link between timber trade and the forest.

The aim of this study is to highlight and clarify the development of certified timber products production, exports and timber certification on tropical timber trade in Malaysia.

MATERIALS AND METHODS

Data attainment: The study is conducted in University Kebangsaan Malaysia, Bangi since July, 2008 to June, 2009. The data for analysis is perceived from International Tropical Timber Organization member country in Malaysia. The significant manipulations for acquired data are log production, log exports, processed exports, total exports, log, sawnwood, veneer and plywood imports. The corresponding outcomes are demonstrated from the analysis of collected data.

Certified timber products production and trade: Timber products have been estimated that only 15% of the global

roundwood production enters international trade; the balance is used domestically within the producer country (Baharuddin and Simula, 1996). The low share of internationally traded forest products will be affected at differing intensity and speed depending on the market distribution and the progress achieved by national initiatives on timber certification in the exporting countries.

The implementation of timber certification was aimed at forest products, mainly timber products, derived from tropical forests. However, the United Nations Conference on Environment and Development (UNCED) (the Earth Summit) in Rio de Janeiro in 1992 emphasized the need for sustainable management guidelines, criteria and indicators for all types of forests, whether tropical, temperate or boreal. It has been recognized that products from the temperate and boreal forests are in fact far more important in the international forest products trade. It has also been estimated that only 11% of logs and 12% of sawn timber produced from tropical forests is exported (Barbier *et al.*, 1993).

The actual demand for certified timber products is driven primarily by organized groups of timber purchasers. The purchasers' groups are supportive of the FSC certification system and normally pledge that a certain proportion of their timber purchases will be certified by the FSC system in the future. The actual demand for certified timber products is not known but will be greatly influenced by the available supply. Current demand is in niche markets. However, even with an optimistic scenario, only 15% of traded timber products could be influenced by certification by the year 1999 (Baharuddin and Simula, 1996). In tropical timber certification could at best reopen some previous markets. The demand for certified timber appears strongest in the Netherlands and Germany and also exists in the UK and the US while there is virtually no demand in markets such Japan.

Timber certification is expanding rapidly. It remains one of the most contentious issues in international trade policy because it is a trade-related instrument and countries feel that it could influence their competitiveness and market access. Timber production and trade are leaded by timber certification.

Exports: The contribution of logs to total primary timber exports of ITTO producers (in terms of both value and roundwood equivalent-volume) has fallen dramatically from over 60% in the 1980s to 22% in 2007. Only Africa continues to export a significant volume of tropical logs compared to processed primary products, with log exports making up 19% of Africa's log production and 45% of

Africa's total export volume in 2007. The Asia Pacific region has replaced significant log exports with the export of secondary processed primary products. Asian log exports made up just over a fifth of Asia's total primary product export volume in 2007 (under 12% of log production).

Latin American tropical log exports are a small fraction of both production and total primary exports. Total roundwood equivalent export volume as a percentage of log production increased marginally in Latin America from 0.7% in 2005 to 1.2% in 2007 and increased in Africa from 17.4 to 18.9% but decreased in Asia-Pacific from 12.2 to 9.7%. Total ITTO producer member exports (rwe) of tropical primary products have declined since 2005, to 54.4 million m³ in 2007 (Table 1). Levels of primary product exports from all three regions are complemented by increased exports of secondary processed wood products (SPWPs).

Imports: The dependence of major ITTO importers on tropical wood products in 2004 and 2006 is shown in Table 2. Major importers are defined here as those with imports of at least 100 000 m³ of one or more tropical products. Table 2 indicates for which products each

country qualifies as a major importer by denoting the relevant figures in bold; only Korea and Taiwan Province of China (POC) qualify as major importers of tropical timber under this criterion in all primary product categories. Taiwan POC is the most dependent of the major consumer importers on tropical timber, with a significant proportion of its log, veneer and plywood imports of tropical origin. Expectedly, given the dominance of tropical plywood in international plywood trade, several of the countries in Table 2 have a fairly high dependence on tropical plywood imports (although this dependence is decreasing in some cases), with China, Japan, Korea and Taiwan POC dependent on tropical sources for close to or over 50% of total imports.

However, with the exception of France and the UK, the tropical portion of plywood imports in all the major ITTO importing countries declined between 2004 and 2006, reflecting the increasing importance of softwoods in world plywood production and trade. Tropical sawnwood has a lower market share in most non-tropical countries, with only Hong Kong SAR dependent on it for around half of their total sawnwood imports. Only Taiwan POC amongst major consumers reported imports of a greater proportion of tropical than non-tropical logs in 2007.

Table 1: Tropical primary product exports by producing regions, 2005-2007 (1000 m³ roundwood equivalent)

Region	Log production			Log exports			Processed exports			Total exports		
	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007
Africa	17356	17988	18029	3015	3406	3406	4339	4200	4202	7354	7606	7608
Asia Pacific	79904	75429	73726	9734	9268	8378	35970	32624	32165	45704	41892	40543
Latin America	34205	32010	33151	237	415	391	6574	5589	5856	6811	6004	6247
Total	131465	125427	124906	12986	13089	12175	46883	42413	42223	62347	56768	54398

Source: ITTO (2007)

Table 2: Tropical proportion of total imports by major ITTO importers, 2004, 2006 (%)

Members	Logs		Sawnwood		Veneer		Plywood	
	2004	2006	2004	2006	2004	2006	2004	2006
Consumer								
Australia	41.1	32.0	16.8	19.9	38.3	28.7	28.8	23.3
Belgium	1.1	2.3	11.2	8.2	23.6	21.2	41.1	33.2
China	26.5	21.3	39.1	34.5	64.2	68.6	61.5	59.0
France	23.3	16.0	11.0	10.8	61.5	65.8	24.1	24.8
Germany	4.4	3.6	3.0	3.5	21.9	25.3	10	9.8
Hong Kong SAR	41.3	30.7	51.2	46.2	14.0	13.6	57.3	43.4
Italy	3.3	2.8	4.3	3.1	37.0	41.9	16.8	11.1
Japan	12.9	12.8	4.1	3.3	32.6	32.5	88.8	69.2
Netherlands	6.7	2.0	14.2	13.6	33.1	44.4	36.5	35.1
Portugal	56.3	40.8	45.0	35.0	41.3	21.8	25.6	22.2
Republic of Korea	7.0	3.9	34.5	15.2	77.9	81.7	91.3	84.3
Spain	3.5	4.4	10.3	11.2	29.5	25.5	7.5	2.5
Taiwan POC	81.1	74.7	36.1	27.7	81.2	83.5	76.6	65.0
UK	3.7	4.2	2.7	2.4	43.3	42.3	13.0	15.0
USA	0.1	0.1	0.8	0.4	5.3	4.4	32.1	24.6
Producer								
India	84.6	75.6	21.4	69.8	68.5	62.4	62.2	31.7
Malaysia	67.0	68.0	89.7	79.4	14.7	9.2	9.1	26.3
Mexico	0.8	3.9	1.0	0.9	20.6	24.5	42.4	30.7
Philippines	83.0	36.4	44.7	34.3	74.9	9.2	7.5	10.1
Thailand	92.3	95.6	44.5	32.4	91.8	69.6	48.1	35.9

Source: ITTO (2007)

Korea and Taiwan POC were the only major tropical veneer importers in 2007.

The major ITTO producer country importers in Table 2 (with the exception of Mexico which trades extensively with the USA) are more dependent on tropical timber for their imported wood needs. This is changing, however, with for example, India, Malaysia and the Philippines now sourcing substantial quantities of timber imports from non-tropical areas.

Apart from the adverse impacts of the US economic slowdown on global consumption, a number of other developments in several of the consumer countries in Table 2 will likely affect demand for tropical timber in the near future. The EU is developing a scheme to restrict imports of timber to those legally sourced from volunteer partners under its Forest Law Enforcement, Governance and Trade initiative. The EU is working with a number of ITTO producer countries to develop Voluntary Partnership Agreements (VPAs) under which partner countries would be subject to strict licensing requirements. Ghana, Indonesia, Malaysia and Cameroon are now engaged in formal negotiations and Central African Republic, the Republic of Congo, Liberia and Gabon are likely to begin formal negotiations. In several countries, government procurement agencies have made commitments to buy legally produced and certified products, creating demand for certified products. ITTO producer countries are under-represented in the supply of certified wood products, with only about six percent of the world's certified forests in developing countries. At least eleven countries have developed timber procurement policies in public sector construction-UK, France, Germany, Belgium, Netherlands, Denmark, Switzerland, Austria, Norway, Japan and New Zealand.

Effects of timber certification on tropical timber trade in Malaysia: The Malaysian Timber Certification Council (MTCC) is an independent organization established in 1998 to develop and operate the Malaysian Timber Certification Scheme (MTCS) in order to provide independent assessments of forest management practices in Malaysia as well as to meet the demand for certified timber products. Timber certification is a market-linked tool to promote and encourage sustainable forest management as well as to provide an assurance to buyers that the timber products they buy come from sustainably managed forests. The Malaysian Criteria, Indicators, activities and Standards of Performance for Forest Management Certification (MC and I) is the standard that will be used for assessing forest management practices in the Permanent Forest Estate (PFE) at forest management unit (FMU) level for the purpose of certification.

Power: Mohd (2004) has stated that the advent of certification has obviously shaken the power dynamics among forestry circles. Forest policy, authority and decision over practices have always been the domain of the government and the Forestry Department. The government is intent on achieving SFM at its own determination, but certification has hastened the urgency. Hence, among other things on grounds of patriotism, the country established the MTCC to certify that the timber with the MTCC logo comes from sustainably managed forest. Despite the focus and determination to improve forest management practices, the MTCC scheme has found that NGOs have a strong influence on market endorsement. The NGOs have often questioned MTCC's ability to establish the necessary credibility to be an assurance of Sustainable Forest Management (SFM). The issue of smuggling of timber from Indonesia has been raised as one of the major concerns for importing countries. The inability to reassure importing consumers despite Malaysian Government log import ban on June 25, 2002 and subsequent announcement of efforts to increase its effectiveness is a further indication of the dynamics of the influence of global issues and of NGOs upon trade. The NGOs have demanded a higher level of transparency about the extent of illegal wood movement between Malaysia and Indonesia. It is a certainty that the Malaysian Government and MTCC in particular, have to accept this power shift (WWF Malaysia, 2003).

Social: Limited evidence of social effects of certification is available. Certified concessions have an obligation to take care of the interest of local residence. For instance, Perak Integrated Timber Complex (PITC) has created two social programs in its effort to fulfill the third FSC principle on financial, socio-economic and legal considerations. These programs were created to fulfill the elements of community and public involvement particularly on the employment from within the local and regional workforce and involvement of employees in community affairs.

The PITC also supports the government program to promote the involvement of local small and medium scale entrepreneurs in the wood-based processing industry. Under its Bumiputra Entrepreneur Development program, three Bumiputra entrepreneurs involved in the manufacturing of furniture components were given priority in obtaining FSC accredited sawn timber supplies from PITC sawmills. Indigenous people are a subset of the Bumiputra (sons of the soil) citizen status that the Malaysian Government deems as requiring support in socio-economic development. This has enhanced the international trade opportunities of these firms.

Economic: There are definitive indications that firms obtaining FSC accreditation have received an economic benefit. Peninsular Malaysia has imposed a ban on the exportation of logs in a bid to encourage domestic processing and to meet local demand under a log supply deficit situation. Any export of timber has to be processed. Hence, PITC is involved in the sawmilling industry and in sawn timber exporting. PITC exports sawn timber to niche markets requiring FSC labeled supplies. PITC has exported to Germany, UK and Holland, of which the German market has offered 20% higher prices than the UK market.

Environmental: Certification has led to a greater planning and monitoring of the environment. This assertion can be concluded from reviews of certification audits of forest concession and responding comments from state forestry departments. Taking the case of the certification audit for the state of Terengganu that seek MTCC certification program, several activities would be conducted taking on-board environmental concerns (Terengganu State Forestry Department, 2002). While various forest plans are normally prepared, in response to certification audits such reports have to be redrafted to incorporate environmental and social concerns.

Role of timber certification on tropical timber trade in Malaysia: Malaysia is one of the largest countries in exporting volumes of timber products in the world. It has achieved this position through adherence to a strict quality control system and an effective marketing strategy for tropical timber products. As the tropical timber products, it needs to establish an industry which can provide a country with long-term earnings, fuller utilization of its natural resources and greater socio-economic benefits for its people. Malaysia's major log customers are still all in Asia, especially China, Taiwan POC, India and Japan. However, Malaysia introduced legislation banning the import of logs and squared timber from Indonesia in 2005.

Basically there have been increasing numbers of species being utilized and traded and this is very much the function of market demand and related to the general condition of the global economy. With slight improvements in the global and local economic situation, there have been signs of an upward trend in construction activities notably in to housing and real estate development.

The ITTO producer countries exported over 13 million m³ of tropical non-coniferous logs worth \$2.1 billion in 2006, with Malaysia (the largest exporter) providing about 36% of this volume, down from almost three-quarters of

the ITTO total in the early 1990s. Malaysia's tropical log exports decreased by 19% in 2006, reflecting the country's increased emphasis on value-added processing.

Malaysia and Thailand were the next largest importers, although they are also important tropical sawnwood producers. Thailand's imports decreased significantly (27.1%) from 2005 to 2006. Thailand's economy and construction activity slowed in 2006 following political uncertainties, resulting in a decline in demand for construction grade tropical sawnwood, principally supplied by Malaysia. Japan's imports of tropical sawnwood have continued their downward trend since the mid-1990s reaching 278,000 m³ in 2006.

India, Thailand and Malaysia are the major ITTO producer country log importers, India accounting for over 87% of total producer imports of 3.4 million m³ in 2006 and Thailand and Malaysia together accounting for 11.3%. Malaysia's tropical log imports progressively increased during the period 2003 to 2006, while those of Thailand and the Philippines (previously a large importer) declined.

The Malaysian timber certification scheme, operated by the Malaysian Timber Certification Council (MTCC), continued to make some progress in 2006. Denmark, the United Kingdom, New Zealand, the Netherlands, France, Japan and Hamburg (Germany) have included the MTCC scheme as one of its accepted certification schemes in its Environmental Guidelines for Purchasing Tropical Timber. Malaysia is currently negotiating with the EU on its Forestry Law Enforcement, Governance and Trade (FLEGT) Voluntary Partnership Agreement, as well as taking steps to submit the MTCC timber certification scheme for endorsement within the PEFC's framework for mutual recognition.

Malaysia's trade with China grows 25.1% by value in 2007. Based on 2007 statistics from China's Customs Agency, China is one of Malaysia's top ten trading partners, reported The Daily Express. Ahmed Aziz, a member of the Board of Directors of the Malaysia External Trade Development Corporation (MATRADE), commented that Malaysia's total trade with China reached USD46.4 billion, a rise of 25.1% from 2006 levels. Malaysia's exports rose 21.89%, reaching USD28.4 billion last year. According to Aziz, Malaysia's exports USD500-600 million worth of timber products to China annually. In a word, timber certification influenced to Malaysian timber product trade is an opportunity as well as challenge.

RESULTS AND DISCUSSION

Malaysian tropical timber products are an important role in the world market. Malaysia is a producer member country in International Tropical Timber Organization.

In Fig. 1, we can see that in ITTO producer member countries, the production of tropical industrial roundwood (logs) totalled 143.2 million m³ in 2007, a year-on-year increase of 4.8%. Log production in 2008 remained at 143.7 million m³. The production of Malaysian tropical industrial roundwood (logs) totalled 21.3 million m³ in 2007 and 24.4 million m³ in 2004. Malaysian log production has been declining since 2004 and reduced significantly in 2007 and 2008 with the full implementation of sustainable forest management. Under the Ninth Malaysia Plan (2006-2010) log production is anticipated to decline progressively to 2010 with more domestic wood processing into exportable value added products.

In Fig. 1, ITTO producer member countries, the production of tropical sawnwood totalled 41.3 million m³ in 2007 and decreased marginally from 2006 levels, although sawnwood production is anticipated to have increased marginally by 42.4 million m³ in 2008. The production of Malaysian tropical sawnwood totalled 4.9 million m³ in 2004 grew to 5.2 million m³ in 2005. But, Malaysian sawnwood production has been declining since 2005 and reduced significantly in 2007.

From Fig. 1, we can see that ITTO producer member countries, the production of tropical veneer totalled 2.5 million m³ in 2007. Veneer production figures should not include veneer used in domestic plywood production and therefore represent the veneer production traded internationally is very small. In producing countries, veneer production increased by 8.0% in 2007 and is estimated to have increased to 2.9 million m³ in 2008. The production of Malaysian tropical veneer totalled 0.64 million m³ in 2004 grew to 0.67 million m³ in 2005. But, Malaysian veneer production has been declining since 2005 and reduced significantly in 2007.

In Fig. 1, ITTO producer member countries, the production of tropical plywood totalled 13.5 million m³ in 2007 and almost the same level in 2006, although plywood production is anticipated to have remained relatively unchanged in 2008. The production of Malaysian tropical plywood totalled 5.5 million m³ in 2007 and 4.7 million m³ in 2004. Malaysian plywood production has been increasing since 2004 and increased significantly in 2007 and 2008 with the full implementation of sustainable forest management. Under the government's Third Industrial Master Plan (2006-2020), Malaysia's wood based industries including plywood have been targeted to increase progressively to 2020 with more domestic wood processing into exportable value added products.

From Fig. 2, we can see that timber certification has influences on tropical timber trade. Generally, there are seen four types of effects of timber certification. These are

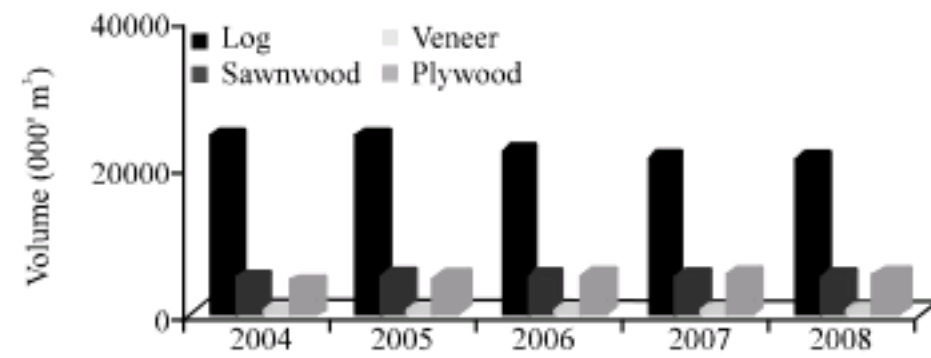


Fig. 1: Malaysian production of tropical timber, 2004-2008

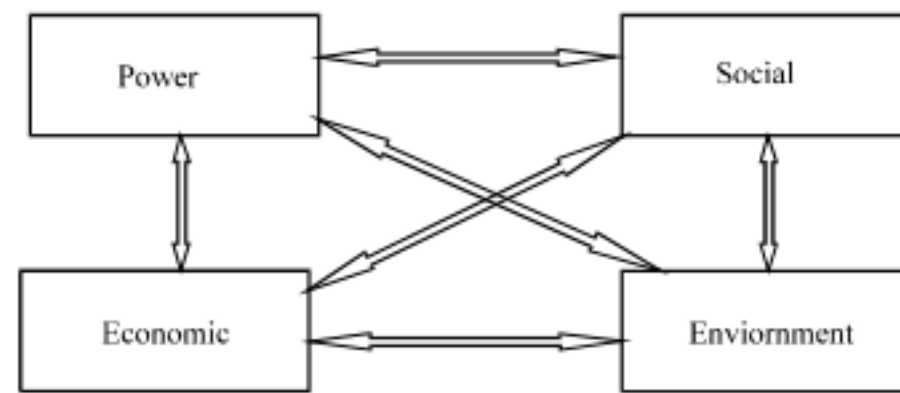


Fig. 2: Effect types of timber certification on tropical timber trade

power, social, economic and environmental. These elements are shown in the following figure.

These elements are interrelated and affected the timber certification. It has reduced the negative impacts of timber certification and increased the sustainable development.

Some studies have showed only the impacts of forest certification on tropical timber trade, some studies only for Peninsular Malaysia. Nobody has showed combinable certified timber products trade, effects of timber certification and the role of timber certification on tropical timber trade. In the results, we have only showed certified timber products trade, effects of timber certification and the role of timber certification on tropical timber trade in Malaysia.

Malaysia as a producer member country of the International Tropical Timber Organization (ITTO, 2007) is fully committed to achieve sustainable forest management in the overall context of sustainable development. Embedded to this commitment is the acceptance of forest certification demanded by developing countries. Timber Certification is the slogan in today forest harvesting. Timber certification is a market-driven and to further improve the certification scheme, Malaysia, through the MTCC, has also held discussion with the Forest Stewardship Council (FSC) since 1999 to promote co-operation, including FSC's participation in the formulation of a national standard for forest certification so as to ensure that the standard is compatible not only

with the ITTO's criteria and indicators but also with the FSC's PandC. After numerous consultations with interested parties a new set of MC and I entitled Malaysian Criteria and Indicators for Forest Management Certification (MC and I) or MC and I (2002) was adopted and to be used in 2006. It is expected that the use of new set of MC and I will enhance our commitment to SFM and further protect the environment.

Market forces for FSC certification, particularly from international customers' demand, have provided the necessary interests in timber certifications among concessionaires. The positive impacts of the certification drive can be seen from the primary stakeholders' acceptance and willingness to comply with SFM practices although, with appropriate supervision and regular inspection. It has provided hope that SFM or well managed forests are attainable. Certification has provided a new dimension in forest management. Forest management is no longer principally the domain of the State Forestry Department or gravitating around the sole issue of sustainable timber production. Social considerations have to be taken into the picture and indigenous peoples' concerns have to be taken on board.

On the other hand, the negative impacts of certification relate to the difficulty of resolving issues on Native Customary Rights (NCR) land. It has been perceived that certification is encroaching into sovereignty rights of independent nations. Compliance with certification also proved to be costly, despite the price premiums obtained by FSC certified concessions that are currently trading certified timbers on a limited scale. It is not certain that such advantage in price premium could be sustained once sizeable areas are certified. Further, price premiums are being enjoyed mainly by FSC certified concessions. Similar circumstances for MTCC certified FMUs have not been reported.

CONCLUSION

The government-sanctioned MTCC program and the FSC adopted in timber certification programs are more important to be implemented in Malaysia. Timber products certification attempts to link international trade to the sustainable management of forest resources by encouraging users to purchase only products made from timber of sustainable forest management. Certified timber products are a very important part in timber products trade due to the advantage from providing certified products. If the policy is properly developed, there can be beneficial effects for trade. This research has to be conducted to advance understanding of timber certification and its impacts in Malaysia. A cost-benefit

analysis could be conducted on timber certification programs in the country to obtain a better understanding of the impacts for various parties and along the supply chain.

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