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A Guide to Investment and Trade in the Forest
Products Sectors of Southeast Asia:
Indonesia, Malaysia, and the Philippines

By

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111

A GUIDE TO INVESTMENT AND TRADE
IN THE FOREST PRODUCTS SECTORS OF SOUTHEAST ASIA:
INDONESIA, MALAYSIA, AND THE PHILIPPINES

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The Forestry Private Enterprise Initiative

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TABLE OF CONTENTS

	Page
1. INTRODUCTION	1
2. RESOURCE AND INDUSTRY PROFILE.....	7
2.1 Indonesia.....	7
2.2 Malaysia.....	27
2.3 Philippines.....	48
2.4 Tables.....	59
3. BUSINESS ENVIRONMENT.....	83
3.1 Indonesia.....	84
3.2 Malaysia.....	101
3.3 Philippines.....	123
3.4 Tables.....	135
4. PRODUCT MARKETING AND TRADE	141
4.1 Overview.....	141
4.2 Product Quality and Standards.....	144
4.3 Product Marketing.....	148
4.4 Shipping and Transportation.....	154
4.5 Barriers to Trade.....	158
4.6 Financing.....	163
4.7 Organizations Involved in the Timber Trade.....	166
4.8 Tables.....	169
CONCLUSION.....	172
REFERENCES.....	178
APPENDICES.....	183
1. Annotated Bibliography.....	184
2. List of Associations.....	187

V

1. INTRODUCTION

Private investment and trade have played an integral role in developing the forest products sectors and economies of resource-rich, developing countries of Southeast Asia. Forest products trade dramatically increased in the region following the second World War, generating more than US\$ 1.5 billion/annual in foreign exchange for the big three producers in the region--the Philippines, Malaysia, and Indonesia--by the late 1960s. Export revenues from the log trade represented the Philippines largest source of foreign exchange during the 1960s. During the 1970s, the log trade became the second largest source of foreign exchange earnings for oil-rich Indonesia. Domestic employment, royalty, and tax benefits also have contributed significantly to the economies of the hardwood producing countries of Southeast Asia.

The investment climate and market for wood-based products in Southeast Asia has been undergoing a period of evolution and rapid structural change in the more recent period since 1975. The evolution of the market has been driven by declining timber resources in the region, an increase in value-added primary and secondary wood-based processing, the corollary expansion and diversification of export markets for processed products, and a growing emphasis in investment laws and regulations towards joint-ventures with domestic participation in ownership, management, and decision-making. Although common regional trends are evident in each of these

areas in Southeast Asia, the pacing and degree of structural evolution is not uniform throughout the region. In particular, the timber supply outlook, the development status of wood-based industries, investment policies, and future outlook for wood-based manufacturing differs substantially for the three main hardwood producing countries of the region.

Peninsular Malaysia and the Philippines, for example, were the first hardwood producing countries to experience constraints on timber availability. These countries began to implement investment plans and policies in the early and mid 1970s respectively, and to encourage a switch from log harvest-for-export to wood-based manufacturing with an emphasis on sawntimber. The Indonesians did not begin to seriously promote wood-based manufacturing until 1978. During the 1980s, however, the Indonesian plywood industry rapidly developed until the point where Indonesia is now probably the second largest plywood producer in the world, behind the United States.

This report profiles the state of timber resources and wood-based industries, the investment environment, and some marketing issues for the forest products industries in each of the three major hardwood producing countries of the Southeast Asian region: Indonesia, Malaysia, and the Philippines. The objective is to provide information to potential investors, traders, researchers, or policy makers with an interest in recent developments and future trends of the wood-based industries and product markets of Southeast Asia.

Specifically, the report is divided as follows:

- Chapter 2 provides a description of forest management policies, highlights the state of the timber resources, and profiles the present status and future trends of the wood-based processing industries of each of the countries. Because forestry management and wood-based industry development are different in West and East Malaysia, the part of the Chapter covering Malaysia analyzes these issues separately for Peninsular Malaysia, Sabah, and Sarawak.
- Chapter 3 provides an overview of the business environment in each of the countries. Covered topics include investment licensing and regulation, government policies toward foreign investment, investment in the forestry sector, taxation, exporting/importing regulations, and policies governing currency and capital controls. The term "foreign investment", in the context of this chapter, refers to all investment originating from outside the country, including investment capital from lesser-developed countries (LDCs). Foreign investment from LDCs appears to be an increasingly important part of the capital mix in the forest-based sectors of all of the producer countries of Southeast Asia. Investment capital from entrepreneurs in LDCs, for example, now represents

about 33% of the foreign capital invested in Indonesia's wood product industries.

- Chapter 4 discusses some issues which affect the marketing and trade of forest products in the Southeast Asian region. Product quality and standards, shipping and transportation services, trade barriers and customs regulations, and export financing are factors which affect the marketing and trade of forest-based products in Southeast Asia. The role of these issues is analyzed, and suggestions are offered for improving the system of marketing and trade.
- Chapter 5 ties the previous sections of the report together in the form of conclusions and recommendations concerning forestry investment and marketing in Southeast Asia.

The report, as structured, covers a broad range of topics in an integrative and synthetic manner. There are a number of other information sources which provide more detail on specific topics, such as forestry taxation or the Indonesian plywood industry. A brief annotated bibliography of such information sources is provided in Appendix I.

It is also the case that forest policy, the investment environment, and economic and political conditions can rapidly evolve in the countries this report profiles. The Philippines, at the present time, is an outstanding case in point. It is particularly important for new investors in

the market to have current and up-to-date information as a background for business decision-making. Prospective investors may therefore find it useful to contact the following organizations to obtain information updates on investment policies and procedures before undertaking new ventures in the region:

Badan Koordinasi Penanaman Modal
(Investment Coordinating Board)
Jalan Gatot Subroto No. 6 - P.O. Box 3186
Jakarta, Indonesia
Tel: 512008, 515041, 517022, 510023

Malaysian Industrial Development Authority
3rd - 6th floor, Wisma Damansara
Jalan Semantan,
Kuala Lumpur, Malaysia
Tel: 943633 Cable: FIDAMAL Telex: MIDA MA 30752;

Thomas Alcantara
Under Secretary, Department of Trade and Industry
Trade and Industry Bldg.
361 Senator Gil Puyat Ave.
Makati Metro Manila
Philippines
Tel: 8185701

Additionally, appendix II provides a list of government agencies and industry trade associations connected with forestry and the wood-products trade in Southeast Asia. These organizations provide information in such areas as marketing, trade and investment regulations, and technical advice on contracts and standards.

2. RESOURCE AND INDUSTRY PROFILE

The forestry sectors of the three hardwood producing countries of the Southeast Asian region which this chapter profiles are now entering a period of transition characterized by declining timber resources and an increasing emphasis on investment planning for domestic wood-based processing industries. The transition from log harvest-for-export as the dominant forest-based industry in the region to primary and secondary manufacturing has not occurred entirely simultaneously, uniformly, or consistently throughout the region. This reflects differing degrees of timber availability, forestry policies, and economic conditions within the region. Nonetheless, the forestry industry in the hardwood producing area of Southeast Asia today is fundamentally different than it was even five years ago. Today, of the countries this report profiles, only the East Malaysian states of Sarawak, and, to a lesser extent Sabah, have forest-based industries dominated by extractive logging-for-export. And only Sarawak (and Papua New Guinea) will continue to be major suppliers of hardwood logs to world export markets from the Asia-Pacific region during the intermediate to longer-run time period, given resource supply trends and investment policy in the region.

2.1 Indonesia

2.1.1 Introduction

Indonesia has recently become the dominant center of wood-based processing in Southeast Asia and a major supplier of

plywood in world export markets. Indonesia's plywood production in 1985 totalled approximately six million cubic meters, making the country the second largest plywood producer in the world, behind the United States. Annual sawntimber production of six million cubic meters now exceeds sawntimber production from neighboring Peninsular Malaysia, the region's largest sawntimber producer for the past decade. Although the Indonesian sawntimber industry is domestically-oriented, with less than 33% of total production reaching the export market, exports of approximately two million cubic meters per year now exceed annual sawntimber exports from Peninsular Malaysia. Other wood-based industries in Indonesia have not demonstrated the rapid capacity expansion of the plywood and sawntimber sectors. Virtually all wood-based ventures, however, are being promoted by the Indonesians as part of a wood-based industrialization program. This includes enterprises producing blockboard, particle board, rayon fiber, wood working, moldings, building components, and furniture.

Indonesia also possesses the largest remaining forest estate of any of the timber-producing countries in Southeast Asia. This is despite exceedingly rapid rates of deforestation in recent years (600,000 hectares/year) caused by industrial logging, shifting cultivation, government-sponsored transmigration programs, and a major forest fire (in 1983) in the timber-rich province of East Kalimantan. Although the cheap exploitability of commercial species has declined in recent years, the forest-base of Indonesia is probably adequate to

sustain the pace of wood-based development programmed by the Indonesian government during the next 15 years¹. This fact distinguishes Indonesia from neighboring countries.

- Forest Resources and Management

Estimates of natural forest area in Indonesia vary between 115 and 143 million hectares. The Bornean province of Kalimantan possesses the largest remaining forest area, with approximately 34% of the total, followed by Sumatra (32%), and Irian Jaya, the eastern most province in the archipelago, with 26%. Predominant species in Kalimantan forests include meranti, ramin, damar, and ulin species; Sumatran forests are dominated by meranti, pine species, mangroves, and ulin species (PT Data Consultant, 1985). The composition of the forest resource in Irian Jaya is more heterogeneous than in the western Indonesian states, with non-dipterocarp mixed hardwoods occurring prominently in the species mix (Ross, 1983). The production potential of the various geographic provinces in Indonesia is denoted in Table 2.1.

The forest resource in Indonesia is divided into five categories, reflecting differing degrees of protective status: Permanent Production Forest, Production Forest Convertible to Other Uses, Limited Production Forest, Protection Forest, and Wildlife and Nature Preservation Forest. The distribution of total acreage reported in each of the categories is not entirely consistent across data sources. There appears to be approximately 64 million hectares of forest in Indonesia

dedicated to industrial logging, with a sustainable annual production potential variously estimated as 28 million cubic meters (BKPM, 1985b) to 77 million cubic meters per year (Sinduredjo, 1986). (The low figure subtracts 15 million hectares of nonproductive forest area from the 64 million hectare total).

The annual intake requirements of the Indonesian wood products industry during the next 10-15 year period should vary between 25 and 40 million cubic meters, depending on the degree to which programmed expansions in development plans are actually realized, the capacity utilization rate of the industry, and the state of world demand for Indonesian wood-based products. Long range development plans call for expansion of wood-based capacities which would increase annual intake requirements to 74 million cubic meters by the year 2000 (BKPM, 1985b). The ability of the natural resource base to support this level of industrial development would appear at best uncertain, based on the production estimate range discussed above.

Forest harvesting in Indonesia is conducted under concession agreements which specify rules and regulations for private contractor leases for logging rights in specified production areas. All of the forest area dedicated to production forest has now been allocated to 573 concessionaires (Gillis, 1985a). The Indonesian Selective Cutting system is the method employed for forest harvest. Under this system, the logging operator enters the stand and removes all standing timber above a

dbh of 50 cm in accordance with a proscribed allowable cut plan. The stand either can be allowed to naturally regenerate or silvicultural treatments, such as stand restocking, can be employed to accelerate the regeneration process. The presumption behind the selective cutting system is that the stand can be reentered in a 35-year period with second generation yields essentially equalling, or nearly equalling, the first harvest yields, thus sustaining forest productivity indefinitely².

Yields from Indonesian forest areas have ranged between 40 and 60 cubic meters per hectare. Some evidence suggests that yields have been improving recently. With the increasing emphasis on local processing, a broader range of species can be utilized because the specification tolerance of the domestic industry is less stringent than the export market (Priasukmana, 1986). Nonetheless, well-over 50% of harvested logs are of the Meranti group (PT Data Consultants, 1986), which suggests substantial scope for broadening species utilization and improving forest productivity.

- Logging

Approximately 275 million cubic meters of roundwood have been extracted since large-scale logging operations began in 1967 and the production forest area cumulatively logged over by 1984 equalled about 19 million hectares. (Meulenhoff, 1986). The pace of log production accelerated during the 1970s, reaching an annual average of 25 million cubic meters between 1975-1980, but

slowing to an annual average of about 16 million cubic meters between 1980-1986³. The recent production slowdown occurred because the intake capacity of the wood-based industries in the early 1980s was not yet sufficient to accommodate the level of annual log harvest which had been exported abroad in the previous five-year period. With further planned expansions and improved capacity utilization, annual log production volumes may attain a level of 40 million cubic meters by 1990. This assumes the realization of the most optimistic industry development scenario, i.e., the government's present development plan.

A number of problems confront logging operations in Indonesia, affecting the stability of log supply from harvested areas to local wood-based processors. Easily accessible, low-cost stands (situated on the coast or on river banks near wood-based factories) already have been harvested. The average distance between harvest sites and holding ponds in East Kalimantan--the largest regional source area for tropical hardwoods in Indonesia--is now between 60 and 90 kilometers (Priasukmana, 1986). This distance increases the transportation component of log production costs, and transportation now exceeds 25% of logging costs in East Kalimantan (Table 2.2). Increasing distances from logging sources to production sites also increase logistical problems. Few of the logging roads in Indonesia are all weather roads; weather can significantly constrain transport during the rainy season. On the other hand, the other transport mode, rafting logs by water, becomes difficult

during the dry season when rivers dry up. Erratic log supply during the year increases the output variability of wood-derived products, and leads to the ironic situation that some wood-based (non-concession) processors face log shortages despite the fact that annual allowable cut are much larger than the annual intake requirements of the industry. These problems can only worsen as cutting sites become more remote.

Equipment in the logging sector also is badly depreciated and in need of upgrading and/or replacement. Most of the equipment was purchased during the initial period of the Indonesian logging boom (1967-1977) when a tax holiday was in effect. Removal of the tax holiday has made the purchase of new equipment more expensive.

- Plantation Status

Existing plantation forests in Indonesia are primarily teak plantations located in Java, which have an annual allowable cut of about 600,000 cubic meters per year. Fast growing plantations of such fuelwood and pulpwood species as Albizia, Eucalyptus, Acacia, and Pinus have been established on the outer islands during the past decade and now have an annual allowable cut of about 180,000 cubic meters per year (Muelenhoff, 1986).

The government has planned to undertake an ambitious expansion of the existing industrial plantation program. First, future projected intake requirements for the wood-based industries may exceed the annual allowable cut from Indonesia's natural forest in the post-1995 time frame. Secondly, log

availability, as noted above, is becoming a localized problem even at the present time.

The plan calls for strategically centering so called "timber estates" in a concentrated area to provide the raw materials requirements for an aggregate of forest-based firms. About 6.2 million hectares of timber estates are scheduled to be established between 1985-2000 at a total investment cost of more than US\$ 3.5 billion. Roughly 1.0 million hectares are scheduled for establishment before the end of the present 5-year development plan, which ends 1988/1989 (BKPM, 1985b). Financing for the project is to be partially supported by a mandatory reforestation deposit of \$4 per cubic meter, refundable to concessionaires upon demonstration of successful reforestation efforts. Species involved in the plantation program are the usual variety of fast-growing types (Eucalyptus, Albizia, etc.) and natural Dipterocarps, Keruing, and Agathis. Foreign investment also is encouraged for the development of these timber estates' (See Chapter 3)⁴.

2.1.3 Plywood Industry

- Background

The plywood Industry began in Indonesia in 1973, when two plants were constructed with an aggregate annual capacity of 28,000 cubic meters. The industry rapidly expanded over the subsequent four-year period, reaching a capacity level of 535,000 cubic meters and a production level of 279 million cubic meters by 1977. Part of the industry's capacity increase during

this period was stimulated by a government decree in 1974, which directed logging concessionaires to sell 10% of production to the domestic market. A further incentive for industrial expansion of the plywood sector came in the form of a decree in 1977 which required the retention of a fixed percentage of company profits - a "compulsory deposit" - to finance wood-based processing (PT Data Consultants, 1986). More significantly, the government, in 1978, raised the export tax on logs from 10% to 0%, increasing the rate of "effective protection" to the industry (Gillis, 1985a). By 1980, capacity of the Indonesian plywood industry had very nearly reached 2 million cubic meters level while the level of production stood at 1 million cubic meters (Table 2.3).

In 1980, a joint decree by the Ministers of Agriculture and Industry announced the objective of a total ban on the exportation of logs. This policy was phased-in gradually between 1980-85 by progressively tightening log export quota allowances. The right to export logs, during the implementation period, was explicitly linked to the construction of large-scale integrated complexes centered around plywood manufacturing⁵. The government essentially confronted concessionaires with the choice of building plywood mills or losing their concessions.

As a result of this policy, plywood capacity and output expanded dramatically between 1980-1985. At the end of 1985, 109 plymills were in operation with an annual capacity of approximately 6 million cubic meters. More than 50% of the

capacity is located in Kalimantan, 25% in Sumatra, with the balance distributed among the other provinces.

- Industry Characteristics

The Plywood industry produces both structural grades and interior decorative panels. About 20% of the plywood is exterior and 80% interior grade (Muelenhoff, 1983). Indonesian plywood is largely manufactured from Meranti (Shorea species), although so called "lesser known species" sometimes are substituted for core material. The standard dimension is 4 feet by 8 feet, with standard thickness ranging from 3.6 mm to 25 mm (Priasukmana, 1986). Unlike Indonesian sawntimber, the quality of plywood is high enough to compete well in the international marketplace.

The operating efficiency and stability of the Indonesian plywood industry have been problems. Capacity utilization has averaged less than 50% for much of the industry's history. Higher levels have been achieved through output expansion induced by below-cost price cutting, placing the industry's financial stability at risk. Wood recovery ratio are only around 45%⁶. However, machinery and equipment in the plywood industry are basically in good shape and highly modern. Much of the plant in the industry has been imported from Japan, Taiwan, and Korean producers who were driven out of business by the cessation of Southeast Asian log exports and by the aggressive plywood marketing tactics of Indonesian firms. Indonesian plywood manufacturers also have imported production managers and

trained personnel from other Asian countries. Yet, the industry confronts numerous difficulties, including inexperienced production crews, delays in the receipt of spare parts at manufacturing sites, and the foreign exchange cost and uncertainty associated with reliance on imports for some key inputs--including glues and resins. Table 2.4 depicts a production cost breakdown for plywood in East Kalimantan. Second only to wood, glue is the largest cost item on the list, accounting for 20% of plywood production costs⁷.

- Plywood Markets

Plywood exports from Indonesia were negligible before 1981, but have been growing steadily since then as a percentage of total production. Roughly 75% of the plywood produced now is sold in the export market. The U.S.A. is Indonesia's largest purchaser, accounting for 28% of the export total in 1984. U.S. imports of Indonesian plywood increased from 34,000 cubic meters in 1981 to 790,000 cubic meters by 1984 (Table 2.5), This paralleled the decline in imports from Taiwanese and Korean producers, whose production capacity was crippled by Indonesia's log export ban. The People's Republic of China, via Hong Kong, is Indonesia's second largest customer, with an import total in 1984 of 650,000 cubic meters. The Middle East consumed about 400,000 cubic meters of Indonesian plywood in 1984, Singapore, also a major customer, imported 340,000 cubic meters. The bulk of the Indonesian plywood imported by Singapore is reprocessed and resupplied to other regional customers in the area,

such as Australia. Together the four largest importers of Indonesian plywood accounted for 78% of the export total in 1984.

The Southeast Asian markets of Taiwan, Korea, and Japan represent significant export potential for Indonesian producers but exports to these markets are discouraged by high nominal tariffs (See Chapter 4, Section 4.5). Japanese tariffs are expected to be lowered in the 1987 GATT negotiation, but non-tariff barriers also present significant constraints to penetration into the Japanese market (Again see Chapter 4.)

Indonesia is planning a drive to diversify export markets into smaller, residual markets, such as Australia and New Zealand. The promotion plan involves a rebate scheme, from the government to producers, to allow lower offered prices in the markets targeted for penetration. According to industry sources, this scheme could lower the price of Indonesian plywood in the Australian market, for example, by as much as five percent⁸.

Indonesia's relatively successful penetration of export markets belies some serious marketing problems. The rapid expansion of the industry was stimulated by government directive rather than market signals, and occurred during a period of recessed demand in world markets. Concessionaires have faced shortages of working capital and inadequate information about international plywood markets, with which they were largely unfamiliar before 1981. These factors have given importers the bargaining power in price negotiations. As a

result, Indonesian suppliers have been locked into a price war, sometimes offering volume discounts at below-cost levels, in an effort to attract buyers and penetrate export markets.

To stabilize prices and introduce some order into the marketing system, the government established seven "joint marketing groups" in October of 1984 (Table 2.6). Each marketing group allocates production levels to members, designates price guidelines, and authorizes plywood contracts and letters of credit. The marketing groups have been largely unsuccessful in preventing price competition, however. Exporting producers apparently evade price guidelines by selling at prices lower than the designated price officially written into the contract (PT Data Consultants, 1986).

Another market development is the formation of producer trading companies to promote marketing of Indonesian plywood and to lobby against trade barriers in highly protected markets.

- Future Prospects

The Indonesian plywood industry, after a period of rapid expansion, has entered a rationalization phase. The rate of development scheduled for the industry in the Government's most recent development plan would have established 191 plywood factories with an installed annual production capacity of 9.4 million cubic meters by 1990. This schedule now appears unlikely. Faced with a shortage of capital resources caused by declining oil export earnings, an unstable debt structure in the industry, and unresolved marketing problems, the

government has decided to suspend investment incentives for new construction and cancel loans to plants licensed but as yet unconstructed (Ginnings, 1985). The objective of the new policy is to increase the capacity utilization and processing efficiency of the industry, and to improve the marketing system, before undertaking further capacity expansions.

A secondary expansion of the industry is conceivable in the post-1990 time frame. Undoubtedly, such a development will depend on how the industry weathers the 1985-1990 period, on the success of plantation programs, an attempt to develop methods for the utilization of alternative species, on how the government reappraises its sectoral planning priorities, and on the state of the forest resource in the longer-term period. The feasibility of needed infrastructure improvements (such as roads, port, and storage facilities) may also influence the extent of future industrial expansion in the plywood sector.

2.1.4 The Sawntimber Industry

The sawntimber industry is the oldest of Indonesia's forest-based industries. Government policy toward the industry, including a 5% export tax (repealed in 1983), has oriented production toward the domestic market to support domestic housing programs. (Ginnings, 1983). Driven by economic growth, the industry rapidly expanded in the mid 1970s with production increasing from 1.8 million cubic meters in 1974 to 4.2 million cubic meters in 1979.

Capacity and output of the sawntimber industry continued to

expand in the early 1980's. Between 1980 and 1985, capacity rose from 9.8 million cubic meters to 14.6 million cubic meters , while annual production rose from 5.0 to 8.6 million cubic meters (Tables 2.7 & 2.8). The rapid growth of the industry during the period can be attributed to increases in the number of concession mills, which are linked in integrated complexes with plywood processing plants. The promotion of plywood processing indirectly stimulated the sawntimber industry, despite the bias against the sawntimber sector in the government's wood-based industrialization planning.

As of 1985, the sawntimber industry consisted of approximately 2,500 mills with an aggregate capacity of nearly 15 million cubic meters. Some 294 large concession sawmills represent 60% of the capacity; over 2,000 smaller nonconcession mills, with an average annual processing capacity of less than 3,000 cubic meters, account for remaining capacity (Table 2.7). With an annual processing capacity of 7.4 million cubic meters, 250 of the 294 concession mills represent the main potential for future exports (Muelenhoff, 1986). Most of the large sawmills are located in Kalimantan (59%) and Sumatra (33%). Smaller mills are widely scattered throughout the archipelago. They produce low-quality air-dried sawntimber which does not meet the quality standards of export markets.

The performance of Indonesian sawmills generally has been poor, with production increases resulting from the accretion of new capacity rather than improvements in capacity

utilization and processing efficiency. Capacity utilization has averaged less than 50%, and is much lower for the smaller, nonconcession segment of the industry. Capacity utilization for nonconcession mills in East Kalimantan has ranged between 7% and 20% since 1979 (Priasukmana, 1986). Shortages of ramin and meranti have forced the temporary closure of smaller sawmills as early as the mid 1970's (Schreuder and Vlosky, 1985), and the availability of logs to nonconcession mills is a continuing problem with the priority for log distribution given to plywood plants. Other problems which have contributed to the low performance of the industry include inefficient production techniques and machinery, leading to low wood recovery ratios (less than 50%), inexperienced production crews, lack of skilled labor, and managerial skills. Marketing for the industry, which must cope with deficiencies in transportation infrastructure and unstable demand, also has contributed to the low overall performance.

- Species and Export Markets

As noted before, Indonesian sawntimber is largely marketed in the domestic market, with more than 70% of annual production consumed at home. Exports only began in 1974 when small volumes of plantation-produced teak from Java began to be purchased by West European buyers. Since 1974, sawntimber exports have steadily increased reaching 1.2 million cubic meters by 1980. Exports continued to increase between

1980-1985 at annual growth rates exceeding 10%, surpassing the 2 million cubic meters level in 1985.

More than 70% of the exported sawntimber is produced from ramin and meranti timber. The product is of low quality and often undergoes further reprocessing in countries of import, before resale in their domestic or export markets. This is the pattern adopted by such Asian importer countries as Hong Kong, Singapore, Japan, South Korea, and Taiwan, which form the largest consuming market for Indonesian sawntimber. The production capacity of kiln-dried lumber has increased in Indonesia, recently, however, and increasing percentage of higher quality kiln dried lumber is sold in the international market.

- Future Prospects

Repelita IV (the fourth five-year development plan) has targeted an annual production level for sawntimber of about 12 million cubic meters by 1989. This target could be achieved by utilizing existing production capacity at the 85% level or by further capacity expansions. Neither improved capacity utilization or expansions are likely to occur to a sufficient degree to achieve the 1989 production target. The emphasis in the short-term will be on the improvement of processing efficiency and capacity utilization as the industry enters a shakedown period similar in nature to that affecting the plywood industry. Further expansion of the sawntimber industry in the longer-term period depends on the performance of the industry in

the nearterm and resolution of resource and marketing problems, noted above.

3.1.5 Other Wood-based Industries

- Waste-Wood

Residue-based industries also have begun to develop in Indonesia. Five particle board mills now are in operation, with an aggregate capacity of nearly 200,000 cubic meters. These range in capacity from the small Suryakencana plant in West Java (constructed in 1975) with an installed capacity of 10,000 cubic meters to more recently constructed, integrated plants with a capacities above 45,000 cubic meters. Another 7 plants are under construction, licenced, or under consideration (PT Data Consultants, 1986). These plants would add another 200,000 cubic meters to the industry. All particle board production, current and planned, will be sold in the domestic market.

The resource base in Indonesia is sufficient to support a major expansion of the particle board industry. Waste residue generated by the sawntimber and plywood industries in 1984 equaled approximately 16 million cubic meters, a volume of waste sufficient to support over 10 million cubic meters of annual particle board production capacity. If residue generated during logging (defective or damaged stems) and/or noncommercial tree species are considered as potential raw material, the scale of the residue-based industry in Indonesia could be considerably larger than the above figure indicates.

Technological problems in the production of residue-based panels, based on mixed tropical hardwoods, also appear to have been resolved, another factor supporting the feasibility of an Indonesian particle board industry. And global excess capacity in the industry would make the relocation and reassembly of mills in Indonesia a comparatively feasible and economic option.

Despite such auspicious factors, however, expansion of the particle board industry on a significant scale seems unlikely in the near future. The capital requirements for expanding the industry must be viewed as onerous in the present market climate characterized by drastic declines in oil export earnings, financial instability of other solid-wood based industries, and competition for capital from the plywood, pulp and paper, and other industrial sectors.

The marketing of particle board, a plywood substitute, would also pose series problems for the Indonesians. Significantly increasing particle board sales would impede the industry's attempts to stabilize plywood prices and markets, exacerbating the existing oversupply in the market.

A more rational course of action would be the development of an export-oriented wood chip industry. Recent forecasts of the Japanese market indicate a growing demand for imported hardwood chips in the years beyond 1990 (Wallace, 1986). Presently, there are four wood chip mills in Indonesia with an aggregate capacity of 628,000 metric tons, with no further

capacity additions planned in the immediate future. Constraints on the development of a woodchip industry would include the necessity for additional infrastructure, including roads, storage and loading terminals, and port expansions.

Indonesian wood-chip exporters could also face competition in the Japanese market from Malaysian, Australian, and Papua New Guinean suppliers (Wallace, 1986).

- Furniture and Wood-working

Indonesia also has a small wood-working and furniture industry. There now are apparently 19 wood-working plants in production located in Kalimantan, Sumatra, and Java, with an aggregate annual capacity of 200,000 cubic meters. These plants produce a variety of products such as molding, furniture components, parquet flooring, and prefabricated housing components. Production figures are unavailable, but export data show a rise from 700,000 tons to 2,000,000 between 1981-1983. Another 36 plants are in the planning stage, which would add another 360,000 cubic meters of annual production capacity to the industry (PT. Data Consults, 1986)

The furniture industry in Indonesia, similar to the industry in other regions of Southeast Asia, is concentrated in and around major population centers where demand markets are centered. As of 1982, there were 150 plants with employment of 20 or more workers. Of the 81 "medium sized" plants, 35 are PMDM Domestic Capital Investment Enterprises (MTIB, 1984b) (Table 2.9). Only four furniture plants produce

for the export market. Exported products include tables, chairs, knock-down furniture, cabinets, loudspeaker boxes, doors, window frames, and other products.

Apparent production of the furniture industry has been expanding in the early 1980's at annual growth rate of 7% a year. Production by 1984 had reached more 350,000 cubic meters (A comparison of this figure with plant capacities in Table 2.9 indicates a low rate of capacity utilization for the industry). The 1984 export level was greater than 2 million tons.

Prospects for further development of Indonesia's woodworking and furniture industry appear generally favorable. Capital requirements for furniture and wood-working enterprises often are lower than for the primary wood-based processors, and low cost labor in Java is readily available. Production costs for furniture factories have, however, been high as a result of the high costs associated with transporting raw materials from Sumatra and Kalimantan. Quality control and product standards also will have to be upgraded if the industry is to significantly penetrate export markets. Wood products could face stiff competition in export markets if other regional suppliers expand production of finished wood products based on the increasing availability of Indonesian sawntimber in the market.

2.2 Malaysia

2.2.1 Introduction

Forestry utilization and the pattern of wood-based

processing in Malaysia can be broadly differentiated between the various states which compose the Peninsular, or western portion of the country, on the one hand, and the eastern states of Sabah and Sarawak on the other.

Extractive logging of lowland dipterocarps forests in Peninsular Malaysia began early in the 1950's. Harvested logs were exported to Japan in order to supply the raw materials requirements for the developing Japanese plywood industry. In the 1960's, however, the national government began to encourage a move away from log exports in the Peninsular states and the development of local wood-based processing industries to capture employment and value-added benefits. The emphasis on wood-based industry development continued in the 1970's, with the imposition of a series of log export restrictions with progressively broadened scope, in terms of species applicability (Table 2.10). As a result of these policies, and a compatible incentives and taxation program, a sizeable export-oriented, wood-based processing developed in the Peninsular states of Malaysia during the 1970's. As of 1984, the wood-processing industry in Peninsular Malaysia consisted of 678 sawmills, 40 plywood and veneer mills, some 90 wood molding mills, and close to 2,000 furniture mills. Export earnings of the Peninsular wood based industry in 1984 accounted for \$M 1.2 billion in foreign exchange⁹.

Extractive logging operations in the eastern states of Sabah and Sarawak did not begin in earnest until the 1960's.

Despite an emphasis in development plans of both state governments to encourage the further domestic processing of harvested logs, the harvest of logs for export remains the dominant feature of the forest-based industry in Sabah and Sarawak. As of 1983, log exports from Sabah and Sarawak totalled approximately 18 million cubic meters, or more than 80% of the south sea log market, with relative market shares for Sabah and Sarawak approximately 50% of the total. Export earnings from the export of logs for Sabah and Sarawak totalled \$M 2.3 billion and \$M 1.8 billion respectively.

2.2.2 Peninsular Malaysia

- Forest Resources and Management

As of 1984, the total forested land area in Peninsular Malaysia was estimated to be approximately 6.32 million hectares, a decrease of more than 2 million hectares from the level reported in the 1972 forest inventory. Most of the forested land area 68% is accounted for by the less populous states which compose the central and eastern side of the Peninsula: Pahang (33%), Kelantan (13%), and Terengganu and Johore (11% each). The forest land area in these regions can be roughly classified into Dipterocarp, Freshwater Swamp, and Mangrove forests, which account respectively for 92%, 6%, and 2% of the total forested area. Dipterocarp forests are dominated by genera from the dipterocarpace family including Anisoptera, Dipterocarpus, Dryobalanops, Hopea, Shorea, and Parashorea (Malaysian Forestry Department, 1984).

Forested land area has been classified for management purposes into proposed Permanent Forest Estate (PFE) and as land dedicated for agricultural conversion. The Permanent Forest Estate is further divided into Protective Forest, which is reserved for parks, wildlife, and recreation (1.9 million hectares), and productive forest, which is managed for industrial roundwood production on a sustained yield basis (2.8 million hectares). Only 1 million hectares of the forested land allocated to the Permanent Forest can now be classified as old-growth forest. On balance, it appears that 2.42 million hectares of forested area with a significant production potential remain in Peninsular Malaysia, taking into account the old-growth forest, logged-over forest with future productive capacity, and the forested area dedicated to agricultural conversion (which can make a one-time contribution to the supply of log supply during the conversion process) (Thang, 1984).

In contrast to other timber producing countries in Southeast Asia, harvesting operations in Malaysia traditionally have been conducted under the "Malayan Uniform System" (MUS), rather than the "Selective Cutting System". Under the Malayan Uniform System, all mature trees above a dbh of 45cm are removed in a single felling, in conjunction with climber cutting and poison-girdling of defective stems and non-commercial species with dbh's of 15 cm or greater. This procedure allows the natural regeneration of the residual stand of light-demanding medium and light hardwood species of

high commercial value. The system is basically designed to convert heterogeneous, virgin lowland tropical rainforest into a more even-aged stand with a higher proportion of commercial species (Thang, 1986).

In recent years, forestry practitioners in Malaysia have begun to reconsider management objectives to encourage forest conversion under the Malayan Uniform System. There is a growing perception that mixed forest stands offer stability and environmental benefits, and that the primary-processing industries can be encouraged to adjust production processes to accommodate a more heterogeneous feedstock. The shift in management strategy away from the MUS to a selective cutting system is further encouraged by the changing distribution of forest resources in the Peninsula which has resulted from the harvesting (or agroconversion) of all of the low-lying coastal forests and most of the easily accessible hill forests (about 2/3 of the total). Remaining virgin forests in Peninsular Malaysia now are located almost exclusively on steeper slopes in more remote parts of the country, primarily in the central and eastern regions. The implementation of the MUS, for silvicultural and environmental reasons, is more difficult to effect in such areas than the selective cutting system (Thang, 1986).

The productive capacity of Malaysian forest has been estimated to range from 60 cubic meters/hectare on a 30-year

cycle for better managed, virgin forest, to 77 cubic meters/hectare on a 50-year cycle for logged-over forest areas. The production of industrial roundwood in the aggregate (from all forest land categories, and programmed agroconversion) totaled 9.4 million cubic meters in 1984. Projection of future log production has been estimated to be on the order of 6.7 million cubic meters per annum for the 1986-90 period; 6.4 million cubic meters per annum between 1991-95; and 4.5 million cubic meters per annum indefinitely thereafter¹⁰. The levelling of log output in the post-1995 period is attributable to the absence of significant agroconversions after this Land clearing for agroconversion historically has contributed significantly to the Peninsula's log production total.

The level of forecasted log production will not be sufficient to meet the feedstock requirements of the primary processing industry in Peninsular Malaysia in the post-1995 time frame, by most estimates. This subject is addressed below, after a survey of the wood-based industry in Peninsular Malaysia.

- The Wood-Based Industry

- The Sawntimber Industry

The sawntimber industry in Peninsular Malaysia is the largest and best established of the wood-based industries. Table 2.11 shows trends in the number of mills, input and production levels, and conversion efficiency of the industry during the past 10 years. Capacity expansion in the industry occurred at a steady rate between 1975 and 1984, with the number

of mills increasing by 79%, from 536 to 678. Newer sawmills have been located primarily in the States of Johore, Pahang, and Kelantan. These mills have been larger, integrated complexes with the capability of processing smaller diameter (below 40 cm) logs. Production levels of the industry have also demonstrated a fairly stable increase, with the exception of recessionary declines in output during the early 1980's and 1984. Sawntimber production reached a production peak of 5.7 million cubic meters in 1983, before dropping by a million cubic meters to 4.6 million in 1984. The States of Pahang and Johore accounted for 24% and 17% of the 1984 production total (Malaysian Forestry Department, 1985).

Data is not available on the capacity utilization rates of the industry. Undoubtedly, the utilization rates are better for the larger integrated concession mills located in the relatively timber-rich states of central and eastern Malaysia than in other regions of the peninsula¹. Processors in the wood-deficit west coast region tend to be smaller-scale, family operated operations whose log supply is dependent on the actions of independent logging firms operating in states such as Kelantan and Jahore. This fact makes the log supply in west Malaysia vulnerable to industry development policies of the eastern log supplying regions of the country (Parsons, 1981).

The operating efficiency of the sawntimber industry also has undoubtedly been low in the last several years because of recessionary contraction in the domestic Malaysian economy and

export markets. Some smaller owner-operators have gone out of business during this period. On the other hand, the capital structure of larger mills is highly leveraged, which creates some uncertainty about the stability of this segment of the industry if the present economic conditions continue.^T

The Peninsular industry produces rough cut and finished air-dried and kiln-dried timber in several standard dimensions. The vast majority (77%) of the drying kilns are located in the Peninsular state of Pahang, and some of kiln dried lumber (about 1/3 of the total) ends up in export markets. The volume and value of sawntimber exports has steadily declined in the early 1980's, although sawntimber exports continue to predominate in the export mix of wood-based products, accounting in 1983 for 75% of the volume (2.3 million cubic meters) and 63% of the value (\$M 823 million) of Malaysian wood-based exports. (Tables 2.13 & 2.14). In terms of species, light hardwoods, such as dark Meranti and Red Meranti, accounted for 40% (1.2 million cubic meters) of the export total; Medium Hardwoods, such as Keruing and the redwood group of species, accounted for 44% (1.02 million cubic meters). The Heavy Hardwoods, for example Verbau and Chengal, provide the balance of the export species. The ASEAN countries and the EEC traditionally have been Malaysia's largest customers in export markets. They respectively accounted for 46% and 26% of Malaysia's 1984 export market share. Singapore alone imported 40% of the sawntimber shipped from Peninsular Malaysia in 1984 (MTIB, 1986).

- The Plywood and Veneer Industries

A total of 40 plants producing plywood, veneer, and blockboard are located in Peninsular Malaysia. The rate of growth of the industry has not been as rapid as the sawntimber industry (Table 2.12). The distribution of the plywood industry mirrors the sawntimber industry, with nearly 50% of the 1984 production total of 516,000 cubic meters produced in the states of Johore and Pahang. (The scale of the industry is small relative to the Indonesian standard; output of the Indonesian industry of over 6 million cubic meters is approximately 12 times larger than the 1984 production of plywood from Peninsular Malaysia). In 1984 Peninsular Malaysia also produced 149,000 cubic meters of veneer and 36,000 cubic meters of blockboard.

The plywood industry in Peninsular Malaysia is highly export oriented, with more than 60% of total production shipped abroad, providing for approximately 20% of the export earnings returned to the wood-based industry. Plywood is shipped primarily to Asian markets, with Singapore again accounting for the largest fraction, 68%, of the 1984 export total (MTIB, 1986). Plywood exports increased by 36% during the early 1980's, reaching a level of 454,000 cubic meters in 1983, before dropping off to 325,000 cubic meters in 1984. The healthy demand for plywood from Peninsular Malaysia during the early 1980's, despite recessionary market conditions, is partially attributable to increased shipments to Korea, Taiwan,

and Singapore. These countries partially responded to the Indonesian log embargo by increasing the level of plywood imported from Malaysia for local reprocessing industries.

- Other Wood-based Industries

Wood-molding mills and furniture manufacturing are the most significant of the secondary wood-based industries in Peninsular Malaysia. In 1984, 90 wood-molding mills consumed 307,000 cubic meters of domestic sawntimber to produce 180,000 cubic meters of moldings. About 50% of the total production of wood moldings was shipped to Australia. The most common timbers used to produce moldings include Light and Dark Meranti, Keruing, Merbau, and Ramin.

More than 2,000 small-scale furniture mills are established in Peninsular Malaysia. The industry is oriented to the domestic market, with only 15 mills producing knock-down furniture for the export market (Malaysian Forestry Department, 1985).

- Future Prospects

The development outlook for wood-based manufacturing in Peninsular Malaysia hinges on the industry's adaptability to the growing shortages of domestically-produced logs, recovery prospects from the present economic downturn, and the relative policy emphasis of the government towards the wood-based sector. In terms of the supply question, forestry department forecasts reveal that the present surplus of log production beyond domestic consumption requirements of about 3 million

cubic meters will decline to 2 million cubic meters in the 1991-1995 time-frame , and reverse to deficits in the years beyond (Table 2.15). These trends imply that the Peninsular industry will be forced from its position as a significant exporter of wood-based products to a net wood importer, if forecasted imbalances between supply and demand are not offset.

The wood supply forecasts, in fact, do not factor into account the potential contribution of rubber wood utilization or the impact of the Compensatory Plantation Program which has been established in the past five years, based on such fast growing hardwood species as *Acacia mangium*, *Albizia falcataria*, and *Gmelina arborea*, with 15 year rotation cycles. About 40,000 hectares of fast growing species have been established in the states of Selangor, Negeri Sembilan, Johore and Pahang, with another 188,000 hectares targeted during the next 15 year period (Asian Timber, October 1985). The level and rate of programmed plantation establishment, in theory at least, is sufficient to offset the anticipated shortfall in domestic wood requirements¹². The potential success of plantation programs is uncertain, however, due to the experimental nature of the program, the lack of historical experience with the species involved, and some uncertainties about the sufficiency of resources and personnel to carry out forestry planning. One auspicious factor in the case of Peninsular Malaysia is its record of success with other cash crop plantations (palm oil,

rubber, cocoa). Cash crop plantations in Peninsular Malaysia have not been undermined by shifting cultivators and land tenure problems, which have hampered forest establishment and rehabilitation in other timber producing countries in the region; most notably, the Philippines¹³.

Efforts also have been stepped up recently to increase the reforestation and rehabilitation of degraded and logged over areas, through such silvicultural treatments as enrichment planting, climber cutting, tree girdling, weed eradication, and boundary cleaning of forest reserves. The progress in forest rehabilitation through the early 1980's lagged in relation to rate of forest conversion and degradation, resulting in the accumulation of a substantial area of "silvicultural backlog." In the state of Perak, for example, 142,000 hectares, representing 66% of total logged over area, remained untreated as of 1980 (Manan and Hai, 1982). Insufficient awareness of the timber supply problem, and lack of manpower and financial resources, contributed to this state of affairs.

In the early 1980's, some state forestry departments conducted cost/benefit studies which demonstrated positive net present values to silvicultural rehabilitation¹⁴. Acting on such information, several states have begun to implement forestry rehabilitation programs. The forestry department of the state of Perak instituted a contract system to enable private sector participation in the silvicultural treatment program.

This policy proved successful; in 1981, for the first time, the rate of forest rehabilitation in forest reserve areas exceeded the rate of logging, with 18,423 hectares treated compared with 14,595 hectares harvested (Manan and Hai, 1982). The state forestry department of Negeri Sembilan also began to implement a forest rehabilitation program, financed exclusively by a silvicultural cess. The success of state-implemented efforts in forest management and rehabilitation will hinge in part on the continued provision of financial and technical assistance from the national forestry department in Kuala Lumpur (Isa, 1982)¹⁵.

Beyond better forestry management, a number of strategies are possible for the industry in Peninsular Malaysia to cope with shortage of domestically supplied logs:

- Import logs from East Malaysia. This option has not been pursued because Sabah and Sarawak will not offer the Peninsular states the preferential pricing scheme available to their own domestic processors, and because of the high costs of log transport. The national government has considered the possibility of directly subsidizing log imports from Sabah and Sarawak¹⁶. This policy, however, is not considered to be a probable course of action, except as a possible short-term buffer against the adjustment impact of the industry's rationalization.
- Relocate processing plants to Sabah and Sarawak. This plan has been resisted by the West Malaysian States, who do not

want to lose employment and manufacturing opportunities. At the national level, however, the idea seems to be gaining some support. (Asian Timber, October 1985). The Malaysian government promotes rural development through a series of investment and tax incentives and Sabah and Sarawak fall within promoted development zones (See Chapter 3). Through control over investment policy, the government could encourage the relocation of plant capacity from east to west Malaysia.

- Encourage higher productivity and product diversification in wood-based industries. National strategy for the resource-sector is premised on the need to further develop secondary and tertiary resource-based industries, and a liberal scheme of tax incentives is available to encourage investors (See Chapter 3). A particularly attractive investment option in the wood-based sector in Peninsular Malaysia might be the establishment of molding or knock-down furniture plants based on imported veneers and sawntimber from Indonesia, the market availability of which should not be of concern for at least the next decade. The Malaysian government is establishing so called furniture zones to integrate activities related to furniture production. Foreign investment in these zones is actively solicited (Seong, 1985)

2.2.3 Sabah and Sarawak

As noted before, log harvest for export continues to

dominate the forest-based sectors in Sabah and Sarawak. The effect of log export restrictions of such producers in the region as Peninsular Malaysia, the Philippines, and most significantly, Indonesia, has shifted log import demand in the market towards Sabah and Sarawak. Sabah and Sarawak each exported more than 9 million cubic meters of industrial roundwood in 1983. Log exports accounted for 91% of the volume and 88% of the value of forest-based trade for the state of Sabah in 1983, and for 98% of the volume and 92% of the value of forest-based trade in Sarawak in the same year. Revenues from the harvest and export of hardwood logs, particularly in Sabah, have played a major role in the financing of basic transportation and communication infrastructure as well as modest industrial development in the wood-processing sector itself.

- Sabah

- Forestry Resources

The remaining forested land areas in Sabah have been estimated to lie within the 5-6 million hectare range. Approximately half of the total forested area is productive forest which has been committed and already licensed for commercial utilization. Undisturbed old-growth forest represents less than 20% of the remaining forest reserve, approximately 1.5 million hectares.

Forest conversion from industrial logging operations and shifting cultivation during the past decade has occurred at an extremely rapid rate in Sabah. Log removals over the period

have averaged 8-10 million cubic meters per year. The productive capacity of remaining forest reserve has been estimated to be approximately 3-4 million cubic meters per year, assuming management according to maximum sustained yield principles. At the present rate of harvest, the availability of timber supply could become a constraining factor on the level of log exporting and wood-based development in Sabah during the next 5-10 year period.

- Wood-based Industry

The wood-based industry in Sabah has been promoted since 1976 (Asian Pacific Forestry Commission, 1984b), when a plan was formulated to:

- reduce log exports by 5% annually until 1978; 10% annually between 1976-1980;
- establish a lower royalty rate on domestically processed logs to stimulate local processing;
- stimulate investment in plywood mills;
- establish plantation programs for fast-growing species.

The export restriction on logs has not been consistently implemented, due to foreign exchange requirements and increased demand pressures in the south sea log market occasioned by export restrictions from other timber producing countries in the region. Nonetheless, the wood-based sector expanded in the early 1980's. Sawntimber

exports rose from 79,891 cubic meters in 1979 to 1.4 cubic meters in 1984, a 17 fold increase. Plywood exports rose from 13,328 cubic meters to 18,000 cubic meters, or by 35%, while veneer exports rose from 9.9 to 24.2 million cubic meters. The export earnings ratio for logs/to processed products decreased from 98% to 88% percent over the period, indicative of a trend towards the further processing for export of higher value-added products (Tables 2.16 and 2.17).

Sabah's wood-processing industry is export-oriented, partly because of the small scale of domestic demand. Over 50% of the production of the processing industry is exported abroad. Major export markets are diversified, but the EEC and Asia account for 70% of the export trade, with respective market shares of 24% and 56%. The U.S., Middle East, and Australia are major markets where Sabah has yet to make a significant impact.

Future development prospects for Sabah's wood-based industries depend in large part on the resolution of resource supply constraints which are looming in the intermediate-run period. Forestry plantation projects have been established to augment domestic timber resources. A joint-venture company, Sabah Softwoods, has planted a total of 25,000 hectares of some of the same fast-growing species utilized in the Peninsular plantation program: *Acacia mangium*, *Albizia falcataria*, and *Gmelina arborea*¹⁷. A total of 250,000 hectares of forest plantations have been programmed by the government over the next 15 year period.

The success of plantation efforts in offsetting timber shortages appears uncertain, at least in the near-term, given the scope of the effort in relation to reforestation requirements and the lag time associated with the production of harvestable volumes even for fast growing species (10-15 years). Shifting cultivation is a problem in Sabah which could potentially undermine forestry plantation establishment. A fundamental problem remains the untested merchantability of fast growing species which are not close substitutes for natural hardwoods in export markets, given prevailing customer preference patterns.

A further expansion of domestic wood-based processing industries, based on fast-growing plantation species, might be a possible long-run strategy for adjustment to the emerging timber supply shortage. Buyer preference is less of a problem in domestic markets. The small scale of Sabah's domestic demand market, however, places constraints on major expansions in wood-based industry development oriented to the local market.

As noted before, the Malaysian national government is encouraging the development of secondary and tertiary resource-based industries through a package of financial tax incentives (See Chapter 3). The diversification of Sabah's primary wood-processing industry in this direction, based on imported Indonesian sawntimber or other semi-finished products, may prove to be a feasible (and economic) option. Sabah is conducting market studies to assess the demand for such

products as moldings, doors, and knock-down furniture in potential export markets.

- Sarawak

- Forest Resources

Sarawak has a total forest estate of 9.4 million hectares, of which .16 million are mangrove forest, 1.5 million are swamp forest, and 7.8 million are mixed dipterocarp hill forests. As of 1981, the area of productive hill forest remaining, however, was only 5.4 million hectares (Wadsworth, 1981). The mangrove forest currently is being harvested to supply the feedstock requirements of Sarawak's single woodchip mill. Swamp forest traditionally has been the site of Sarawak's industrial logging activity. Extraction of commercially important peat swamp ramin has occurred at an unsustainable rate, however, and most of the long-term licenses issued for the harvest of old growth peat stands are due to expire over the next 15 years (Choon and Lin, 1982). The locus of forest utilization is expected to shift to the mixed dipterocarp hill forest, as a result. As of 1984, 40% of hill forest areas had been licensed for commercial exploitation (Gillis, 1985b).

Although the annual rate of deforestation has averaged 80,000 hectares in the past five years, the status of the forest estate in Sarawak is less tenuous than in Sabah. Logging production averaged at the relatively low level (compared to Sabah) of 3-5 million cubic meters during most of the 1970's. Production of hardwood logs did not reach the 8 million cubic

meters level until the early 1980's.

- Wood-based Industries

Sarawak's sawmilling industry consists of around 100 very small (9 cubic meters per day) sawmills specialized to converting peat swamp ramin. Although a consistent set of production figures is difficult to obtain, production in 1984 was most likely in the neighborhood of 500,000 to 750,000 cubic meters. Due to the small scale of domestic demand markets, most of the sawntimber, 50-75%, was exported to overseas markets.

Three plywood plants annually consume 100,000 cubic meters of logs to produce about 30,000 cubic meters of plywood, of which 15,000 cubic meters are exported. A blockboard plant, a few dowel and molding factories, and a single wood chip plant with an intake capacity of around 200,000 cubic meters round out Sarawak's small wood processing sector. (Tables 2.18 and 2.19 denote recent export trends for Sarawak's wood-based sector).

A forest industries development plan (FIDP) has been established to stimulate the development of wood-based processing (Yussip, 1982). The objective of the plan is to divert 40% of domestic log production into the sawntimber industry, and 15% of log production to the plywood sector by 1990. These targets imply production increases on the order of 70% and 300% respectively for the two industries, and the construction of another five plywood plants by 1990. Hill species such as Meranti, Kapur, Keruing, and Mixed Light Hardwoods will be the primary timber source for processing

plants established under the FIDP.

Expansion of wood-chipping facilities also is programmed in conjunction with solid-wood industry development, based on the waste-wood residue from sawntimber and plywood mills and increased forest utilization (harvest of noncommercial species and defective/residual stems from felling operations). Preliminary feasibility studies have been conducted on the siting of additional plants, and laboratory tests have demonstrated the viability of mixed dipterocarps from Sarawak as a pulp feedstock (Table 2.20).

The implementation of the forest industries plan has been overtaken by new developments however. The rapid capacity expansion of the Indonesian plywood industry has created oversupply conditions in the market for plywood and increased the demand for logs. Sarawak is reassessing its development thrust in view of these circumstances. Veneer plants, which are less expensive to construct and operate, may be promoted instead of plywood plants. Lesser known species can also be used in core veneers with less reaction from the market.

In the longer-run, the development of the industry in Sarawak will probably be most affected by the ability of the government to overcome infrastructural deficiencies in power supply, communications networks, transportation, and port and storage handling facilities. Labor shortages have also been a constraint on industrial development in Sarawak.

Even if all of Sarawak's industry development objectives

are accomplished, however, the scale of the expansion, while having a significant impact on the country, will be too small to enlarge Sarawak's role significantly in terms of global markets for processed wood. Under the most optimistic scenario, the production and export of sawntimber and plywood from Sarawak will amount to less than 5% of Indonesia's 1984 export level. In terms of export markets, Sarawak's impact will be manifested as a major supplier of logs for the foreseeable future.

2.3. The Philippines

2.3.1. Introduction

The Philippines has played an important role in the forest products trade in the Southeast Asian region during the Post World War II period. The Philippines was the largest regional supplier of logs in the area until the emergence of Malaysia and, subsequently, Indonesia in the mid 1970's. Log production in the Philippines peaked in 1969 at 13 million cubic meters, and exports in that year totalled 9.4 million cubic meters, or 72% of total production. Export earnings from logs of US\$235 million represented the country's largest single source of foreign exchange earnings in 1969 (FAO, 1981).

During the 1970's, log production and exports declined in the Philippines and the production and export of sawntimber steadily rose. By 1980, log production totalled only 6.3 million cubic meters, of which 12%, or 714,825 cubic meters was exported. Sawntimber production, however, increased over the same period from 185,000 cubic meters to 1.5 million cubic meters. Some

741,000 cubic meters of the sawntimber production was exported in 1980, generating \$181 million in foreign exchange, compared with only \$91 million in foreign exchange earnings derived from the export of logs. Thus, in the course of a decade, the Philippines moved away from the harvest of logs for export as the dominant forest-based industry to domestic processing of logs to support an export-oriented sawntimber industry, as well as other wood-based processors including plywood, veneer, and blockboard.

In the ensuing period, however, the wood-based industry in the Philippines has experienced a recession and the level of log exporting again has increased as a means of generating foreign exchange. The present condition of the industry is reviewed below, after an overview of Philippine forest resources and management policy.

2.3.2 Forest Resources and Management

The total forested land area in the Philippines has been estimated to be around 11 million hectares. Most of the forest resource is located in Mindanao, followed by Luzon, Visayas, and Palawan. Species from the Dipterocarp family comprise approximately 8.2 million hectares or 75% of the total. Standing timber volume has been estimated at 750 million cubic meters with a harvestable volume of 350 million cubic meters (MTIB, 1984a).

As of 1980, however, the remaining area of commercial old-growth forest totalled only one million hectares, most of which

is located in remote, higher elevation areas. The production capacity of the old growth forest is estimated to be on the order of 70 to 80 cubic meters per hectare. It is expected the remaining old-growth forest in the Philippines will be logged out within the next 10-15 years (Palis, 1986).

Like other hardwood producers in Southeast Asia, timber is harvested in the Philippines under concession contract arrangements which entitles the concessionaire to harvest an annual allowable cut over a designated area. Licenses are normally issued for 10-25 years and are renewable up to 50 years. As of December 1984, there were 163 concession licenses covering an area of 6.5 million hectares with an annual allowable cut of 9.8 million cubic meters. This figure represents a decline in the number of licenses (from 197) as a result of a ban on logging operations in certain regions of country, including the eastern, central and southern regions of Luzon, to reduce the rate of deforestation (Palis, 1986).

The rate of deforestation through extractive logging operations - legal and otherwise - as well as shifting cultivation, has occurred at a very high rate in the Philippines, averaging 170,000 hectares per year during the 1970's (FAO, 1981). The country now faces impending timber shortages, as a result of the decline in old-growth forest and lower yields from cut-over forests than forecasted in original projections. Many logging concessionaires, which began operations in the 1950's, are just now about to reach the end of the 35 year selective

cutting cycle, and the quantity and quality of second cycle yield on these areas appears to be substantially lower than original expectations. Contributing to the problem are the destructive action of shifting cultivators and less-than-optimal forest management policies on the part of the concessionaires. Concessionaires have had little incentive to undertake productive forestry investments or conservation-guided management strategies, in part, because of the institutional uncertainties surrounding the government's administration of concession rules and procedures. Suspension and revocation of licenses, and after-the-fact rule changes in timber licence agreements, have created an unstable operational environment for the concessionaire (Palis, 1986).

Similar problems have impeded reforestation programs. Some processing mills in Mindanao have attempted to establish plantations based on fast-growing plantation species, primarily such fuel and pulpwood species as *Albizia falcataria*, with mixed success. Although such fast-growing plantations, if successful, may augment fuel-wood supply and restore degraded land area, the potential contribution as a substitute wood source for dipterocarp industrial roundwood is very uncertain, as noted before (See footnote 4).

2.3.3 The Primary-Processing Industry

As of December 1984, the Philippine wood processing industry consisted of a 255 processing mills with a total production capacity of 4.1 million cubic meters (Table 2.21).

Sawntimber accounted for 53% of the installed capacity and 62% of production. Production of the sawntimber industry in 1984 equaled 1.2 million cubic meters (Table 2.23).

The plywood industry is the second largest segment of the wood processing sector in terms of rated production capacity and output. Capacity and production in 1984 stood at 1.7 million cubic meters and .5 million cubic meters respectively. Veneer, blockboard, fiberboard, and particle board account for the remainder of the primary processing sector in the Philippines. Production from this segment of the industry in 1984 totalled approximately 250,000 cubic meters.

The sawntimber and plywood industries in the Philippines are export-oriented, with an average of between 45% and 55% of production supplied to the export markets. The export orientation of the industry is partially a function of weakness in domestic markets caused by a depressed construction sector and infrastructural problems within the country. Additionally, however, the quality of exported processed products is high, with the quality of manufactured plywood comparing well with the Japanese and U.S. standard (Brion, 1983). Exported timbers include: Apitong, Kalantas, Red/White Luan, Tanguile, and Mayapis.

Principal export markets for the Philippines plywood are the United States, Japan, ECC, and the ASEAN countries (MTIB, 1984a). Recently, the United States share of the plywood trade has decreased from 50% to around 30%, with the PRC market, via

Hong Kong, picking up approximately 25% of the trade. The EEC block is the largest import market for Philippine sawntimber. This market has been developed through promotion efforts sponsored by industry and government sources.

Since 1980, the wood-based industry in the Philippines has experienced a severe economic recession. Numerous wood processors shut down during the period either on a temporary or permanent basis. Rated production capacity of the aggregate industry dropped by 33% between 1980 and 1984 (Tables 2.21 & 2.22), with particularly large declines experienced for veneer (76%), block board (69%) and sawntimber (44%). Trends in production and export volumes and values generally followed the same trend (Tables 2.23, 2.24, 2.25), with the exception of log exports, which actually increased over the period to generate badly need foreign exchange.

The industry's economic woes are partially related to economic factors, including soft demand conditions in domestic markets, the high costs of capital, and competition in export markets stemming from supply-side expansions in the trade by Indonesia and Malaysians, in both plywood and sawntimber markets (Palis, 1986). Political and institutional instability, a series of devaluations, foreign exchange controls, and unstable policies in the forestry sector also have contributed to the uncertainties which underlay the present state of the industry.

- Log Banning Policy

Guidelines for log export restrictions were first issued in 1967 but the implementation of the policy was subsequently frozen. In 1975, a Presidential decree was issued requiring the domestic processing of all logs, beginning in January 1976. This order was later amended by a decree allowing the exportation of logs on a selective and limited basis. The rationale of this policy change was to allow timber licenses to accumulate investment capital for financing wood-based ventures. Since this time, the log export ban has been reimposed and rescinded several times in response to foreign exchange emergencies and pressures from the timber industry, for which log exporting is more profitable than wood-based processing, given present economic conditions.

The erratic restrictions on log exports may not have had a serious impact on the operability of the industry, which appears to have successfully circumvented the quota system through illegal smuggling. Political instability associated with the New Peoples Army (NPA), however, has constrained the operation of companies located in rural areas where the insurgency movement has influence; specifically, by enforced "taxation" of company operations¹⁸.

The outright ban on logging operations in the southern, eastern, and central regions of Luzon has had a significant impact on wood-based processors in the heavily populated region in the southern part of the island, including metro Manila, whose log supply originated in the ban-affected area. Overland

transport from Northern Luzon and inter-island shipping from the supply sources from the south, such as Samar, Palawan, and Mindanao, has proved to be a costly alternative to the proximate timber sources in Luzon, given freight rates and shortages of cargo carriers. This policy has caused some movement in the export-oriented industry to the island of Cebu, a regional shipping center close to Mindanao, the country's largest remaining source of timber supply (Brion, 1983).

- State of the Industry

Much of the plant and equipment in primary processing is badly depreciated and in need of upgrading and/or replacement. Excess capacity has been a problem in the industry since the 1970's when the government initiated a plan to rationalize the sector (Parsons, 1982). Utilization of plant capacity averaged only 45% in 1985 on an industry wide basis, suggestive of the need for further contraction and rationalization of the industry despite the production capacity decline evidenced in the 1980-1984 period. Capital requirements for restructuring the industry have been estimated to be on the order of US\$ 25 million.

2.3.4 Other Wood-based Industries

The Philippines has a well-established furniture industry based largely on rattan, buri, and to a lesser extent hardwood. Most of the furniture factories are concentrated around Metro Manila and Cebu in proximity to raw-materials sources, support industries, and infrastructure. The location of the

rattan industry has recently been shifting to the city of Cebu which is situated more closely to islands of Samar and Mindanao, the primary rattan supply regions in the country (Brion, 1983).

The Philippine furniture industry is labor-intensive and, in terms of business organization, is characterized by a large degree of family ownership. In the rattan industry, 76% of firms are single proprietorships, 17% are incorporated, and 7% are partnerships. Due to the small scale of the industry, marketing efforts are generally unsophisticated, particularly for smaller, unmechanized firms. Domestic firms tend to produce in response to job orders, without the assistance of middleman or wholesalers. Export marketing also is largely dependent on personal contacts and specific job orders from furniture customers, without the intervention of importer or brokers (MTIB, 1984a).

The export performance of the furniture industry in the late 1970's was excellent. Aggregate export earnings of the industry increased from \$22 million in 1977 to \$87 million in 1981. Rattan furniture accounted for 52% of the industry's export earnings, Buri 38%, and wood furniture 4%. Detailed production and export data for the 1980's are scarce, but a reasonable surmise is that the industry has suffered a recession in conjunction with other wood-based industries.

The primary export markets for the Philippine furniture industry appear to be the United States, Australia, and Canada. European markets have also been targeted in an export promotion

effort by the government.

There are several constraints the industry must resolve to significantly expand the scope of its marketing (MTIB, 1985a). They include:

- rising costs and diminishing supply of rattan poles (for the case of the rattan industry);
- low labor productivity/shortage of skilled labor;
- low degree of mechanization in the industry;
- poor information on trade contacts and overseas marketing opportunities;
- quality control requirements of foreign markets;
- inability to meet the demands of large volume buyers;
- inadequate financing for capital expansions.

2.3.5 Future Outlook

In an attempt to streamline forestry policy and to reenergize the wood-products industry, the Wood Industry Development Authority (WIDA) was formed under the Ministry of Natural Resources, to become operational in January of 1986. Responsibility for the licencing and monitoring of all forestry, processing, and export operations was transferred from the Bureau of Forestry Development to the WIDA. The tenure of the new organization, however, and the more general status of forestry policy, appears uncertain with the governmental change in the Philippines in February of 1986¹⁹. The future

outlook of the Philippine wood-based industry will remain unclear until the political situation becomes resolved in the country.

Table 2.1 Annual Potential Log Harvest, by Geographic Region/Species

	Geographic Region				Total
	Sumatra	Kalimantan	Sulawesi	Eastern Indonesia	
Productive Forest Area (ha)	13,438,000	10,365,250	4,267,000	13,157	41,227,750
Annual Harvest Potential (000 m3)					
Diterocarps	10,500	31,500	629	3,438	46,067
Non-Dipterocarps	5,587	7,134	3,394	8,638	24,933
Agathis	295	286	409	283	1,273
Ramin	163	1,494	--	--	1,657
Bakau	396	368	--	479	1,243
Other	575	965	141	198	1,879
<u>Total</u>	17,515	41,927	4,577	13,036	77,055

Source: Sinduredjo, 1986

Table 2.2 Log Production Costs at Millsite in East Kalimantan, 1984

Item	Cost (U.S. \$/m3)	Percent of Cost of Total
Survey and Planning	1.19	2.7
Road Construction and Maintenance	6.77	15.1
Log Extraction (felling, bucking, and skidding)	3.14	7.0
Hauling and Rafting	6.41	14.3
Spare Parts and Maintenance	2.32	5.2
Medical and Insurance	1.25	2.8
Administration/Overhead	1.00	2.2
Forestry Sector Fees (royalties, grading fees reforestation deposit)	11.75	26.2
Depreciation		
Equipment	9.72	21.7
Building and Camp	1.23	2.8
TOTAL	44.78	100.0

Source: Priasukmana, 1986

Table 2.3 Plywood Production, Capacity, Sales, and Exports (000' m³)

Year	Number of Plants	Annual Capacity	Production	Domestic Sales	Exports
1973	2	28	9	8	2
1974	5	103	24	24	-
1975	8	305	107	105	2
1976	14	405	214	204	10
1977	17	535	279	261	17
1978	19	799	124	341	83
1979	21	1,809	624	498	126
1980	29	1,949	1,011	728	283
1981	40	2,601	1,552	778	774
1982	61	3,292	2,359	1,209	1,150
1983	79	4,528	3,330	1,230	2,100
1984	95	5,329	5,075	2,375	2,700
1985	109	5,833	5,945	2,945	3,000

Source: Indonesia Wood Panels Association

Table 2.4 Production Costs for Plywood in East Kalimantan

December 1984

Item	Cost (\$/m ³)	Percent
Log	97	43
Glue	45	20
Log Preparation	2	-
Peeling and green veneer manufacturing	10	4
Veneer drying and processing	14	6
Gluing and pressing	7	3
Panel sawing and sanding	6	3
Panel finishing	10	4
Strapping and crating	11	5
Depreciation	16	7
General expenses	9	4
Insurance and Taxes	-	-
Total	227	99

Source: Priasukmana, 1986

Table 2.5 Indonesian Plywood Exports by Country of Destination (m³)

Top Five Export Markets					
Year	USA	EEC	Middle East	Hong Kong /PRC	Singapore
1981	83,547 (11%)	86,110 (11%)	150,651 (20%)	127,380 (17%)	141,955 (18%)
1982	230,087 (18%)	121,558 (10%)	227,232 (18%)	271,015 (22%)	258,456 (21%)
1983	600,847 (30%)	225,927 (11%)	446,632 (22%)	247,386 (12%)	362,772 (18%)
1984	789,978 (28%)	233,288 (8%)	396,683 (14%)	654,687 (23%)	338,924 (12%)

Source: Indonesian Wood Panels Association

Table 2.6 Indonesian Joint Marketing Board

Marketing Board	No. of Members
1. Sumatra Pioneer Wood Group	20
2. Satya Alas Kalamur Timber Indonesian Group	15
3. Plywood Indonesia Group	18
4. Far Eastern Panel Group	19
5. Hutan Kurnia Raya Group	22
6. HKU Indah Utama Group	8
7. Kayu Lapis Group	6

Source: P. T. Data Consultants Inc., 1985

Table 2.7 Development of the Indonesian Sawntimber Industry

Year	Concession (HPH)		Nonconcession (HPH)		Total	
	Mills	Capacity	Mills	Capacity (000 m ³)	Mills	Capacity (000 m ³)
1979	145	4,100	1,510	3,800	1,655	7,900
1980	188	5,500	1,639	4,300	1,827	9,800
1981	239	7,100	1,788	4,800	2,027	11,900
1982	257	7,600	1,957	5,400	2,214	13,000
1983	286	8,500	2,205	5,900	2,491	14,400
1984	294	8,700	2,205	5,900	2,499	14,600

Source: Indonesian Sawmillers Association

Table 2.8 Sawntimber production and Exports (000 m³)

Year	Domestic Sales	Exports	Total
1979	2,658	1,342	4,000
1980	3,579	1,218	4,797
1981	3,907	1,342	5,249
1982	4,288	1,462	5,750
1983	4,550	1,730	6,280
1984	6,400	1,991	8,391

Source: Indonesian Sawmillers Association

Table 2.9 Furniture Plants in Indonesia, 1980

Province	Number and Type of Companies			Capacity (000 m ³)
	PMDN*	PMA**	Total	
Jakarta	19	3	22	262
West Java	3	1	4	638
Central Java	6	-	6	136
East Java	4	-	4	46
West Kalimantan	1	-	1	4
Maluku	1	-	1	-
Jambi	1	-	1	-
Total	35	4	39	1,086

Source: Malaysian Timber Industry Board

* Domestic firms

** Firms with foreign equity participation

Table 2.10 Log Export Ban in Peninsular Malaysia

Species	Effective Dates
1. All Red Meranti, Mersawa, Mengkulang, White Meranti, Durian Hutan, Nyatch, Sepetir, Keruing, Merbau dan Damar Minyak	1972
2. Jelutong	1973
3. Chengal, Balau, and Kempas	1978
4. Terentang and Sesendok	1979
5. Kapur, Kasai, Kelat, Keledang, Kulim, Bintangor, Kungkur, Macang, Melunak, Merpauh and Simpoh	1983

Source: Annual Report of Forestry in Peninsular Malaysia, 1984

Table 2.11 Development of Sawmill Industry, Peninsular Malaysia
1975-1984

Year	No. of Mills	Log Input (000 m ³)	Sawntimber (000 m ³)	Efficiency %
1975	536	5,169	3,352	65
1976	543	7,042	4,764	68
1977	574	8,360	5,091	61
1978	587	8,124	5,270	65
1979	596	7,854	5,390	69
1980	603	8,134	5,339	66
1981	644	6,902	4,564	66
1982	655	7,569	5,022	66
1983	663	8,425	5,676	67
1984	678	6,967	4,608	66

Source: Annual Report of Forestry in Peninsular Malaysia, 1984

Table 2.12 Development of Plywood Industry, Peninsular Malaysia
1975-1984

Year	No. of Mills	Log Input (000 m ³)	Plywood (000 m ³)	Efficiency %
1975	35	767	341	65
1976	35	1,088	500	46
1977	35	1,228	525	43
1978	35	1,175	442	38
1979	35	1,210	505	42
1980	37	1,143	441	39
1981	38	1,393	505	36
1982	40	1,383	553	40
1983	40	1,483	623	42
1984	40	1,200	516	43

source: Annual Report of Forestry in Peninsular Malaysia, 1984

Table 2.13 Wood Products Exports from Peninsular Malaysia
(000 m³)

Product	1980	1981	1982	1983
Lumber	2,722	2,253	2,244	2,323
Plywood	332	374	380	454
Blockboard	56	68	63	69
Veneer	64	92	88	65
Mooden moldings	153	143	127	138
Chipboard	4	2	4	5
Logs	262	232	272	132
Prefabricated timber	-	1	2	2
Total	3,593	3,165	3,180	3,188

Source: Malaysian Timber Industry Board

Table 2.14 Foreign Exchange Earnings from Wood Product Exports
Peninsular Malaysia (\$M 000)

Product	1980	1981	1982	1983
Lumber	1,029,237	776,823	746,965	823,583
Plywood	207,632	240,039	220,868	252,743
Blockboard	33,171	43,087	32,268	33,920
Veneer	26,109	31,886	32,113	24,619
Wooden Moldings	149,871	143,640	126,519	136,317
Chipboard	1,694	948	1,601	1,790
Logs	23,125	21,094	25,016	11,107
Prefabricated timber	1,327	2,646	4,189	4,246
Total	1,472,169	1,262,364	1,189,540	1,288,326

Source: Malaysian Timber Industry Board

Table 2.15 Projected Supply and Domestic Demand for Roundwood in Peninsular Malaysia

Period	Average Annual Log Production (million m ³)	Average Annual Domestic Demand (million m ³)	Demand/Supply Balance (million m ³)
1984-1985	5.98	3.00	+2.98
1986-1990	6.72	3.43	+3.29
1991-1995	6.38	4.32	+2.06
1996-2000	4.45	5.53	-1.08
2001-2005	4.45	6.88	-2.43
2006-2010	4.45	8.16	-3.71

Source: (Thang, H. C. 1984)

Table 2.16 Wood Products Exports from Sabah (000 m³)

Product	1980	1981	1982	1983
Logs	8,234	8,698	6,927	9,475
Lumber	238	383	642	936
Plywood	22	17	16	18
Total	8,494	9,098	10,485	10,429

Source: Malaysia Timber Industry Board

Table 2.17 Foreign Exchange Earnings from Wood Products Exports Sabah (\$M 000)

Product	1979	1980	1981	1982
Logs	2,050,950	1,782,520	1,641,680	2,092,020
Lumber	26,900	78,150	134,720	227,100
Plywood	11,689	19,520	17,700	14,510
Total	2,099,550	1,890,590	1,812,240	2,352,720

Source: Malaysian Timber Industry Board

Table 2.18 Wood Products Exports from Sarawak (000 m³)

Product	1980	1981	1982	1983	1984
Lumber	174	163	184	183	130
Plywood	14	8	4	8	12
Logs	6,695	6,923	9,200	9,091	8,981
Moldings	-	-	-	-	-
Dowels	-	-	-	-	-
Woodchips	-	-	-	-	-
Total	6,883	7,094	9,388	9,282	9,123

Source: Malaysian Timber Industry Board

Table 2.19 Foreign Exchange Earnings from Wood Products Exports Sarawak (\$M 000)

Product	1981	1981	1982	1983	1984
Lumber	104,120	84,800	100,640	84,960	67,784
Plywood	7,660	4,630	2,450	2,577	2,910
Logs	816,500	812,360	1,261,330	1,694,400	1,221,120
Moldings	18,770	18,400	17,130	15,859	15,300
Dowels	43,850	40,310	35,070	38,506	48,406
Woodchips	10,440	11,660	6,900	7,197	6,897
Total	1,001,340	972,160	1,843,499	1,843,499	1,362,417

Source: Malaysian Timber Industry Board

Table 2.20 Suitability of Sarawak Pulp Mixtures for End Uses

Resource	Sulphate (Kraft) Pulp		NSSC Pulp
	Unbleached	Bleached	Unbleached
Peat Swamp Forest Mixtures	Kraft linerboards, bag and wrapping papers	writing and printing papers	Corrugating medium and low grade packaging material
Mixed Dipterocarp Forest Mixtures	Linerboards, Bag and wrapping papers	writing and printing papers and component of White board products	Low grade packaging material

Source: Choon L. W. and N. Lim, 1982

Table 2.21 Philippine Processing Capacity: 1984

Mill	Number	Log Requirements (000 m ³)	Production Capacity (000 m ³)
Sawmill	189	4,300	2,150
Plywood	38	3,305	1,653
Veneer	6	296	149
Blockboard	18	68	58
Fiberboard	2	160	152
Particleboard	2	14	13
Total	255	8,143	4,174

Source: Bureau of Forest Development

Table 2.22 Philippine Processing Capacity: 1981

Mill	Number	Log Requirements (000 m ³)	Production Capacity (000 m ³)
Sawmill	375	7,719	3,859
Plywood	34	3,090	1,546
Veneer	23	1,224	612
Blockboard	12	206	175
Total	444	12,240	6,193

Source: Bureau of Forest Development

Table 2.23 Production of Logs and Processed Wood Products in the Philippines (000 m³)

Product	1980	1981	1982	1983	1984
Logs	6,352	5,400	4,133	4,412	3,316
Lumber	1,529	1,219	1,151	1,129	1,223
Veneer	660	553	367	405	107
Plywood	553	457	329	450	504

Source: Bureau of Forest Development

Table 2.24 Export of Logs and Processed Wood Products from the Philippines (000 m³)

Product	1980	1981	1982	1983	1984
Logs*	715	706	752	786	846
Lumber	741	546	591	728	553
Veneer**	164	138	151	122	72
Plywood	344	370	242	295	250

Source: Bureau of Forest Development

* Circumvention of log export bans through illegal smuggling is widespread in the Philippines, and undoubtedly imparts a downward bias to these officially recorded statistics on the level of log exporting.

** Includes both face veneer and corestock.

Table 2.25 Wood Products Foreign Exchange Earnings
Philippines (\$000)

Product	1980	1981	1982	1983	1984
Logs	91,997	76,995	78,477	63,033	85,15
Lumber	181,210	125,725	123,662	144,320	106,11
Veneer	15,516	34,357	22,094	26,468	15,67
Plywood	103,843	109,741	67,351	77,409	55,40
Total	392,566	346,818	291,584	311,230	262,33

Source: Bureau of Forest Development

Chapter 2 Footnotes

1. Other factors, however, such as capital shortages, may constrain the short-term pace of wood-based development.
2. The sustainability of forest resources, based on the selective cutting approach, faces several theoretical and practical problems. If natural regeneration, rather than silvicultural treatment (such as enrichment planting) is employed, commercially usable species may not be the species which regenerate. Second cycle yields also may be lower than official estimates as a result of residual stem damage and wastage which occur under present harvesting regimes. Shifting cultivation and fire damage also can reduce yields. Additionally, the time-frame of concession agreements in the past has been too short to justify long-term investment-protecting conservation practices and, in fact, has encouraged stand reentries for secondary harvesting only 10 or 15 years after the initial operation. This practice has further damaged stands and lowered productivity (Gillis, 1985a).
3. Figures on cumulative roundwood extraction were calculated from FAO data (FAO Yearbook of Forest Products, Various editions).
4. The success of plantation and reforestation programs in Southeast Asia in augmenting old-growth wood supply is not a foregone conclusion. There is little experience with tropical forest plantations in Asia of the programmed species types, and basic silvicultural data is not always available (Priasukmana, 1986). Fast-growing plantation species are not close substitutes for natural dipterocarps, at least in export markets, given existing processing technology and customer preference patterns. As far as natural hardwood plantations are concerned, rotation periods of 60-80 years render such efforts irrelevant for the intervening period, and the collection and storage of local seeds, which are produced at intervals of every five years for some species (and which, in the case of dipterocarps, have dormancy periods of less than 7 days) presents difficulties. Finally, the financing of reforestation projects is a significant constraint. In Indonesia, the reforestation deposit has had little success in encouraging plantation planting (Gillis, 1985a). The proceeds of the tax have been diverted and little money has actually been spent on plantation planting. The institutional control of funding and incentive systems for plantation programs will have to be strengthened in Southeast Asia for reforestation efforts to prove successful.

5. The policy to promote wood-based processing originally applied to all segments of the industry, but, in 1981--over the protests of the sawmilling industry--was restricted to integrated plywood plants (Ginnings, 1983).
6. Although the present inefficiency of the Indonesian industry cannot be disputed, theoretical and practical objections can be raised to drawing such an inference from wood recovery ratios. Because Indonesia is relatively well-endowed with wood resources--relative to other scarce production factors, such as capital--it is economically rational in Indonesia to adopt a relatively wood-intensive production process in plywood manufacturing. Viewed from this perspective, it is just as accurate to conclude that the Japanese plywood industry is inefficient because it employs relatively large amounts of capital--it's least scarce factor--in plywood production, than to conclude the reverse: that the Indonesian industry is inefficient because it employs relatively large amounts of its least scarce factor--wood.

On a practical level, the quality of feedstock also is an important determinant of wood recovery ratios. The Indonesians have traditionally exported the best quality large diameter logs (Saw log grade 1 and 2) to Korea, Japan, and Taiwan. Some evidence suggests that Indonesian wood recovery ratios have recently improved because the better quality logs, which formerly were exported, now remain in the domestic market (Brion, 1983).

7. To reduce this cost, the Indonesians are attempting to develop a domestic resin industry. Production costs for the nascent resin industry are still much higher than the CIF costs of imported resins (PT Data Consults, 1986).
8. Personal communication, Neil Goldschmidt, Australian Plywood Producers Association, Brisbane, Australia. March 1986.
9. The exchange rate between the Malaysian ringgit and U.S. dollar is about 2.5 to 1.
10. These projections are based on the production potential of logged-over and old-growth forest, but do not incorporate the timber supply potential from rubber wood utilization or the output of forestry plantation programs.
11. Personal communication, Ong Meng Seng, Director, Industrial Development Unit, Department of Forestry, Kuala Lumpur. July, 1986.

12. Lower value plantation species are adequate substitutes for natural hardwoods for domestic markets, but are of uncertain merchantability in export markets, given current processing technology and customer preference patterns.

Research has also been undertaken in Malaysia to assess the value of spent rubber wood as a substitute wood species. Unlike fast-growing plantation species, rubber wood appears to be similar to Ramin, along the relevant dimensions, and to substitute nicely for this species in furniture making.

13. Exceptions to the general rule have occurred in isolated instances in more populous West Malaysian States, such as Negeri Sembilan.
14. Estimated real rates of return on forest rehabilitation programs were calculated to be on the order of 13%.
15. The role of the Malaysian national government, in terms of forestry policy, traditionally has been limited to the provision of technical, advisory, and financial assistance to the states, as well as serving as a conduit for donor aid. The states have been granted autonomy under the Malaysian constitution in all matters pertaining to forestry management and wood-based industry development, including the authority to determine the annual coup for forest harvest, grant concessions, develop and implement forestry sector taxes, and disburse forestry-derived revenues.

The Malaysian states, however, have adopted the principles underlying the Forestry and Wood-Based Industry Development Bills, enacted in December 1984. These bills provide a uniform code of sorts for forestry and wood-based industry development in Peninsular Malaysia. Among the more important principles is the establishment of permanent forestry estate areas to be managed in perpetuity on a sustained yield basis.

16. Personal communication, Khaun Gan Poh, Economic Planning Unit, Prime Ministers Department, Kuala Lumpur. June 1986.
17. The Sabah foundation owns 60% of Sabah Softwoods; the North Borneo Timber Company owns the remaining 40%.
18. Personal communication, Pat Durst, Forestry Support Program, USAID, August 1986.
19. Personal communication, Pat Durst, Forestry Support Program, USAID, August 1986.

3. BUSINESS ENVIRONMENT

The general business environment in the Southeast Asian region during the 1980s has partly been driven by conditions in the economies of the more developed countries, which form the region's export markets. The economies of the developing Southeast Asian countries during the period were generally less robust than during the 1970s, a result of a recessionary contraction experienced in the developing countries during 1980-1981 and a decline in the prices of some important export commodities, including oil, palm oil, rubber, wood-products, and tin. Notwithstanding the general economic downturn, however, positive institutional reforms affecting the business environment were implemented in the region during the period; specifically, in Indonesia. The general regional business outlook over the next five year period remains somewhat uncertain, depending on the recovery prospects of commodity prices, economic performance in the region, and, in the case of the Philippines, how successful the Aquino government becomes in stabilizing the political and economic situation in the country.

This chapter profiles some features of the business environment which affect investment in the forestry sector. Topics covered include investment licensing, regulation, and incentives; government policies toward foreign investment; investment regulations for the forestry sector; taxation, including forestry-sector taxes; export and import regulations,

and government policies towards currency and capital controls.

3.1 Indonesia

3.1.1. Introduction

Notwithstanding a recessionary downturn in the Indonesian economy during the 1980s, business conditions for private investors have generally improved during the past five years in response to government policies to stabilizing the economy and diversifying the economic base away from a dependence on the petroleum sector (the refining, marketing, and distribution of which are controlled by Pertamina, a state-owned company). The government also has instituted a number of important reforms designed to streamline the licensing and monitoring process for domestic and foreign investment, and to reduce the costs and time delays associated with customs requirements, shipping regulations, and merchandise handling and storage at the port. The most significant reform recently, however, has been in the area of tax policy: the implementation of a radically overhauled income tax code (effective January 1, 1984). Based on the technical assistance and advice of some of the same consultants and tax experts who shaped the recent tax reform revision in the United States, the new Indonesian tax code effectively lowers marginal tax rates, reduces the number of tax brackets, and standardizes the treatment of taxable income across different income sources - including personal and corporate income-achieving the general tax reform objective of "simplicity and fairness". The Indonesians have also promulgated a new VAT

tax, effective April 1 1985, to replace the preexisting cumbersome and difficult-to-administer scheme of sales taxation. Taken together, the Indonesian policy reforms provide a welcome stimulus to economic performance and an improved business conditions. They also help overcome an institutional climate which traditionally has complicated the task of profitable risk-taking and entrepreneurship by domestic and foreign investors.

3.1.2 Investment

Foreign investment in Indonesia is governed by the foreign investment law of 1967, amendments to the law in 1970 and 1974, and a series of subsequent decrees and implementing regulations which have further defined the thrust and scope of the government policy towards foreign investment. The passage of the 1967 law was premised on the assumption that foreign capital, technology, and expertise could be harnessed to the benefit of country's national development objectives, if appropriately controlled and regulated. The law, as originally passed, allowed foreign companies to operate in Indonesia either independently or as joint venture concerns, not to exceed a 30 year period. Renewability of the investment for a longer period could occur at the discretion of the government. The law also provided guarantees against nationalization of foreign companies, unless the action was "in the public interest".

Amendments and supporting regulations to the law, since 1967, have tightened the conditions for foreign participation in

investment and increased the support for indigenous Indonesian nationals (i.e., Indonesians of Malay ethnic origin). The 1974 amendment specifically restricted investments to joint ventures with an Indonesian partner. The initial Indonesian equity share must be at least 20%, with an eventual transition to a majority ownership by indigenous Indonesians within a ten year period. Similar phasing provisions apply to middle and upper management positions held by expatriates in joint venture firms, who may experience difficulties and approval delays for the employment of non-resident Indonesians even during the initial stages of the investment.

- Investment Licensing

The licensing and monitoring of foreign (and certain domestic capital) investment in Indonesia are under the jurisdictional control of the Investment Coordinating Board (BKPM), an agency established by Presidential decree in 1977 to reduce bureaucratic problems associated with the approval and implementation of foreign investment. The BKPM annually issues "a priority list" of industries and the areas of economy open to foreign investment; the main areas closed to foreign participation, at the present time, are the secondary and tertiary stages of petroleum processing, timber cutting, and the import business, with certain exemptions and qualifications. The annual priority list is updated every 6 months. Special exemptions to foreign investment restrictions can be considered by BKPM on a case-by-case basis during the initial licensing

stage of the investment.

The licensing and certification of foreign investment occur in several stages. First, the priority list must be consulted to determine sectors in which investments are allowed; and an application form must be filed with the BKPM¹. Assuming the proposed application complies with all relevant laws and regulations, the BKPM will issue a "Provisional Approval Letter" (SPS) at the latest four weeks after the application has been "declared received" by the BKPM (BKPM, 1985a). No later than 12 months after the provisional approval, the investor must have provided all additional supporting materials, required by the law, to BKPM.

If it is a new foreign investment, BKPM forwards the application and supporting documents to the President of the Republic for approval. Assuming approval is obtained, a "Notification of Presidential Approval" is issued for the foreign capital investment no later than 1 week after the Presidential approval letter is received by the Chairman of the BKPM (BKPM, 1985a).

If, on the other hand, the investment is a new domestic investment, or a capacity expansion of an existing domestic or foreign investment, the Chairman of the BKPM can decide on the admissibility of the proposed investment project. Permanent approval concerning the enlargement of capacity or nondomestic investment is issued by the BKPM no later than four weeks after receiving the investment application.

A number of licenses also is issued by the BKPM and other agencies, after the project has been approved, which enables the implementation of the investment. These include working licenses for expatriates, building permits, business licenses, identification number for importers/exporters and the like. Several weeks to months may transpire between the official approval of the project and the issuance of all operating licenses required for the project's implementation.

The BKPM executes a supervisory and monitoring role during the implementation and operational phases of the capital project. A prescribed reporting form must be filed with BKPM every six months during the project's construction; an annual form must be filed after the project begins its operations.

- Investment Incentives

The role of tax incentives to stimulate foreign investment has declined with the passage of the new tax code (discussed later). Tax holidays on business income and incentives to encourage the public issue of stock on the Jakarta stock exchange have been eliminated. A regulation to place a limitation on debt/equity ratios of 3/1 also is under consideration. High debt/equity ratios (both reported and real) have served as a "de facto" incentive in the past by enabling large interest rate deductions and the reduction of income tax obligations. The one direct incentive still in place is direct subsidy payments to export-oriented industries. The continuation of this export promotion policy is under review².

The most important nontax incentives include bonded warehouse and industrial estate areas. Licensed (bonded) warehouse facilities combine some of the features of free trade zones and industrial estates (Price Water House, 1986). Industries sited in free trade zones experience minimal customs regulations; import duties may be waived or reduced on raw materials, component parts, and equipment needed by the manufacturing firm; export duties on the semi-finished or finished products the firm produces and exports also may be reduced. Industrial estates offer the investor basic infrastructure such as roads, power, water, and communications facilities, cheap land, better-than-usual information on site attributes, and normally, a rationalized procedure for the initiation, implementation, and monitoring of the investment, e.g., the accelerated issuance of necessary land titles, building permits, and on-site inspections. The purpose of licenced warehouses, free trade zones, and industrial estate areas, from the point of view of the host country, is to promote regional development--based on linkages with manufacturing enterprises and the regional labor pool--and to derive benefits from the transfer of technology and management expertise the foreign firms provide.

At the present time, bonded warehouses are located in the main port area of Jakarta (more are planned for Cakung near Jakarta), Surabaya, Semarang, Medan/Belawan, Cilicap, Ujung Pandang, and on Bantum Island), while industrial estates are

sited near Jakarta, in Surabaya, near Cilacap, and on the island of Bantum near Singapore (Price Water House, 1986). As pointed out in Chapter 2, a series of industrial estates in Kalimantan is planned, based on industrial roundwood plantations which are integrated with plywood manufacturing plants.

- Investment Guarantees

Certain guarantees are in place to protect the foreign investment. These include:

- the expressed intent of the 1967 investment law against nationalization;
- repatriation rights for invested capital, with some restrictions;
- autonomy guarantees against undue interference in the management and control of the investment.

Indonesia has negotiated investment-guarantee agreements with a number of foreign governments, including the United States, Canada, South Korea, Belgium, Denmark, France, Germany, Norway, and the Netherlands. The agreements normally provide compensation for losses to the foreign firm attributable to nationalization, expropriation of assets, or political instability. Indonesia also adheres to the Convention on the Settlement of Investment Disputes, which provides for arbitration of disagreements surrounding foreign investments by the Washington D.C.-based International Center for the Settlement of Investment Disputes.

- Forestry-Sector Investment

Foreign investment has played a significant role in developing the forest-based sector in Indonesia. As of February 1985, in the forestry sector foreign investment of Indonesia equalled about .5 billion U.S. dollars out of an investment total 2.1 billion (Shreuder and Vlosky, 1985).

The passage of the foreign investment law of 1967 (amended in 1970 and 1974) reopened the economy to foreign investment and stimulated the logging boom during the following decade (Gillis, October 1985a). The law, as noted before, specified that foreign companies could operate in Indonesia either independently or as joint venture concerns for a 30-year period, with renewability of the investment subject to government approval. The law was amended in 1974 to restrict investment to joint ventures with an Indonesian partner.

Foreign investment in the forestry sector was further restricted in 1975 when the government explicitly banned all foreign investment from timber felling operations. Foreign investment on a joint venture basis is now encouraged for combined logging-sawmilling operations, dry kilns and wood-working plants, logging with plywood or block-board production, or combined logging, wood-chipping, or pulp and paper production (BKPM, 1985b). The emphasis on downstream processing, rather than logging-for-export, represents a policy orientation the government seriously began after 1978 in the forestry sector. Joint ventures also are encouraged in several wood processing-

related industries, including:

- sea and road transportation infrastructure;
- resin production for plywood processing;

Foreign investment in the forestry-sector begins with an application to the Forestry Directorate General of the Minister of Agriculture (BKPM, 1983). If the ministry approves the investment, an initial working agreement or forestry contract is drawn-up and the investment is reported to BKPM for approval. BKPM and the ministry share responsibility for the monitoring of the investment through the implementation and operational stages. As is the case for other natural resource industries, the ministry responsible for forestry, the Ministry of Agriculture, plays a significant role in the establishment and management of the forestry investment.

Foreigners may operate as contractors for loggers or participate through equity holdings in the processing industries. Regulations applying to foreign equity participation in the forestry sector are more stringent than for the general case discussed before: Indonesian nationals must hold majority ownership in the venture from the investment's inception. This requirement stems from residual distrust on the part of the Indonesian's towards foreign concessionaires who were responsible for most of the extractive logging during the 1967-1980 period.

Forestry concession contracts in Indonesia normally are negotiated for a 20-year period, and can be renewed at the discretion of the authorities. Contract includes, among other provisions:

- annual allowable cut levels;
- regulations for the employment of blue collar workers;
- regulations concerning the construction of onsite processing facilities (PT Data Consultants, 1985).

3.1.3. Taxation

A variety of taxes are levied in Indonesia at the national and regional level. The most important taxes which impinge on forestry sector activities now include (NIDO, 1985):

- Business Income Tax;
 - VAT;
 - Forestry Sector Taxes (royalties, licensing fees, reforestation deposits);
 - IPEDA (Regional Development Contribution);
 - Trade Taxes.
-
- Business Income Tax

Before 1978 the corporate income tax was not an issue for investments in the forestry sector. Companies were granted a five year tax holiday which in some cases was extended to 10

years (Gillis, 1985a). Overreporting of debt/equity ratios, as noted before, also permitted many corporations to successfully evade tax by enabling excess interest rate deductions.

The tax reform bill of 1984 "broadened the taxable base and lowered the rates" by eliminating the special tax incentives, which existed under the old law, reducing the number of tax brackets (from 19 to 3), and lowering the marginal tax rates associated with each bracket. Under the old system, the top marginal tax was 50% for personal income and 45% for business income, with some variation on the business rate to encourage favored industries and discriminate against low priority industries. The tax schedule under the new law is depicted in Table 3.1. These rates apply to personal, as well business income. With few exceptions, different categories of business income, including capital gains, are aggregated and treated as a single source income. "Taxable business income" is derived from gross profit in the usual manner by deducting expenses associated with producing the profit³.

Depreciation rates applying to depreciable assets have been significantly increased under the new law. Depreciation rates for four basic asset classes are shown in Table 3.1. Rates under the old law varied between only 2 and 20%, computed on a straight-line basis.

One issue which often arises with foreign investment is "the double taxation of income", taxation of income both by the host and foreign government. Bilateral tax treaties between

host and foreign governments can be drawn up to establish a legal framework to avoid double taxation and ensure agreement of definitions of legal concepts related to business taxation. Indonesia has negotiated tax treaties with nine countries - the United Kingdom, the Netherlands, France, West Germany, Belgium, Canada, Japan, Thailand, and the Philippines - and is in the process of negotiating tax treaties with a number of others, including the United States, Sweden, Denmark, Malaysia, Singapore, East Germany, Austria, Romania, Italy, Norway, and Pakistan (NIDO, 1985). These efforts represent positive steps in the evolution of the Indonesian business environment towards greater stability and security for the foreign investor.

- Value Added Tax (VAT)

Indonesia has instituted a uniform VAT of 10% which applies to firms which produce manufactured goods, import goods, act as a major distributor, or provide "taxable services". "Taxable services" refers to activities related to the construction of fixed assets--buildings, roads, bridges, dams, and the like (NIDO, 1985). The VAT is implemented in a two-step process: the firm pays an input tax on the purchase of inputs and collects an output tax on the sale of the manufactured product. Input tax payments are then deducted from output tax collections and the balance - the tax on value added - is remitted to the government. This scheme replaces a sales tax system which applied seven different rates to varying stages of the production process.

- Forestry Sector Taxes

A number of taxes and charges are levied on the business enterprises operating in the forestry sector. A royalty has traditionally been levied on harvested logs at the rate of 6% of administered export (or check) prices (Gillis, 1985a). The current royalty rate structure is uncertain, since the system of posted check prices has been discontinued and the export of logs, as noted in Chapter 2, has been banned to subsidize the domestic processing of logs.

Other tax charges include license fees, grading fees, and a reforestation deposit of \$4.00/m³. As noted in Chapter 2, the reforestation deposit is theoretically refundable if a successful reforestation plan can be demonstrated, but, thus far, no refunds have been claimed (Gillis, 1985a). Based on data from East Kalimantan, all categories of tax aggregate to \$11.75/m³ (see table 2.2, Chapter 2), or 26% of total logging cost of around \$U.S.44/m³, in 1984. This figure (on the aggregate tax) is probably fairly typical for regions of Indonesia other than Kalimantan, because royalty policy and rates in Indonesia are neither established at the regional level nor differentiated by species (as in East and West Malaysia, for example)⁴.

- IPEDA (Property Tax)

This charge is administered at the regional level. As of 1979, it was assessed at the flat rate of 20% of the aggregate value of all timber royalties (Gillis, 1985a).

- Trade Taxes

Customs taxes used to be a significant factor in the timber sector. An export tax of 20% was applicable to logs but is no longer relevant with the phase-out of log exports. A 5% export tax on lumber was also levied on lumber to support the government's domestic housing program, but this tax was discontinued in 1982. Currently, there are no export taxes of any description on any wood-products, a policy consistent with the government's export-oriented focus in the wood-processing sector.

Import tariffs are levied to raise revenue and discourage the import of products which jeopardize the competitive prospects of favored, domestic industries, including the wood products industry. Trade taxes now are computed ad valor on market, rather than administered prices, as assessed by a Swiss-based surveying company. (This procedure is part of the recent reform of transportation and shipping service regulations). The import taxes most relevant to the wood products industries are those apply to the imported machinery, equipment, and component parts used in wood-based manufacturing factories. These duties are waived, as described in Section 3.1.2, for firms which locate in bonded warehouse or free trade areas. Protective tariffs, ranging from 35% for logs to over 70% for highly processed products, also are applied to imports which compete with the products of the domestic wood-based industry (Customs Cooperation Council Nomenclature, 1986).

Finally, as noted in Chapter 2, export subsidies have been instituted to stimulate plywood expansion into new markets, such as Australia, which Indonesian plywood has not yet significantly penetrated. The general policy of providing direct subsidies to export-oriented industries is under review, however.

In summary, the role of trade taxes (or direct subsidies) appears less significant now in Indonesia in the present market environment than in the relatively recent past⁵.

3.1.4 Trade Regulations

- Exporting & Importing

Foreign or domestic manufacturing firms, producing an exportable product, may act as exporting agents on their own behalf. A special exporting license is required, which is granted by the Ministry of Trade.

Export regulations were streamlined in 1985 to ease financing and credit terms for exporters. Among the significant changes (Price Water House, 1985):

- extended payment-periods for foreign purchasers;
- relaxed credit conditions for exporting, with financing available at rates between 6 and 10%, (depending on the commodity);
- commercial bank-provided subsidized export credit for foreign firms of 9%;
- simplified procedure for export certification.

Regulations on the participation of foreign banks (domiciled in Indonesia) in the area of export financing also have been liberalized. The rules and regulations governing importing are more restrictive than for exporting. A limited license can be granted to foreign companies to import materials and machines for use in the company's own production process. Importing is strictly limited to Indonesian nationals in all other cases, however. A five year extendable general importers license, or a two-year temporary license, is the option granted to domestic (Indonesian) importers.

The responsibility for the licensing and implementation of import regulation are vested in several governmental agencies, including the Bank of Indonesia, the Ministry of Trade, the Ministry of Finance, and authorized foreign exchange banks. For imports financed by letters of credit, several steps are involved in obtaining the necessary authorization and clearances before foreign exchange will be made available by the Bank of Indonesia. A letter of application must be forwarded to the Ministry of Trade with supporting documentation, which includes a copy of the importers licence, Import Identification No. (API), an outline of importing experience (which must be at least two years), and an LKP certificate (discussed below). The application must justify the reason for the importing, describe the price, quantity, and quality of the imported good, name the supplier company from which the imports are to be purchased, and offer proof of actual purchase (MTIB, 1984b). Subsequent to

the submission of this information, the relevant authorities will make a determination on the admissibility of the application. The import of goods may be constrained in some instances by quota or other import limitations. Imported goods also are normally subjected to tariffs, as noted before⁶.

A number of standard documents must accompany import shipments into Indonesia. Documentation normally includes an ordinary commercial invoice, bill of lading, a certificate of origin (in special cases), an insurance certificate, and a packing list (MTIB, 1984b). As a result of the recent reform of shipping and transportation service, imports must also bear an LKP certificate which validates the documentation (freight charges, tariffs, etc.). The LKP is drawn up by a Swiss-based surveying company in an onsite inspection of the imported good in the country of import origin (Price Water House, 1986).

- Currency & Capital Controls

There are no currency controls reported at the present time in Indonesia, and the Indonesian Rupiah has been declared to be a "fully convertible" currency by the IMF. Exchange regulations are limited to reporting requirements for the purpose of monitoring the country's foreign exchange. However, the system of import licensing mentioned above clearly would allow the government to enforce the rationing of foreign exchange on an ad hoc, case-by-case basis. Information was not available on the extent to which the government's import licensing procedure actually serves as a de facto mechanism of foreign exchange

control.

Capital flows also are unrestricted. As noted before, the 1967 investment law provides repatriation guarantees for invested foreign capital. The executive imposition of currency controls, however, in the manner suggested above, could obviously impede the movement of capital (as well as the commodity trade), notwithstanding repatriation guarantees expressed in the 1967 foreign investment law⁷.

Indonesia has become a signatory and participant in GATT (as of March 1985), an action which brings it within the framework of international countervailing duty statutes. Indonesia, however, should be relatively immune from antidumping and/or countervailing duty actions from other nations, because a large part of its wood-based trade is transhipped through Singapore. In official record keeping, Singapore is recorded as the port of origin for such shipments; and, since the reach of countervailing duty law does not extend beyond the port of origin, this part of the trade is protected from countervailing duty claims. Notwithstanding this fact, the entry of Indonesia into the GATT legal structure is a positive step towards the institutionalization of trade relations between Indonesia and its trading partners.

3.2 Malaysia

3.2.1. Introduction

Malaysia traditionally has been regarded as a show case for economic development and a hospitable site for foreign

investment, based on the country's record of economic growth, political stability, and well-developed infrastructure, at least in West Malaysia. Gross domestic product (GDP) expanded at the annual rate of 8% during the 1970's. During the initial part of this period, investment policy was orientated towards import substitution. During the latter 1970s, however, the investment emphasis shifted towards the resource-based, export-oriented light manufacturing sector, including the wood-based processing industries. The growth rate of the manufacturing sector averaged an annual rate of 12.5% for much of the 1970s.

The investment climate in Malaysia has been influenced by the government's policy towards "Malaysianization" as embodied in the New Economic Plan (NEP). The New Economic plan was promulgated in 1971, and is designed to increase the participation of Bumiputra Malays in the economic life of the country⁸. The NEP has two basic objectives:

- to eradicate poverty and reduce the income disparity between bumiputra Malays and other ethnic groups; and
- to increase economic opportunities and the role of Malaysians in the business and commercial life of the country.

In keeping with the latter objective, targets have been established for increasing equity participation by Malaysians in private domestic enterprises. According to the intended

schedule, Malays should hold a 70% equity share (with 30% in Bumiputra hands) in the private sector of the economy by 1990. The restructuring of the private sector implied by these targets is to be accomplished through guidelines issued as part of the investment licensing process for project expansions and new investments. The targets are global in nature, and are not rigidly applied at the level of individual investment projects (See Section 3.2.2).

The New Economic Plan has been moderately successful in promoting the economic interests of indigenous Malays. As of 1985, Bumiputra ownership of the economy had increased to 18%, an increase of 5 points in five years. During the same period, ownership by non-Bumiputra Malaysians also had increased from 45% to 57% (The Economist, January, 1987). The impact of the NEP on foreign investment, on the other hand, has been mixed. Regulations on equity participation, though flexibly applied, have been viewed as a constraining factor by some entrepreneurs engaged in commercial activities in Malaysia. On the plus side, however, the plan has contributed to the maintenance of the political stability which has provided the necessary conditions for the investment and growth of the Malaysian economy⁹.

During the 1980s, the economic performance of the Malaysian economy has weakened. The economy was hampered by the 1981-1982 recession in the developing countries, which provide Malaysia's export markets. In the period since, a slump in the prices of all of the country's primary commodity exports (tin, rubber, palm

oil, oil, wood) has prolonged the economic difficulties of the early 1980s.

Malaysia's economic and future business outlook therefore are mixed. The decline in primary commodity prices in the world export market should increase the economic benefits of processing such resources locally. This fact undoubtedly will encourage a continuation of the emphasis in industry planning on the expansion of domestic manufacturing based on locally-produced, natural resource inputs, including timber. It also is probable that guidelines regulating foreign equity participation in new investments will be applied less stringently in the future (than in the recent past), since the cost of implementing equity objectives and the need for foreign investment have both become greater in the present economic environment. Malaysia is now making a major effort to attract foreign investment, and is conducting feasibility studies on privatizing some sectors of the economy such as civil aviation, port services, the national railroads, and telecommunications. (The Economist, January 1987).

3.2.2 Investment

Background and Licensing Requirements

Private investment in Malaysia is governed by the regulations of the Industrial Coordination Act and supporting regulations from the Industrial Incentive Acts and related legislation covering operations in Free Trade Zones, Licensed Manufacturing Warehouses, and fair employment and health and

safety standards for labor. The Industrial Coordination Act was established to:

- serve as a vehicle to guide the implementation of private investment in accordance with the government's industrialization planning;
- ensure orderly development and growth in the manufacturing sector; and
- provide the means of collecting data and information on the manufacturing sector (MIDA, 1985a).

The Ministry of Trade and Industry is the agency responsible for the Act's administration. The Act basically requires investors, with certain exemptions, to obtain a license from the Ministry of Trade before implementing investment projects. Covered investments include capacity expansions, the diversification of manufacturing lines into new product areas, and the initiation of new investment projects. Firms with shareholder funds of less than M\$250,000 and less than 25 employees are exempted from the licensing and oversight authority of the Ministry of Trade (MIDA, 1985a)¹⁰.

No distinction is made between foreign and domestic investment in terms of licensing procedure. Foreign investment is actively encouraged by government policy; particularly where the transfer of technology, technical expertise, managerial know-how, or marketing assistance is involved, or for project

locations in remoter areas with high levels of rural unemployment. Consistent with the NEP, however, the government prefers foreign investment in the form of joint-venture concerns with Malay participation. The following guidelines apply to foreign equity shares in investment projects:

- Malay majority ownership is normally required for firms whose production is marketed domestically.
- Equity participation for Malays should normally be at the 70% level, with 30% for Bumiputras, for firms whose production is based on the extraction and primary processing of non-renewable domestic resources.
- Majority ownership by foreigners is allowed for firms producing for export markets. "Where it is justified", 100% foreign equity ownership can be considered (MIDA, 1985a).

These conditions are guidelines only, and may be flexibly implemented, on a case-by-case basis, during the licensing stage. Criteria used to determine the degree of foreign equity participation include the level of proposed capital expenditure, technologic sophistication of production processes, the project's location, its export orientation, the degree of linkage with other private enterprises, and promotional effects. Normally, some flexibility applies to the time-table for compliance with equity participation regulations. Companies can often begin

operations with foreign ownership shares in excess of equity regulations specified in the investment license, with the understanding that excess foreign interests will be reduced to compliance levels over a prescribed interval of time.

Malaysian policy towards expatriate employment is consistent with the philosophy of increasing Malay integration in the commercial life of the country as manifest in equity participation guidelines. Although the policy is to increase the employment and training of Malaysians (at all skill levels), firms are permitted to fill some positions with foreign personnel on a temporary basis until replacements can be recruited and trained. "Key posts" also can be negotiated to be permanently filled by foreign personnel to safeguard the company's foreign interest for firms with foreign capital participation of approximately M\$500,000 or more. Rules relating to expatriate employment also are flexibly implemented, and are influenced by the same general criteria used to regulate equity participation.

Application for the approval of expatriate posts can be submitted to MIDA with the investment licensing application. Although approval of personnel requirements is not a necessary condition for approval of the investment licence - these details can be subsequently negotiated - submission of such information at the time of the investment application allows the letter of approval for the investment to contain expatriate employment regulations, avoiding possible delays in the project's

implementation which might arise from later negotiation (MIDA, 1985a).

After the investment plan has been approved, a number of permits, approvals, and clearances must be obtained from various agencies before the initiation of the investment project (Price Water House, 1985). Approval of machinery installation, factory configuration, safety standards, qualification of factory employees and the like must be obtained from the Factories and Machinery Department. Reflecting Malaysia's relative sophistication and development status, environmental and pollution control guidelines, issued by the Ministry of Science and Technology, must be complied with. This ministry must verify that the project plan incorporates the proper environmental controls before construction commences. Local government authorities are responsible for issuing building permits, and monitoring public health, safety, and security. Such on-site permitting and regulation are minimized in bonded warehouse and free trade areas explicitly established to encourage export-oriented manufacturing (Discussed in the following section).

- Investment Incentives

A range of tax and non-tax incentives has been established to encourage investment. Major tax incentives available to investors are discussed below:

- Tax Incentives

Investment tax incentives are designed to partially or totally offset a 40% corporate income tax, a 5% development

tax, and, where applicable, a 5% excess profits tax which may be levied on business enterprises (See section 3.2.3). The main tax incentives include: the granting of Pioneer Status, "Labor Utilization Relief", Investment Tax Credit, export incentives, and deductions for overseas promotion (Industrial Incentives Act, 1968). Requests for tax incentives can be made to MIDA by qualifying firms as part of the initial licence application.

- Pioneer Status

Pioneer status may be granted to companies which produce new products which are not already commercialized on a significant scale in Malaysia, to companies whose establishment is "vital to the national interest", or to companies intending to produce manufactured products exclusively for the export market. The authorities are normally more favorably disposed to applications involving joint-venture arrangements with majority Malaysian control and employment practices which reflect the ethnic composition of the labor force. These are not necessary considerations, however, for designation of pioneer status; companies relying on labor-intensive production process or whose product lines are marketed overseas may be granted pioneer status, for example, even if Malaysian equity participation in the enterprise is less than 50% (Peat Marwick, 1985).

Pioneer status provides for a complete tax holiday for a two-year period if the capital expenditure is less than M\$250,000, three years if the capital expenditure is greater than

or equal to M\$250,000 and less than M\$500,000, four years for capital investments greater than or equal to M\$500,000 and less than M\$1,000,000, and five years if the level of capital investment is M\$1,000,000 or greater¹. An additional year of tax relief can be granted if the manufacturing plant is located in a development area, if the capital investment is in a "priority" industry, or if the local content is at least 50%. These provisions extend the tax holiday period to a maximum of eight years. The law also allows for the carry-forward of tax credits into the post-holiday period if the company experiences profit losses during the basis period in which the tax-relief was applicable.

- Labor Utilization Relief

Labor Utilization Relief grants the same tax relief as Pioneer Status, except that the tax exemption schedule is scaled to the firm's employee level, rather than the level of capital investment. This incentive is designed to promote labor intensive and light manufacturing. Firms granted employee-scaled tax holidays are as follows: two years for 51-100 full time employees, three years for a 101-200 full-time employees, four years for 201-350 employees, and five years if the firm's employment level exceeds 350. These tax holidays can also be extended by one year for each of ancillary factors mentioned above for grants of Pioneer Status: location of manufacturing in a development area, capital investment in a "priority" industry, or local content of at least 50%.

- Locational Incentive

The purpose of so called "development areas" is to encourage the dispersal of industry into remote areas of low skill labor and high unemployment. This incentive would appear to be particularly relevant to investments in wood-based manufacturing because several of the "development areas" are sited in less developed regions in states of Pahang, Terengganu, Kelantan, and Jahore (West Malaysia) and Sabah and Sarawak (East Malaysia) where the bulk of the country's remaining timber resources and wood-based manufacturing are located (Table 3.2). Tax relief for firms sited in development areas will range between 5 and 8 years, depending on the level of employment and capital expenditure involved in the project. An additional one year of tax relief can also be granted again if the capital investment is in a "priority" industry or if the local content is at least 50%. These provisions extend the potential tax holiday period in the regional development areas to a maximum of 10 years.

- Investment Tax Credit

If capital expenditures cannot qualify for any of the previous tax incentives, an investment tax credit, equivalent to not less than 25% of the investment, can be received. The tax credit is applicable to capital expenditures occurring within the first five years of the project's life. If the company incurs losses or has a taxable income which is less than the available credit during the basis period, the unused credit may be carried forward and utilized in subsequent periods. The

tax credit can again be increased for each of the following: location of manufacturing plant in a development area, capital investment in a "priority" industry, or local content of at least 50% (MIDA, 1985b). These provisions increase the cumulative tax credit to a maximum 40% level.

- Export Incentives

Consists of an annual allowance of 5% of the f.o.b. value of annual export sales of a manufactured product. The allowance may be increased to 8% if the exported manufactured product contains more than 50% local content.

- Accelerated Depreciation

A 20% initial allowance can be granted for new investment or modernization of plant capacity, on top of a 40% annual allowance if the company exports at least 20% (by value) of the total production of a manufactured product. Because the straight-line method of depreciation is employed in Malaysia, these incentives allow capital expenditures to be totally written off in the first two-year period of the project's inception. This incentive is not available to companies already accorded Pioneer Status, labor utilization relief, or any of the other previously mentioned incentives.

- Deduction for Overseas Promotion

Expenses associated with the overseas promotion of Malaysian manufactured products are deductible. Qualifying expenses include: overseas advertising, supply of samples, export market research, preparation of tenders, technical information,

attendance at trade fairs, and general public relations. For companies enjoying tax holidays under any of the schemes mentioned before, deductions can be cumulated and utilized in the first tax year after the holiday expires (Peat Marwick, 1985).

- Nontax Incentives

The most important nontax incentives include bonded warehouses and industrial estate areas. As mentioned earlier, licensed warehouse facilities combine some of the features of a free trade (export processing) zone and industrial estate area (Price Water House, 1986). Industries sited in free trade zones experience minimal customs regulations: import duties may be waived or reduced on raw materials, component parts, and equipment needed by the manufacturing firm; export duties may also be minimized on the semi-finished or finished manufactured products the firm produces and exports. Industrial estates offer the investor basic infrastructure such as roads, power, water, and communications facilities, cheap land, better-than-usual information on site attributes, and a rationalized procedure for the initiation, implementation, and monitoring of the investment, e.g., the accelerated issuances of necessary land titles, building permits, and onsite inspections. The purpose of the licensed warehouses, free trade zones, and industrial estate areas, from the point of view of the host country, is to promote regional development - based on linkages with manufacturing enterprises and the regional labor pool - and to benefit from the transfer of technology and management

expertise¹².

There are now 97 fully developed industrial estate areas in Malaysia, with more planned for the future (MIDA, 1985b). West Malaysia has 85 of these, with the balance distributed between Sabah and Sarawak in East Malaysia. The purchase price of land in these areas varies from essentially zero in some of the remoter locations in Sabah and Sarawak to as high as M\$86/square meter for more choice locations in Selangor (the state surrounding the capital city of Kuala Lumpur).

- Investment Guarantees

The Malaysian constitution expressly prohibits the nationalization of foreign companies without due and just compensation. Malaysia adheres to the Convention of the Settlement of Investment Disputes, which affords foreign investors the opportunity to appeal for redress before an international arbitration proceeding through the auspices of the International Center for the Settlement of Investment Disputes, in Washington D.C.

Repatriation of an investor's profits is permitted, and there are no foreign exchange or capital controls to speak of (See section 3.2.4). Thus, the movement of an investor's funds and share capital into and out of the country is relatively unimpeded.

Malaysia stands willing to negotiate bilateral investment guarantee agreements which formally codify investment guarantee protocols. These agreements normally contain provisions

against nationalization, compensation for losses, free movement of funds, and adherence to arbitration proceedings before the International Center for the Settlement of Investment Disputes.

Investment Guarantee Agreements already have been negotiated with 12 countries: the United States, the Federal Republic of Germany, Canada, the Netherlands, the Republic of France, Switzerland, Sweden and Belgium/Luxembourg, United Kingdom, Sri Lanka, Romania, and Norway, and is presently in the process of negotiation with Austria, South Korea, Denmark, Finland, and Italy (MIDA, 1985a).

- Forestry-Sector Investment

Foreign investment in the timber-based sector in Malaysia has a long tradition, particularly in Peninsular Malaysia and Sabah, and is actively promoted both by the national government in Kuala Lumpur and the state governments of West and East Malaysia which are directly responsible for the management of forestry and the promotion of wood-based processing industries. As in other Asian countries in the region, the trend is away from traditional concession type arrangements with large multinational logging firms to joint-ventured investments in wood-based processing facilities with local firms or agencies participating in the management and ownership of the enterprise. Joint ventures have been negotiated with partners from the United States, UK, and Japan, and, more recently LDCs such as the Philippines, Singapore, and India. The Sabah Foundation, the entity responsible for forestry management in the Sabah state

of Malaysia, for example, has concluded a joint venture agreement in logging-processing with a Philippine company (Sabah Melale Sdn. Bhd.) and an agreement to build a pulp and paper mill with an Indian Company (the Birla Group) and local partners (Gillis, 1985b). The foundation also conducts joint-ventures with local firms. Sabah Forest Industries Sdn. Bhd. is a joint venture between the Sabah foundation and a local firm engaged in sawmilling, plywood manufacture, and related tertiary processing (Asian Timber, July/August 1984).

As noted in chapter 2 (footnote 15), there is a dichotomy in the responsibility of state and national governments in the sphere of Malaysian forestry and wood industry policy in that the national government has no direct control over forestry development. Because the national government controls the income tax lever, however, it can encourage or discourage the efforts of state governments through investment policy. The national government also shapes the general conditions and overall investment environment (as by investment guarantees) with important ramifications for forestry-sector investment, particularly from foreign sources. The national government also establishes regional development areas, industrial estates, and free trade zones, which, as noted before, can incorporate forestry projects or wood-based manufacturing facilities.

The general thrust of the government's current five-year development plan harmonizes with the attempts of state governments in Malaysia to promote wood-based processing

industries. It seeks to promote processing industries which convert raw materials into secondary and finished products catering to the export market. Investment priorities related to the wood-based sector at the national and state level are designed to promote integrated timber complexes, improve waste-wood utilization, and encourage the manufacture of knock-down furniture, handicraft items, and joinery products.

The wood-based industry specifically qualifies for investment incentives noted above related to export orientation, location in regional development areas, such as Sabah and Sarawak, and status as a priority industry (MIDA, 1985b). Marketing expenses incurred in the promotion of lesser known species and technical information related to grade, species, and product quality, etc., also can be deducted from business income. Additionally, capital allowances based on reforestation expenditure also are available (Table 3.2).

Investments in the wood-based processing industries must be implemented through concession contracts and licenses secured from State Forestry departments in West Malaysia, the Sabah Foundation in Sabah, and the Head of the Forestry Department in Sarawak (FAO, 1981). The standards and regulations concerning the length and type of contract vary substantially, but can be divided into three types:

- Longer-term concessions of 21 years. Usually joint-ventures which require the development of integrated

processing complexes.

- Special 10-year license. Normally specifies an annual coup to be logged. May be conducted as a joint venture or under a contract-of-work agreement.
- One year-contract-of-work agreements.

The latter two forms of licenses are most common in the states of Sabah and Sarawak.

3.2.3 Taxation

The principle taxes which an investor in the forestry sector will confront include taxes on income, trade taxes, and sales and excise taxes on transactions. These taxes are imposed by the national government. Local and state authorities also may impose property taxes and various charges. The most important of these from the perspective of forestry based investment are the cesses, premia, and royalties which are charged against extractive logging operations by the various state governments in Malaysia.

- Business Income Tax

For purposes of taxation, business income from various sources, including nonproperty-related capital income, is aggregated and treated as a single source. A flat tax of 40% applies to business income. This tax may be partially or totally offset by the various investment incentives described above to promote labor-intensive, export-oriented manufacturing.

A so called development tax of 5% also is imposed on

business income, and an additional 5% excess profits tax is charged against all business income greater than M\$200,000. Combined with the basic business tax of 40%, these taxes effectively make the Malaysian business tax a graduated system with two marginal tax brackets: 45% for income of M\$200,000 or less; 50% for income greater than M\$200,000. If business income is derived from timber operations, a timber profits tax also is imposed (Timber companies are not subject to the excess profits tax). This tax is levied at two rates: 10%, for profits not exceeding 10% of gross income; 20% for residual income above the 10% level (Peat Marwick, 1985).

Malaysia has negotiated double taxation agreements with a number of countries to prevent uncertainty over taxation status and duplicate taxation of firms by the Malaysian government and the country in which the investment originates. Countries with whom Malaysia has negotiated double taxation agreements include several regional trading partners (Australia, Thailand, the Philippines) as well as a number of other Asian and European countries.

- Transactions taxes

A sales tax of 10% and an excise tax of 5% are levied at the time of sale for locally produced goods as well as on the purchase of imports. Refunds on these taxes may be obtained for exported commodities. Additionally, taxes on the purchase of inputs, whether domestically produced or imported, may be waived for priority industries in cases where purchased inputs have been

accorded a tax exempt status (Peat Marwick, 1985).

- Trade taxes

Export taxes are not imposed by the national government on any wood-based products produced in Malaysia¹³. In fact, the Malaysian wood based industry is protected by high nominal tariffs on the import of competitive products, e.g., 45% against the import of plywood. Raw materials, component parts, and machinery utilized in domestic manufacturing concerns, such as wood-based factories, are normally exempt from import tariffs or taxed at rates of less than 10%. Import tariffs on raw materials, when they do exist, can often be waived as, for example, by location of the import-using industrial firm in a licensed warehouse area or free trade zone.

- State Forestry Sector Taxes

Forestry sector taxes are implemented by state governments in West and East Malaysia and represent a significant source of tax revenue. State governments in Peninsular Malaysia impose three basic charges on forestry operations: silvicultural cesses, premia, and royalties. Silvicultural cesses are imposed on harvested logs on a $\$/m^3$ basis; rates vary between M\$2.00/ m^3 in Terengganu to M\$2.80/ m^3 in Selangor¹¹. Premia are basically annual rental charges on land leased to concessionaires for logging operations. The level of charge varies as a function of land categories (virgin forest, stateland, logged over forest, areas for development), type of license (tendered areas, long-term agreement areas) and by the state imposing the tax. Premia

are as low as M\$.75/hectare for Mangrove forest in Jahor to as high as M\$1235/hectare for long-term agreement areas in Negeri Sembilan. Finally, state governments in Peninsular Malaysia impose royalty charges on each m³ of log harvested. Royalties are differentiated by species, of which there are 60 recognized for taxation purposes, and by the state imposing the charge, of which there are 12 in Peninsular Malaysia. In short, there are 600 permutations for royalty rate setting in Peninsular Malaysia; rates vary from approximately M\$5.00/m³ to M\$19.00/m³.

The configuration of forestry taxation in the East Malaysian states of Sabah and Sarawak is simpler than in Peninsular Malaysia. The most important taxes in the timber sector in Sabah are: a 70% ad valorem tax on harvested timber based on the difference between market (fob) log prices and harvesting costs; tender fees of between M\$.20/hectare and M\$.30/hectare; and a cess of approximately M\$4.16/m³, again on harvested timber. There is also a cess of M\$15/m³ applied to sawnwood¹⁵.

The most important forestry sector tax in Sarawak is a royalty which ranges between U.S.\$ 5.9/m³ and U.S.\$ 11.75/m³ for prime commercial timbers, such as Ramin and Meranti (FAO, 1985). Other charges include a cess of M\$1.8/m³, a "timber development premium" of M\$3.6/m³, and an export tax levied at 20% of f.o.b log prices. In the aggregate, forestry sector charges amount to approximately U.S.\$19.25/m³ to U.S.\$24 for fob log prices varying between \$100 and \$150/m³.

3.2.4 Trade regulations

- Exporting and Importing

Exporting and importing can generally occur in Malaysia with minimal restrictions or licensing requirements. With the exception of the export of primary commodities, such as timber, and embargoes against some countries (South Africa, Israel), the movement of the commodity trade is relatively unimpeded. Firms producing an exportable product may generally act as an exporter on their own behalf, with appropriate approval and clearances from the Ministry of Trade and Industry. Raw materials and equipment required for manufacturing processes can generally be imported under a general importers license (also issued by the Ministry of Trade). Financing of exports and imports requires the clearance of the Comptroller of Foreign Exchange for domestic (Malaysian) borrowings in excess of M\$500,000.

Documentation associated with import of raw materials and capital goods involves the usual forms, invoices, and certificates, conveying necessary information to customs officials on the quantity and value of the product, origin of shipment, the purpose of the import, intended use of the product in Malaysia and the like. For exports shipments with an f.o.b value of \$M5,000 or more, a "KPW 3" form must be obtained and approved by an authorized bank and submitted to customs authorities at the time of the shipment (MIDA, 1985a). This form allows the comptroller of foreign exchange to monitor export-derived foreign exchange receipts to assure repatriation

to Malaysia in conformance with the country's currency exchange regulations.

- Currency and Capital Controls

The present foreign exchange and capital regime in Malaysia is liberal. Foreign exchange transactions are monitored by the Comptroller of Foreign Exchange. Foreign exchange transactions in excess of stipulated amounts (M\$5,000 in the case of exporting) must be reported to authorities. In particular, export receipts must be repatriated to Malaysia no later than six months after the date of the export transaction. The movement of currencies to and from Malaysia is otherwise unrestricted¹⁶. In particular, Malaysia adheres to Article VIII of the IMF's "Article of Association" which provides assurances for the free movement of currency and against discriminatory exchange rate regimes.

The movement of funds and capital also is unrestricted. Remittances, dividends, and profits from the foreign investment can be freely repatriated to the investor's home country. As discussed earlier, the Malaysian constitution provides investor guarantees, and Malaysia adheres to the Convention of the Settlement of Investment Disputes, which permits foreign investment-related disputes to be refereed in an international arbitration proceeding.

3.3 The Philippines

3.3.1 Introduction

The Philippines, like the other developing countries of

insular southeast Asia (with the exception of Thailand), has experienced an economic slowdown in the 1980s. In fact, the economic performance of the Philippines was the poorest of any of the ASEAN countries over the period, averaging a 4% annual decline between 1984-1986. The country is burdened with a serious international debt problem, and the continuing political instability reported in the press: the Moslem separatist movement, communist insurgency, and the tension between some elements of the army and the civilian government. These factors cloud the future economic outlook. Furthermore, the accession of the Aquino government will undoubtedly bring changes in the general business environment in the form of new laws and regulations governing investment licensing, taxation, and foreign exchange regulation. Unfortunately, available documentary sources do not reflect the shape of possible reforms in this area. Information in this Chapter should be viewed with this qualifier in mind.

Notwithstanding some uncertainty over the specific shape and scope of future Philippine business regulation, the general policy direction will probably continue the regional trend witnessed during the 1980s to promote investments in import-substituting "pioneer industries" - domestic industries that begin to manufacture a new product not previously produced domestically - and labor intensive, export-oriented light, manufacturing. Industries located in rural areas of high unemployment also have been granted priority in the region¹⁷. In

terms of the wood products sector, this policy emphasis has translated into priority status for secondary and tertiary processing industries which produce wood-based products for international markets. The trend to further downstream processing, as alluded to before, also is a function of increasing scarcities of natural wood in the region and the need to derive additional added-value from products derived from increasingly high-valued diminishing wood resources.

3.3.2 Investment

- Background and Licensing Requirements

Investment in the Philippines has been regulated by an omnibus investment code (Presidential decree 1789), the Investment Priorities and Incentives Acts, and implementing regulations. These acts are designed to guide private investment in accordance with the country's industry planning objectives and to assure business development in accordance with the national interest. Foreign investment is generally encouraged in the Philippines to promote regional development and the balanced growth of the manufacturing sector.

The Ministry of Industry, through the Board of Investments (BOI), is responsible for implementing the terms of the investment code and general investment policy. All new investments must be licensed through the Board of Investments. Additionally, if the investment proposal involves a foreign interest, the Central Bank must approve of the proposal. Other restrictions applying specifically to foreign investments are

the typical regulations restricting foreign equity participation. Only "pioneer industries" are permitted 100% foreign equity ownership (discussed below). Certain segments of the economy are off-limits to foreign investment, but foreign participation is generally allowed in the wood-based manufacturing industries. Generally, forestry-based investments with less than 30% foreign equity are granted routine approval; a greater degree of foreign ownership requires more careful (and time consuming) consideration.

Rules and regulations regarding expatriate employment are generally similar to those in Malaysia and Indonesia. Although foreigners may play a temporary - or in certain instances, a permanent role - in the management and senior executive levels in joint-venture concerns, the government maintains a strong preference for the employment of Philippine nationals.

- Incentives

A package of tax incentives is available for industries designated as pioneer industries; firms which are export-oriented, or which sell a manufactured input to an export-oriented firm; and export traders, who act as middle men/brokers between export-oriented companies and overseas clients (Peat Marwick, 1983). Tax incentives include waiving or reducing obligations for the payment of transaction and custom taxes, and liberalized terms for the deductibility of business expenses, accelerated depreciation schedules, and the carry-forward of losses. Tax incentives for pioneer industries specifically

include (BOI, 1984):

- partial exemption from transaction and customs taxes;
- full exemption from duties on imported components and machinery utilized in manufacturing.
- deduction of earnings reinvested in capacity expansion or product diversification;
- accelerated depreciation for capital assets;
- deduction from taxable income of 1/2 of the value of labor training expenses.

Additional incentives granted to export-oriented firms include (BOI, 1984):

- full exemption from all transaction and export taxes;
- deduction from taxable income for a five-year period of labor costs and the costs of locally produced raw material inputs to up to 25% of export sales;
- full exemption from duties on imported components and machinery utilized in export-oriented manufacturing.

Finally, export traders are exempt from export taxes on exports purchased from local, export-oriented firms (which qualify for the tax incentives noted before); are exempt from transaction taxes on purchase and sale of export products; can deduct 20% of total export sales from taxable income, and can deduct, for an

initial five year period, the cost of establishing and operating an overseas office (Peat Marwick, 1983).

The Philippines, like other nations in the region, has established free-trade zones to encourage export-oriented manufacturing. Firms can operate in these areas virtually free of transaction and customs taxes on the purchase of raw materials and capital equipment and on the sale of export products. Firms sited in free trade zones also are exempt from local and provincial taxes. Applicable provisions related to income taxation in free trade zones include the carry-over from taxable income of net operating losses during the first 10 years of operation up to six years following the year of the loss, and accelerated depreciation schedules for capital assets (BOI, 1984).

- Investment Guarantees

The Philippine Constitution which stood until the accession of Cory Aquino in February 1986, provided guarantees against expropriation of foreign assets and for full repatriation of investor profits. The foreign investment-related provisions of the new, recently-ratified constitution, have not yet been analyzed. It is quite likely, however, that similar guarantees will be embodied in the new Philippine constitution. The present government is acutely aware of the need to restore investor confidence in the Philippines and to encourage foreign investment to assist the country in overcoming the present economic difficulties.

- Forestry-sector Investment

Foreign investment is promoted in the Philippines, as noted above, with incentives for pioneer industries and priority exporters. Investment incentives are available to export-oriented wood-based processing industries with some exemptions and qualifications. The priority investment list for the wood-based sector reflects an emphasis on wood-based processing and higher value-added manufacture. The following industries qualified for preferential treatment under the Investment Priorities plan for 1984 (BOI, 1984).

- fast growing species for timber and pulpwood;
- builder's woodwork, including prefabricated and sectional buildings and other building components for export. (Saw-milling and kiln-drying operations may be included if integrated with further downstream processing operations).
- the expansion/modernization of existing plywood plants. New plywood plants may be included when integrated with wood manufacturing facilities or when based on the processing of plantation-produced timber. (The structure of incentives for the plywood industry reflects the fact of overcapacity in the industry relative to the availability of local wood resources).
- sliced veneer plants, and/or the expansion of existing rotary cut veneer plants. Veneer plants of any type

which are linked to builders woodwork plants, or based on plantation-produced timber, also qualify for tax incentives under the investment priority plan.

- blockboard for export, if linked with a primary wood processing plant.
- particle board for export, based on wood waste residue from primary processing or timber from plantations.
- furniture, knock-down furniture, and other wood products for export such as toys, chopsticks, lacquered wood products, including laminated products which involve wood and other materials.

There has been some confusion in the past over the qualifying criteria for incentives for wood-based manufacturing. For a period of time, the Marcos government appeared to restrict preferential tax treatment to companies relying only on raw material imports, which excluded wood-based manufacturing derived from local timber (Philippine Lumberman, January 1985). How this situation has, or will, become resolved is not clear at the present time.

Investments in forestry and wood-based processing have traditionally been coordinated by an agency called the Bureau of Forest Development. As reported in Chapter 2, the plan was to replace this agency by the Wood Industry Development Authority (WIDA) within the Ministry of Natural Resources. The status of this transition is not entirely certain; future forestry

investments, however, will undoubtedly be implemented and monitored by some agency with responsibility in the natural resources or wood development area in addition to the Board of Investments and the Central Bank, the latter when foreign investment is involved. The Board of Investments has traditionally been the body responsible for investment licensing and proposal evaluation to determine qualifying status for investment incentives. As noted before, the Central Bank must approve investments involving a foreign component.

A number of licenses and contract arrangements is available for investments in forest harvesting and wood-based processing including Timber License agreements, Pulpwood License Agreements, A&D Timber License, Minor Forest Products License, Pasture License, and others. The timber license agreement is the standard long-term concession contract, allowing an annual harvest for a 10-25-year period, with renewability up to 50 years (FAO, 1981). The trend exhibited in Malaysia and Indonesia, away from long-term concession arrangements, controlled exclusively by foreign interests, to joint ventures, shorter term licenses, and contract-of-work agreements, also is becoming evident in the Philippines.

3.2.3 Taxation

- Business Income Tax

The business income tax in the Philippines is a graduated tax; the rate structure of the tax is exhibited in Table 3.3. For the purposes of taxation, business income from different

sources, including capital gains income, is aggregated and treated as unified income. With the exceptions noted above as special incentives, deductible expenses must normally be taken in the tax year in which they accrue. The one exception to the rule applies to companies during the first three years of operation. In this special case, losses sustained during the first three operating years may be carried forward for income tax purposes and claimed during the succeeding two-year period (Peat Marwick, 1983).

- Taxes on Transactions

The Philippines maintains a system of taxes on transactions which essentially amounts to a value-added tax. Taxes are applied to purchased inputs, and a sales tax is applied on the sale of produced goods based on the value-added by manufacture. Rates vary between 25-100% (Peat Marwick, 1983).

- Trade Taxes

Like most other developing countries in Southeast Asia, the Philippines maintains an extensive system of trade taxes to protect local industries and to raise revenue for the government. Import duties on wood products which compete with the local industry vary between 10% on "wood in the rough" to as high as 60% on finished products such as wooden tools, furniture, and furniture parts (Customs Cooperation Council Nomenclature, 1986). With the pressing shortage of wood in the country, a policy reform which would assist the industry development, rationalization, and new investment objectives of the government

would be to reduce or eliminate import duties on sawntimber and other semi-finished products, allowing the inexpensive import of these products from other Asian suppliers for reprocessing by secondary industries. Import duties on capital equipment are waived for priority export industries, and producers of semi-finished and finished wood products can qualify for this incentive.

4.3.4 Trade Regulations

- Importing and Exporting

Except for goods restricted by import quotas or bans, which can be implemented to protect local industry under the Import Quota Act, importing is permitted by licensed importers in accordance with prescribed regulations. Regulations requiring the posting of a letter of credit are waived in cases where the financing source is in the importers own foreign exchange. Except in this special case, a letter of credit must be opened if the proposed import transaction involves U.S.\$1000 or more. Authorization by the central bank is required in these cases. Applications for import letters of credit must include a "proforma invoice" which provides a complete specification of the quantity/value of the proposed goods to be imported (MTIB, 1984a).

The usual shipping documentation is required for transactions associated with importing. All shipments must include the following (MTIB, 1984a):

- commercial invoice--normally a minimum of 3 copies;
- three negotiable and 5 nonnegotiable copies of a bill of lading;
- certificate of origin; and packing list.

Exporting is generally permitted in the Philippines by licensed exporters; similar rules and regulations applying to importing also govern exporting. The export of certain product categories is banned, however. The most significant of these, from the point of view of the wood-based sector, of course, are the export restrictions which have periodically been imposed on logs.

- Currency & Capital Regulations

The currency regime in the Philippines is a managed float; foreign exchange receipts can be converted to domestic currency at the going rate through authorized financial institutions. The Central Bank is supposed to be informed of these transactions on a quarterly basis to enable the monitoring of foreign exchange stocks. As noted above, foreign exchange financing is permitted but must be approved by the Central Bank. The Central Bank therefore has the discretionary authority to ration foreign exchange to priority uses.

As noted previously, the old Philippine constitution provided guarantees for repatriation of investor dividends and profits upon the liquidation of assets. It can be expected that similar provisions will be inaugurated under the Aquino government as a means of supporting investor confidence.

Table 3.1 Taxation in Indonesia

Tax Rates

<u>Taxable Income</u>	<u>Rate</u>
Up to 10 million Rp	15%
From 10 to 50 million Rp	25%
Over 50 million Rp	35%

Depreciation Rates

<u>Asset Class</u>	<u>Useful Life</u>	<u>Depreciation Rate</u>
1	Up to 4 years	50%*
2	Between 4 and 8 years	25%*
3	Greater than 8 years	10%*
Buildings		5%**

* Computational Method = Open-ended double declining balance

** Computational Method = Straight-line

Source: National Development Information Office (NIDO, 1985)

Table 3.2 Tax Incentives for Reforestation
(Malaysia)

	Nature of Allowance (calculated on cost)
Capital expenditure incurred on clearing of land, new planting and construction of roads	50%
Capital expenditure on labor lines	20%
Capital expenditure on other buildings	10%
Replanting expenditure	Allowed as a deduction Against revenue
Plant and Machinery	Initial Allowances granted at 60%

Source: from Peat Marwick (1985)

Table 3.3 Business Tax Schedule in the Philippines

<u>Taxable Income</u> *	<u>Tax Payable</u>
Not over 10,000	5%
10,001 - 30,000	500 + 15% of excess over 10,000
30,001 - 150,000	3,500 + 30% of excess over 30,000
150,001 - 500,000	39,500 + 45% of excess over 150,000
Greater than 150,000	197,000 + 60% of excess over 500,000

* All monetary denominations are in Philippine Pesos

Source: from Peat Marwick, 1973

Chapter 3 Footnotes

1. Investment application forms vary, depending on whether the source of the proposed investment is foreign or domestic, and whether the investment is for a new project or simply for a capital expansion of a preexisting project.
2. This subsidy scheme is available to the plywood industry. See Chapter 2, Section 2.1.3 under the heading "Plywood Markets".
3. Since the Indonesian tax code has been reformed to serve simply as an instrument for revenue collection, some of the previous deductions designed to promote or subsidize specific industries have been disallowed.
4. In the past, royalties in Indonesia have been differentiated by species (FAO,1985).
5. Of course, the ban on log exports provides an indirect subsidy to the plywood industry in the form of lower domestic prices and increased timber availability for domestic processors.
6. One restrictive trade practice applied to imports is the so called "counter purchase" policy. This scheme requires the linkage of import contracts of 500 million Rupiah or greater (approximately U.S.\$440,000) to the export of Indonesian products of equivalent foreign exchange value.
7. One inevitable problem for a foreign investor in many lesser developed countries is that, even if profits and remittances can be repatriated, the lag-time associated with the paper work and necessary clearances ends up tying up capital for short-term periods of two-weeks to a month. The interest cost of this probable delay should be incorporated into the initial calculation of the investment's profitability.
8. The three largest ethnic groups in Malaysia are the Bumiputra's (indigenous Malays) (56%); the Chinese (33%), and the Indians (10%). The relative success of the Chinese in the commercial life of the country precipitated race rioting in 1969 between the Malays and Chinese. The NEP was developed in an attempt to redress the economic and social imbalance which lead to this disturbance. In 1971, the year in which NEP was inaugurated, indigenous Malays owned 4% of the country's capital; the Chinese and Indians, 34%; and foreign investors, 62%.

9. A basic problem with equity guidelines for foreign investors is that it can be difficult to solicit the required degree of local participation. Local investors often would prefer to invest their capital outside the country than to invest in companies based within the country. It may not be possible to interest local buyers in equity issues, except at a substantial discount. This places the issuing company in the position of losing money, on the one hand, or violating equity participation guidelines, on the other.
10. Copies of investment licensing forms are obtainable from the Malaysian Industrial Development Authority (MIDA) and the Division of Industries, within the Ministry of Trade and Industry. The Malaysian Industrial Development Authority is the principal agency established by the Industrial Coordination Act to implement and monitor investment in the Malaysian economy. It has regional offices in Los Angeles, Chicago, New York, London, Paris, Cologne, Berne, Sydney, Tokyo, Osaka, Seoul, Hong Kong, and Singapore.
11. The exchange rate between the Malaysian ringgit and the U.S. dollar is approximately 2.5/1.
12. Free trade zones sometimes are criticized for providing the means for foreign companies to make a quick profit, without significant lasting benefit to local populations (Economist, January 1987).
13. Export charges are levied by state governments of Sabah and Sarawak as part of the royalty structure for the taxation of timber and timber-based products (Discussed under State Forestry Sector Taxes).
14. Data on forestry-sector taxation in Peninsular Malaysia are compiled by the Department of Forestry, in Kuala Lumpur, and were conveyed to the author on a personal visit in July, 1986.
15. Data on forestry taxation in East Malaysia are from Gillis, 1985b.
16. Exchange controls in Malaysia are reported to be "rudimentary" and "easy to evade" (Economist, January 31, 1987).
17. Some development of resource-based heavy industry also has occurred in Southeast Asia, largely in the extractive energy and mineral resources sector, and in pulp and paper manufacturing. The Philippines has a well-established pulp and paper industry. The Indonesians also have begun to

implement an ambitious development program for the pulp and paper industries. This program, however, has momentarily stalled out from lack of sufficient investment funds.

4. PRODUCT MARKETING AND TRADE

4.1 Overview

This chapter addresses some topics related to the marketing and trade of forest-based products in Southeast Asia; specifically, the marketing and export of processed wood originated from Malaysia, Indonesia, and the Philippines. The marketing and promotion of wood-based products in the region is an important determinant of the commercial prospects of firms involved in investment projects, or planning investments, in wood-based ventures. This chapter analyzes factors which affect the movement of processed-wood products from Southeast Asian suppliers to consuming markets, and offers some proposals to address marketing and trade constraints which can reduce private investment, trade, and the volume of private transactions in Southeast Asian wood product markets to less than optimal levels i.e., to less than the market's full potential.

The system of marketing in Southeast Asia has worked reasonably well in the past, especially when compared with the marketing of products originating from the two other hardwood supply regions of the world: South America and Africa. Although the tropical broad-leaved hardwood forests in Southeast Asia are much more heterogeneous than forests in more temperate regions of the world, the currently-exploited forests in Southeast Asia are more homogeneous than the tropical forests of Africa and Latin America. This fact has enabled the evolution of a "grouping" system of marketing in Southeast Asia, whereby,

similar species are aggregated and sold together under the same label; for example, as Philippine Mahogany. As a result, timber placed on the market from Southeast Asian sources has been more commercially acceptable than marketed timber from suppliers in Africa and Latin America.

The domination of the Southeast Asian trade by large volumes of log shipments, before 1980, is another factor which historically has contributed to the relative stability of the marketing system. Marketing bulk raw material is easier than processed products, because production tolerances are wider, market preferences are less stringent, fewer regulations, standards, and lower trade taxes apply, and volume shipping services, e.g. specialized charters, are more easily negotiated. Joint-venture arrangements between large concessionaires engaged in extractive logging operations and customer firms in Asia and the United States also facilitated the movement of wood from sellers to buyers, in terms of shipping and marketing, during the era of extractive logging by large-concessionaire. Sales of hardwood timber to the United States, for example, were initiated largely by two joint-ventures involving Georgia Pacific and Weyerhaeuser, who shipped on their own vessels or contracted out the services (Asian Timber, November/December 1983). Weyerhaeuser also regularly supplied customers in Japan.

The forest products trade in Southeast Asia recently has evolved in two ways which make the task of product promotion,

trade, and marketing more difficult than the historical experience:

1. The trend in the region towards further processing and value-added manufacturing has increased competition in markets for processed wood. The evolving market environment places greater demands on product quality, packaging, and promotion. Processed products also are intrinsically more difficult to market than raw materials, because markets are smaller, more selective, and require more information (higher research costs) to penetrate; product standards are more stringent, and markets for processed wood are more highly protected by tariffs (and more easily and often protected by non-tariff barriers).
2. Concern over diminishing timber resources in the region has stimulated research into the merchantability of lesser known species to increase the harvest productivity of forested-area and conserve scarce timber resources. The locus of timber supply in the region may shift in the longer-run to such timber source areas as Irian Jaya (the extreme eastern-most province in Indonesia) and contiguous Papua New Guinea, which supports a more heterogeneous hardwood forest than the traditional supply regions of Southeast Asia. The introduction and commercialization of lesser-known species increases demands on the system of marketing and the need to respond with innovative marketing mechanisms.

These issues are discussed in the remainder of the chapter under the following headings:

- Product Quality and Standards
- Product Marketing
- Shipping and Transportation
- Trade Barriers and Customs Regulations
- Financing Mechanisms

The chapter concludes with a short discussion of government and private organizations concerned with promoting the timber trade in the Southeast Asian region.

4.2 Product Quality and Standards

- Issue

Product quality and standards sometimes affect wood-based investment, trade, and market development in Southeast Asia. Product standards for many larger joint-ventured plywood mills are high enough to meet the stringent standards of export markets without serious problem. Uniform product quality is harder to achieve for the many smaller processors scattered throughout insular Southeast Asia, who operate outside the system of timber grading, to the extent that it is potentially applicable, ie., to the extent that grading rules exist for the timbers in question. Quality control also can be low as a result of inexperienced production crews (Schreudor and Vlosky, 1985), and the extra handling and storage requirements for small processors, who sometimes must hold stocks for longer-than-

desirable periods to accumulate enough volume to generate a port call by a shipping company.

Scaling and measurement variation and inadequate grading rules also affect product standards in Southeast Asian timber markets. Because different suppliers sometimes employ different scaling and grading rules, it may not be possible for importers to determine in advance of purchase what quantity or quality of the product they have negotiated, and what customs obligations to expect. Needless to say, this uncertainty can reduce the level and rate of market transactions. Sabah, for example, changed from a hoppus method of scaling to a metric system in early 1982. This action destabilized the log trade for several months (Asian Timber, March/April, 1982). Importers in Taiwan and Korea held back from the market because buyers did not have the prior experience to compute the volume of timber being purchased. Buyers also petitioned customs authorities to reclaim duty payments they believed to be excessively high on previous shipments, in view of the scaling change. The decrease in Philippine exports to Taiwan during the year 1985 also has been attributed in part to a "lack of a common understanding of grading rules to be applied".

- Solutions
- Extend and Implement Grading Rules

The purpose of grading rules is to provide a measure to gauge the qualities of wood-based products originating from different production sites or regional timber sources. The

purchase of graded timber should assure that the product conforms with buyer specifications. Given grades can be employed in identical uses regardless of the site of origin (RPRA, 1977).

The extension of the Malayan Uniform Grading System - or the adoption of another model system of grading - would be an important step to reduce market uncertainty in the Southeast Asian wood products market. Steps have been taken in this direction and/or have been encouraged by the Malaysian Timber Industry Board, the Southeast Asian Log Producers Association, and ASEAN, but progress is incomplete. The Malayan Uniform System was expanded in 1985 to include timbers common to Sabah and Sarawak in addition to those common in Peninsular Malaysia (Asian Timber, May 1985). The Malayan Uniform System of grading now covers 100 timbers, representing some 800 commercial species. There are numerous other species of the "lesser-known" variety which have not yet been brought within the grading framework, however¹. Additionally, a uniform product standard for plywood has yet to be developed in the region.

The scope for uniform product grading might be limited to the part of the market supplied by large producers, or representing the output of small producers which is aggregated at central ports, where grading operators exist. The cost of upgrading the product of smaller producers to establish a niche in the graded market may not be justified in view of the remote location of some smaller producers vis a vis markets, and the relative lack of sophistication of milling equipment and

operations of smaller firms. There may be a market role for the smaller producer who, by virtue of scale, production capacity, and marketing capability clearly produces a product which is suited to local markets.

- Regional Standardization of Measurement Systems

Suppliers in the region often employ different systems of scaling. Standardization of measurement systems on a regional basis would reduce uncertainty in the market and facilitate marketing by export-oriented firms. The possibility of standardizing scaling systems does not appear to have received much attention from government agencies, trade associations, or industry groups in the region.

- Establishing End-Use Standards

As a means of reducing uncertainty surrounding the introduction of lesser known species, research has been progressing at various forestry research institutes, including the Forest Research Institute of Malaysia and the Forest Products Research Institute of Holland, to develop "end-use criteria" for timbers. The objective of this research is to determine necessary timber specifications for various categories of end-uses - such as doors, windows and window frames, floors, etc., - against which new species could be evaluated for suitability in a reasonably quick and straightforward manner, as by computer scanning. The Dutch have developed criteria for three end-use categories; the Malaysians have established criteria for fourteen. Further research is necessary in this area.

4.3 Product Marketing

- Issue

Marketing wood-based products from the hardwood-producing countries of Southeast Asia has become more challenging with the trend in the region towards wood-based manufacturing and the corollary diversification of export markets. Specific marketing issues which the exporter may confront are:

- High cost of market research, particularly for smaller suppliers. Informational uncertainty also is an issue for new sellers in the market;
- Suppliers in the past have had to rely on large trading houses for market information. Market information from these sources often are incomplete and biased in the buyers interest.
- Marketing lesser known species presents particular problems. Buyers often are resistant to accepting substitute lesser-known species, even though lesser-known species may be superior in particular end-uses. A great deal of background research is necessary to determine the physical and mechanical properties of lesser-known species and suitability of the timber for various end-uses. As reported above, considerable research has been conducted in this area and is available to timber traders in the region. However, timber traders, at present, seem to be unable to ". . . translate the technical data into final products and the other way around, products into technical timber data"

(Laming, 1986).

- Product identification and standards sometimes are issues due to lack of technical expertise of buyers or sellers and some uncertainty connected with grading, measurement, and product quality. These issues can impede product promotion and marketing.

- Solutions

- Better Marketing

Marketing of a product involves its development, promotion, pricing, and eventual sale in the market. Poor information on market channels, new products, and buyer preference in export markets necessitate creative marketing strategies on the part of suppliers in the region (Fimansjah, 1980):

- Market planning should start early in the process of planning, building, expanding, or upgrading a processing plant. Initiation or expansion of operations should not be undertaken without sufficient assurance that products will be acceptable in target markets. While this point would seem to be a common sense truism, the issue of product marketing in Southeast Asia often has been deferred until after the plant is built (Frimanshah, 1980).
- Buyer interest in products should be solicited early in the planning stages of any wood-based manufacturing venture. Joint-venture arrangements can sometimes be negotiated which provide the local firm with technical assistance, trained

personnel, financing, and a marketing outlet for the product. Sales and marketing assistance provided by venture partners in secondary manufacturing probably is especially helpful as a means of penetrating foreign markets for secondary wood products. In Indonesia, in fact, 4 out of 19 furniture mills involve foreign equity participation on a joint-venture basis (See table 2.19, Chapter 2).

- The profitability of targeting different end-use markets should be carefully calculated. In some cases, for example, the lower quality, ungraded sawntimber market is more economical than a higher quality market, because the recovery rate from the log is higher for the lesser grade. It should be possible to target different types of market outlets for the best recovery/price combinations.
- Buyers should be kept informed on the progress of the mill's construction. Future buyers should be prepared for the market entry when the mill is ready to operate.

In terms of marketing lesser-known species, one possibility is to barge-ship products from remote sources to terminal loading facilities, where buyers congregate, and shipping, handling, and grading services are available. Concentration of supplies from a number of sources to a specific location increases the reliability of supply; many buyers are reluctant to introduce new species unless a stable supply is secured. Suppliers, in fact, could cooperate and coordinate shipments to

try to sustain a reasonably even flow to the market.

Another strategy for marketing lesser-known species is to combine them with commercially accepted species in semi-finished or finished products, where the identity of the constituents is less evident. The sale of core veneer, for example, is one means of introducing lesser-known species (Yussip, 1982).

- Model Sales Contract

The development of a standardized sales contract would reduce uncertainty between buyers and sellers, and improve business transactions in Southeast Asian wood products markets. One possibility would be to extend the Standard Form Contract developed by the Malaysian Timber Industry Board (MTIB, 1985/86). A model contract should contain a number of elements, including product type, with reference to grading rules, identification of species and marketing label, e.g., Meranti; acceptable color/weight variations; length, width, and thickness allowances; grade, condition of seasoning, and surface and working, e.g., rough or unplanned, dressed, or patterned (Firmansjah, 1980).

Beyond the development of a model contract, an enforcement mechanism is necessary. This is particularly true for the Southeast Asia trade because traders do not have a tradition of negotiation by contract. The issue is handled in Malaysia by requiring contracts to be filed with the Malaysian Timber Industry Board for monitoring and enforcement (MTIB, 1985/86).

- Market Reporting System

A market reporting system would improve business conditions

in the Southeast Asian tropical timber market. The tropical hardwood market is not organized and integrated to the same degree as most other commodity markets, including tin, agricultural products, and oil, which have organized commodity exchanges and future markets. As a result, traders in the tropical hardwood market are less informed on market conditions and trends than traders of other commodities. Current trends in export processing and species utilization reinforce the need for a centralized clearing-house for market information.

Large import trading houses currently are the best sources of market intelligence. Even established producers may have to rely on this information source, which has the obvious problem of buyer bias. A large number of publications is available which contain information on market trends, prices, and current trade statistics. These include the Japanese Lumber Journal, The Timber Trade Review, Maskay, and others. At the present time, however, a centralized information exchange, based in the Southeast Asian region, does not exist for wood-based products. The consensus of participants at a UNCTAD meeting in 1981 was that "new suppliers in the market were ... in urgent need of assistance in selling their products competitively and profitably" (Asian Timber, November/December 1983).

A market reporting system could serve the following functions:

- conduct market studies; provide market intelligence, trade statistics, and information on evolving market conditions;
- promote information exchange on marketing of timber products;
- provide information on grading standards and measurement, species, trade names, and identification;
- provide information on market structure and market distribution channels;
- provide information on research into lesser-known species and waste-wood utilization;
- maintain registries of exporters, importers, buyers, graders and sorters, shipping companies, port authorities, and other relevant agents in the market;
- provide liaison services and linkages with regional organizations.

Functions of such a reporting service might be broadened to include the provision of technical advice on such matters as contract negotiation, marketing, and guidance on standards and product specifications.

A proposal has been put forward by FAO/UNDP to establish an "ASEAN Timber Bureau", to serve as a regional price reporting system for the Southeast Asean region. This project has been tentatively approved and will be coordinated in the FAO/UNDP Asia-Pacific Forest Industry Development Group, headquartered in Kuala Lumpur².

4.4 Shipping and Transportation

- Issue

Shipping of materials and wood-based products within and between countries in Southeast Asia is sometimes hampered by inadequate, or high cost, transportation services. To some extent, the cost of transportation can be considered a natural barrier to trade, an economic fact of life which market participants must incorporate into assessments of business conditions and profitability. Yet, natural transportation cost barriers in Southeast Asia sometimes are exacerbated by the actions of governments, shipping companies, port-authorities, and regulatory authorities which have a role in mediating business and the wood-based trade in the region.

Wood-supply points in insular Southeast Asia have become geographically less concentrated and more remote from shipping routes as readily accessible coastal stands have been harvested. This trend has complicated the logistics of the trade. Coastal service operators, for example, may be unwilling to service remote sources, unless a minimum cargo load is generated. For remote-sited produces, there are three sales and marketing options (Asian Timber, November/December 1983):

- Accumulate enough cargo to generate a loading call. This option requires storage space and financial reserves to absorb the opportunity cost of holding the stock and paying for the transportation service;

- Send products by coaster or barge to ports which directly service end-use markets. Transportation costs are higher under this option, but stock holding costs are lower, and the access to markets is better;
- Sell in the local market. This option has the benefit of lowering market research expenses at the cost of increased competition and the financial constraints of local buyers.

The costs of shipping in Southeast Asia are highly variable and affected by a number of factors beyond transportation distances, including shipping volumes, the value of products, the possibility for return shipments ("backhauls"), the degree of competitiveness in shipping services along the route, and the like. Charter shipping can often be contracted for large volume shipments of such products as logs and woodchips in specialized carriers at long-term, attractive rates (Bourke, 1986). The negotiation of this type of arrangement is less likely for processed products (particularly at the secondary level) due to smaller cargo volumes generated.

Historically, conference shipping has dominated the transportation traffic of logs and primary processed products in the Southeast Asian region. Wood-based products produced from Indonesia and Malaysia usually are transhipped through Singapore; shipping from Singapore to destinations in Asia and the United States has been dominated by Japanese vessels, primarily Sago Lines (Brion, 1983). Transportation of wood-based exports from the Philippines historically has been provided by Japanese

conference carriers. The traffic in wood-based products from Singapore to European markets has been carried by both conference and non-conference carriers, primarily of European origin. The trade in secondary wood-based products in the southeast Asian region has been almost exclusively carried by conference carriers of Japanese origin³.

The domination of the wood-based trade by conference carriers translates into higher freight rates for wood-based products in Southeast Asia than would occur in a more competitive market environment. Furthermore, buyers as well as transportation companies in Southeast Asia traditionally have maintained an oligopsonistic position in the market. The net result of these market conditions is to disadvantage suppliers in price negotiations. One manifestation of this reality is that higher freight rates, to large degree, can be passed on to suppliers. FOB prices in price negotiations are determined as a residual of the "market price" in the consuming market less the cost of shipping, which itself will be higher than the rates established by competitive markets.

There has been a trend in the Southeast Asian market for governments in supplying regions to negotiate market sharing arrangements between local and foreign firms to increase the participation of local companies in the shipping business. The Sabah State of Malaysia and Japan have negotiated a bilateral agreement which mandates a 52%/48% split of the log trade between Japanese and locally registered vessels (Brion, 1983).

Similarly, the Philippine government, in 1985, negotiated with the Japanese for 50% of the log trade between the Philippines and Japan⁴. The Indonesians had a similar market sharing arrangement with the Japanese which now has become obsolete with the cessation of the log trade between the two countries. More recently (in 1984), the Maritime Ministry in Indonesia banned overage vessels and barges from the intercoastal trade to support the local shipping industry.

Such market sharing or exclusionary arrangements distribute some of the profits from transportation services to domestic firms, but do not increase competitiveness in the market or make for more efficient rate setting in the transportation sector. In fact, shipping rates can increase and service availability declines when shipping services are restricted to local firms. The Indonesian action to ban overage vessels and barges, for example, further limited shipping access and increased the production costs of firms which formerly had used company-owned barges for moving raw materials and wood products (Asian Timber, November 1984). Partially in recognition of this fact, the ban was lifted later in 1985, as part of the general export regulation and shipping service reform package (noted in Chapter 3) aimed at encouraging shipping and foreign trade through Indonesian ports.

- Solution

As noted before, the cost of transportation can be considered a cost of doing international business, to a degree.

But the costs of transportation in Southeast Asian region are excessively high as a result of the market structure of the shipping industry for processed wood-products. Access to shipping for the intercoastal trade also is becoming more difficult, and is certainly not becoming cheaper, with the evolving pattern of resource supply and industry location away from coastal areas.

Encouraging the entry of shipping firms in the region, either for the coastal or oceanic trade, would undoubtedly increase the availability of transportation services to remote areas, increase competition in the market, and bring about a reduction in rate structures. By assumption, excess profits should exist in the shipping services sector in the present market environment. The Indonesian government, in fact, encourages foreign investment in ship building and sea transportation infrastructure. Joint-ventures in sea transportation services for forest products, involving foreign participation, is one potentially attractive investment option in the region which deserves further analysis and market research.

4.5 Barriers to Trade

- Issues
- Tariff Barriers

Tariff and non-tariff barriers affect the Southeast Asian trade in wood-products as well as the pattern of global trade. All the importer countries in the region impose nominal tariffs on wood-products which escalate directly with the level of wood-

processing, as a means of protecting local industries. This policy counters the efforts of hardwood producing countries in Southeast Asia to attract foreign investment in wood-based processing industries.

Importers normally impose lower tariffs on exports from developing countries as part of the so called "Generalized System of Preference" (GSP). These preferences, however, can be qualified in various ways, as in the EEC's tariff quota scheme (discussed below), or waived all together (Table 4.1). The Japanese, for example, apply the lower GSP rate of 0% to lumber imported from developing Southeast Asian countries, but maintain the "Most Favored Nation" tariff level of 17-20% against plywood imports from the region. Australia and New Zealand also maintain high nominal tariffs on imported products from the Southeast Asian region. (In the case of New Zealand, 20% and 25% for veneers and plywood, respectively). As might be expected, the furniture industries in these countries also are protected by high nominal tariffs (See table 4.1).

- Non-tariff Barriers

Non-tariff barriers include tariff-quotas, quantitative controls (export/import quotas), voluntary restraints, and standards and quarantine measures (Ferguson and Lloyd, 1976). The distinction between an illegitimate restraint of trade and legitimate product standards - determined in concordance with local building codes or health and safety regulations - is sometimes a very fine one. This fact often makes the detection

and quantification of non-tariff barriers a difficult task in wood-products markets (Bourke, 1986).

One non-tariff trade barrier which clearly has an impact on trade originating from Southeast Asia is the EEC's tariff-quota on plywood, adopted as part of GSP scheme for lesser-developed countries. Each of the hardwood producing countries in the region is allocated an annual quota, which ranged between 70,000 m³ and 78,500 m³ for the years spanning 1981-1984 (Table 4.2). Plywood can enter the EEC without duty charges as part of the GSP system under the quota level; if the quota level is surpassed, however, a duty charge is imposed which, in recent years, has averaged about 11%. The problem with the system is that the quotas are generally exhausted before the end of the year, as sellers rush to make their shipments before the tariff becomes effective (Table 4.2). But because traders do not have complete information about shipment arrivals and what's afloat in transit, the quota may be surpassed by the time a trader's consignment arrives, regardless of the trader's intention. The trader must then absorb the loss of an unexpected additional duty charge. This situation creates considerable uncertainty for producers, brokers, and buyers in the market.

Product standards also may operate as nontariff barriers to trade for Southeast Asian wood products because, as noted before, some uncertainties surround the grading of wood-based products produced in the region and some user standards of hardwood importers are very exacting. Again, it is difficult to

quantify the impact of such nontariff barriers or determine if they qualify as an illegitimate trade restraint⁵. Whether legitimate or not, building codes and grading standards of the Japanese are seen as a barrier to market penetration by suppliers of this market (Ferguson and Lloyd, 1976). Grading in Japan is the responsibility of the product users and is conducted on site, which imposes additional costs and reduces the competitiveness of products which are difficult to grade, as are the products from Southeast Asian markets.

- Customs Regulations

Customs rules and procedures can sometimes become a de facto barrier to trade in the form of added costs, uncertainties, or delays accompanying inspections. Customs inspections are an inevitable part of business which traders must face in the international wood products trade. Customs valuation may be a problem in view of uncertainties mentioned in section 4.2 connected with the value and volume of traded products. Such uncertainty increases the probability of both honest mistakes and smuggling through over- or under-invoicing. As a result, disputes and differences of opinion with customs authorities can arise. The resolution of such disputes may occur at the expense of the importer in the form of additional duties and/or fines on notice, which raises costs unpredictably. Furthermore, statute of limitations clauses do not exist in the customs law of some importer countries, such as the United States, and retroactive duty payments or fines must sometimes be paid by importers

years after cases are finally adjudicated (Osgood, 1976).

Smuggling and corruption on the part of customs officials sometimes complicate the export business in Southeast Asia. Exporters may have to make additional irregular payments over and above statutory duty charges. Governments in the region have attempted to control the problem, with mixed success and variable impact on legitimate exporters. The Philippines implemented customs regulations in 1982 to control log smuggling, for example, which required cargoes on all vessels to be double checked: once at the loading port, and again at eight designated exit ports. The regulation delayed shipments and raised costs by the amount of additional expense and time involved in rerouting the shipments and paying double port charges.

- Solutions

In terms of tariff barriers, the general trading environment appears to be liberalizing as the GATT negotiations continue (Sedjo, 1985). Tariffs on wood products are scheduled to be reduced by 20-50% when GATT-negotiated tariff reductions become effective in 1987. This trend is a positive development for the producers of wood products in Southeast Asia.

The incidence of non-tariff barriers, however, appears to be increasing, although again the trend is difficult to document and quantify⁶. Further, it appears that the intentional (or unintentional) use of export subsidies is growing as a means to promote domestic industries which have had the protective shield

of high nominal tariffs negotiated away in GATT-sponsored talks or bilateral negotiations. This trend augurs an increase in the number of antidumping and countervailing duty disputes which will likely occur between trading partners in the next several years⁷. The issues of non-tariff barriers and export subsidies are on the agenda for the next round of GATT talks, which is a hopeful sign.

In terms of customs regulations, countries in the region periodically attempt to make improvements in the system. The most notable attempt has been the Indonesian reform in 1985 to streamline and improve cargo documentation and inspection procedures. Cargo inspection has been contracted to a Swiss-based surveying company with worldwide experience. This change should facilitate the smooth flow of trade through Indonesian ports, including wood products.

4.6 Financing

- Issue

Inadequate financial services sometimes inhibit the import of production inputs or the export of products from wood-based ventures operating in Indonesia, Malaysia, and the Philippines. International commerce is more complicated and risky than commerce within domestic boundaries; as a result, financing for international transactions can be relatively difficult to obtain and/or expensive. Financing for new market ventures can be particularly difficult because of the corresponding higher risk. Any institutional weakness of the financial services sector can

aggravate the intrinsic difficulties associated with international finance hindering entrepreneurial innovation and the aggressive penetration of new markets.

Transactions between wood-products suppliers in Southeast Asia and broker/importers who purchase the products often are undertaken through a letter-of-credit arrangement. A letter-of-credit is opened on the account of the importer's bank; the supplier's bank is advised of the letter of credit, and a bank draft is issued to the exporter, with terms and maturity conditions stipulated by the letter of credit, once the supplier's bank has received copies of necessary shipping documentation (commercial invoice, bill of lading, and the like) which validates the contents of the shipment⁸. The maturity date on the draft might range from 30 to as much as 180 days. Since exporters in hardwood-producing countries often are short of working capital, the exporter often sells the draft back to the bank at a discount to obtain immediate payment. The letter-of-credit scheme in this instances becomes a financing mechanism as well as a method of payment for the financial transaction.

The letter of credit scheme provides a relatively secure form of payment and/or financing for the exporter, but the services of the bank come at a price and a loss is taken in the form of a price discount on the sale of the draft.

The broker who receives the shipment presumably will have negotiated a sale to buyers in importing countries. The same letter-of-credit arrangement again can be used on the shipment

may be marketed on "open account". In the later case, the transaction is made on a buyer-to-seller basis without official intermediation by the bank. This option is riskier than the letter-of-credit, but may be less expensive, depending on the financing arrangements.

- Solution

Institution-building in the financial services and/or insurance sectors could diversify the options for the payment and financing of international transactions, increasing market activity in the wood-based trade. The Malaysian Export Credit Board, for example, a joint venture between the Malaysian government (56%), commercial banks (38%), and insurance companies (6%), was formed to provide export insurance to protect exporters against the risk of nonpayment or repudiation of contracts. The program also provides an advisory and assistance function (Maskayu, February, 1982). In this capacity, the Malaysian Credit Board:

- makes information available to exporters on the credibility of foreign buyers and political and business conditions in foreign markets;
- provides information on international trade practices;
- offers advice, assistance, and strategy on the collection of accounts.

One of the advantages of an export insurance program is that the insurance package can be used as collateral in negotiations to obtain better terms on financing.

Export insurance programs could be usefully implemented in other countries of the region. The Philippines does have a government-supported export insurance program which provides loan guarantees and financing at reasonable interest rates. Joint-ventures between nationals of hardwood producing countries of the Southeast Asia region and other more developed countries in the financial services sector (export financing/insurance) might be profitable and should be promoted.

Bank-owned export-import trading companies are one mechanism for innovative trade financing. The passage of the Export Trading Company Act of 1982 in the United States provides the legal structure to allow banks to form export-trading companies (Rosenburg, 1986). These enterprises, however, have not played a significant role in the Southeast Asian timber trade to date, and there are no bank-owned trading companies based in any of the less-developed, hardwood producing countries, to the author's knowledge (in forest products). The feasibility of Southeast Asian-based bank-owned trading company joint-ventures needs to be further researched.

4.7 Organizations in the Timber Trade

Numerous organization have emerged in recent years to research tropical forestry and timber trading, and to promote information exchange between governments, regional bodies, and private industries involved in the timber business. The goals and policies of these organizations generally aim towards the same type of strategies proposed in the preceding sections to

address issues and concerns related to investment and trade in the Southeast Asian market.

Three UN agencies play an active role in the area: UNCTAD, ESCAP, and FAO. The most significant development is UNCTAD's sponsorship of the International Tropical Timber Organization as the governing body of the International Tropical Timber Agreement. It seeks to:

- promote trade in the tropical hardwood market;
- promote research and development in forest management and utilization;
- improve market intelligence and reporting;
- improve marketing and distribution of tropical timber exports;
- encourage conservation of tropical forest resources.

The Southeast Asian Log Producers Association (SEALPA), a regional association of timber producers, and ASEAN, have goals and policies which attempt to influence timber trading in the Southeast Asian market. SEALPA was originally established as a producer cartel, but in this mission - the control of log prices in the market - the organization largely failed. SEALPA, in fact, had not met for two years (1984-85), but recently was revived with a redefined mission (Asian Timber, October, 1985). The organization intends to adopt a cooperative, rather than confrontational posture, in relation to consuming countries and

develop policies for processed products in addition to logs. The organizational goals are:

- provide statistics and production/market information for the guidance of governments and industry;
- promote research into the utilization of lesser-known species;
- promote standardization of grading rules and contracts.

There are numerous government boards, industry organizations, and trade associations in Southeast Asia which help regulate and monitor the forest-based products trade, serve as repositories of market information, or provide technical assistance. These include:

- The Malaysian Timber Industry Board;
- The Timber Trade Federation of Malaysia;
- Singapore Timber Trade Association;
- The Indonesian Timber Society;
- Philippine Wood Products Association.

An expanded list of these organizations with addresses are provided in Appendix I, as contacts for further information.

Table 4.1 Ad Valorem Import Tariffs, on Wood Products

Country	Product			
	Sawntimber* (CCCN 44.13)	Veneer* (CCCN 44.14)	Plywood* (CCCN 44.15)	Furniture (CCCN 94.01/03)
<u>Japan</u>				
MFN	10%	15%	17%-20%	4.8%
GSP	0%	(0%, 7.5%)**	17%-20%	0%
<u>EEC</u>				
MFN	4.3%	6.1%	10.4%***	5.6%-6.3%
GSP	0%***	0%***	0%***	0%***
<u>USA</u>				
MFN	0%-2.5%	0%	8%	2.8%-5.8%
GSP	0%***	0%	8%	0%***
<u>Australia</u>				
MFN	2.15%	5%	28%	30%
GSP	0%	5%	28%	20%***
<u>New Zealand</u>				
MFN	10%	30%	35%	40%
GSP	0%	20%	25%	22.5%

Source: from (Bourke, 1986)

- * Hardwood
- ** Tariff quota (0% under quota level)
- *** Quantitative restrictions also exist

Table 4.2 EEC Tariff Quota on Plywood

4.2a Quota Allocation

Year	Country Allocation	Regional Allocation
1981	70,000 m ³	430,000 m ³
1982	73,500 m ³	441,000 m ³
1983	75,000 m ³	450,000 m ³
1984	78,000 m ³	471,000 m ³

4.2b Date Quota was surpassed

Country	1981	1982	1983 - December
Brazil	Open	Open	Open
Indonesia	Sept. 5	June 10	March 3
South Korea	Nov. 11	Open	Open
Malaysia	May 20	June 15	June 4
Philippines	Sept. 2	Oct. 19	Aug. 12
Singapore	June 26	Sept. 11	Sept. 23

Source: Asian Timber, July/August, 1984

Chapter 4 Footnotes

1. There are over 2,500 timber species in the tropical forests of Malaysia.
2. Personal communication, Jim Douglas, FAO/UNDP Asia Pacific Forest Industries Development Group, December, 1986. Kuala Lumpur.
3. The volume of trade in secondary wood-based products is lower than the trade in products at precursor stages of processing. Lower traffic means fewer firms and the probability of less competitive market conditions for transportation services in this sector.
4. Personal communication, Pat Durst, Forestry Support Program, USAID. Washington, D.C.
5. It is, after all, perfectly reasonable for a customer to refuse to purchase a product which does not meet his/her specifications.
6. Some see the apparent increase in the use of nontariff barriers as directly tied to the liberalization of other sectors of trade policy, e.g., reductions in nominal tariffs as a result of GATT negotiations.
7. The recent dispute between the United States and Canada in the North American lumber market is an example. In Southeast Asia, Indonesia would appear to be the country most susceptible to antidumping, or countervailing duty, actions given its generous subsidization of the plywood industry. As noted previously, however, the transshipment of Indonesia's wood products trade through Singapore largely protects the country from such actions.
8. Shipping documents, of course, do not guarantee the shipment in terms of quantity or quality. It is sometimes the case in the Southeast Asian market that consignments are received after payment which do not turn out to be what the broker thought was ordered (Osgood, 1976).

5. CONCLUSION

The forestry industries in the three hardwood producing countries of the Southeast Asian region - Indonesia, Malaysia, and the Philippines - are now entering a transition period characterized by declining timber resources and an increasing emphasis on investment planning for the domestic processing industries. The transition from log harvest-for-export as the dominant forest-based industry in the region, to the development of primary and secondary manufacturing, has not occurred entirely contemporaneously, uniformly, or consistently throughout the region, reflecting differing degrees of timber availability, policies toward the forestry sector, and economic conditions in the three countries. Nonetheless, the forestry industry in the hardwood producing region of Southeast Asia today is fundamentally different from it was even five years ago. At the present time, only Sarawak, and, to a lesser extent Sabah, have forest-based industries dominated by extractive logging-for-export. And only Sarawak (and Papua New Guinea) will remain as major suppliers of hardwood logs from the Asia-Pacific region, if resource supply trends and investment policy in the region continue the present evolution.

Paralleling the transition from log harvest-for-export to forest-based manufacturing is the emphasis in forestry policy and investment law and regulation on joint-ventured operations with domestic participation in equity ownership, management, and decision-making. Regional policies on domestic

participation in forestry-based operations are partly motivated by the same concern which has caused development plans to emphasize wood-based manufacturing, as opposed to extractive logging: namely, the desire of regional governments to capture a greater share of the economic benefits of declining timber resources for domestic populations and economies. The implementation of investment policies, however, also has varied throughout the region. Rules and regulations governing foreign participation, in fact, may be relaxed in the future, given capital constraints now facing the Southeast Asian countries. Notwithstanding this fact, the investment environment in the wood-based industries of Southeast Asia should continue to be conditioned by requirements for local participation. This is a fact with which foreign investors must live in the region.

Conditions in markets for wood-based products in Southeast Asia now reflect regional trends towards wood-based manufacturing. The rapid expansion of the Indonesian plywood industry has reshaped the wood-based trade originating from Southeast Asia, by driving out of business many of the plywood mills previously located in Singapore, Taiwan, Korea, and Japan. Plywood producers in these countries had supplied markets in Europe and the United States, which the Indonesians now service. In general, the trend in the region towards further processing and value-added manufacture has increased competition in the market for processed products and the diversification of export markets beyond the exporting countries historical experience

(Indonesia was largely unfamiliar with world plywood markets before 1981). Market conditions can be expected to become more demanding in the future for the exporting countries of this study if regional trends continue, i.e., further investments are made in value-added manufacturing (secondary and tertiary processing), lesser-known species are promoted, and the sources of timber supply eventually diversify to such areas as Irian Jaya.

Within the general parameters of resource availability and investment policy, the status of industries, and solicited investment opportunities, can be summarized as follows:

- Indonesia

The state of timber supply in Indonesia is probably sufficient to support investment in further primary processing capacity in the intermediate-term time-frame (next ten years) but not in the longer term. The government also is soliciting investments in secondary wood-processing industries, including wood-working, molding, building components, and furniture; timber estates linked to primary processing plants; and ancillary support areas for wood-based industrial investments, including resin manufacturing and sea transportation.

- Malaysia

Because of the domestic timber supply shortages in Peninsular Malaysia, further expansion of primary processing industries is not being encouraged at the present time.

However, investments are being solicited for secondary wood-working industries, with an emphasis on moldings, building components, furniture parts, and furniture. A significant expansion of these industries in Peninsular Malaysia could be based on imported Indonesian sawntimber. The timber supply outlook in Sabah and Sarawak is somewhat better than in Peninsular Malaysia, and the investment emphasis is correspondingly broader. Areas open to investment include primary, as well as the secondary, processing industries.

- The Philippines

Excess capacity exists in the primary processing industries in the Philippines at the present time; this sector of the industry will be rationalized, rather than expanded. Investments are solicited for the modernization of existing sawntimber and plywood plants, and for capital expansions in such industries as builder's woodwork, furniture, and blockboard and particle board for export.

The degree to which the countries of the Southeast Asian region are successful in stimulating an intensification of investor participation in their wood-based industries will depend on the degree to which some of the issues raised in the body of the report can be resolved or reconciled. Product marketing is probably the single most important issue which has been ignored in the past and must be faced in the future, from the level of governments determining investment policy to individual investors evaluating investment prospects. For example, although

investing in furniture manufacturing may appear wise from the standpoint of adding value to resource products, it is clear that if all regional competitors have the same idea, the extra value added to the product will quickly evaporate as product prices decline from increased competition. Investment and marketing strategies for the region have to be conducted with skill in the present market environment characterized by declining resource availability, diverse export markets, and increased regional competition.

In connection with marketing, the following suggestions can be made:

- Joint-ventures with foreign partners should be actively encouraged, particularly with partners from countries which are targeted for market penetration. Not only do joint-ventures provide a means of financial and technical assistance, but the market intelligence from foreign partners obviously is a good source of information on the targeted, foreign market. To the extent that rules and regulations governing equity participation by foreigners negatively affect investor participation, they should be as liberal as possible and implemented with the minimum of red tape.
- The development of a market price reporting system along the lines of the proposed ASEAN Timber Bureau should be encouraged. As well as reporting current prices and market

information, an important function for such a Bureau could be to conduct market studies and forecasts of market trends on behalf of subscriber clients. The formation of such a Bureau deserves the support of donor agencies, governments, and industry trade associations in the region.

- Continued R & D in the area of wood products technology, utilization of lesser known species, establishment of end-use criteria, and extension of grading standards, will help improve the conditions for the marketing and trade of wood-based products produced within Southeast Asia.

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APPENDICES

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These papers provide a detailed examination of forestry taxation policy in the Indonesia and Malaysia, and its impact on regional development, the rate of forest harvest, and deforestation.

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Provide forest products trade statistics, trade regulations (export/import procedures), and information on shipping documentation for each of the Southeast Asian countries.

Peat Marwick. Guides to Investment and Taxation.

These guides are published for use by clients of Peat Marwick. They provide detailed information on investment regulations and taxation for a number of countries, including those of Southeast Asia.

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