INTERNATIONAL TROPICAL TIMBER ORGANIZATION (ITTO)

ANNUAL REVIEW AND ASSESSMENT OF THE WORLD TROPICAL TIMBER SITUATION

1996

INTERNATIONAL TROPICAL TIMBER ORGANIZATION (ITTO)

ANNUAL REVIEW AND ASSESSMENT OF THE WORLD TROPICAL TIMBER SITUATION

1996

This document supersedes document ITTC(XXI)/3 "Elements for the Annual Review and Assessment of the World Tropical Timber Situation 1996". It presents updated and revised statistics of the world tropical timber situation received during and following consideration of document ITTC(XXI)/3 by the International Tropical Timber Council in November 1996.

The designations employed and the presentation of material in this document do not imply the expression of any opinion whatsoever on the part of the International Tropical Timber Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Document GI-7/96 International Tropical Timber Organization. Yokohama, Japan.
Prepared by the Division of Economic Information and Market Intelligence, ITTO.

© ITTO 1997

Printed in Japan

Table of Contents

Figures

Tables

Box

Summary

This Review provides data on production and trade of tropical forest products and the status of tropical forests in ITTO member countries. Data are presented up to and including 1996 based on projections or estimates made in the third quarter of that year. However, 1994 is used as the base year for all global comparisons as this is the latest year for which global data were available at the time of preparation.

Production of tropical saw and veneer logs in ITTO producer countries totalled 132.0 million m^3 in 1995, a 3% decrease from 1994 levels. Log production decreased again in 1996, to 126.8 million m^3, due to decreases in Asia and Africa. The proportion of logs domestically processed in Africa fell from almost 70% in 1992 to an average of 60% in the 1994-96 period (largely due to increased log exports to Asia). The Asian figure for domestic processing grew from 84% to 88% over the same period and is expected to continue growing to over 90%. This reflects increasing populations, growing economies and the emphasis on exporting value-added products in this region. Latin American countries processed virtually all tropical logs produced in 1994-96. Sawnwood production by ITTO producers totalled 41.1 million m^3 in 1995, down nearly 2% from 1994 levels. This decrease was due to production falling throughout Asia, which masked continuing production increases in Latin America. In 1996 sawnwood production decreased further to 40.4 million m^3. Tropical hardwood veneer production remained steady at just over 3 million m^3 in 1995, a level maintained since 1993. Production by ITTO producer members increased to over 3.2 million m^3 in 1996, with rising Asian production leading increases in all three tropical regions. ITTO producer countries' plywood production rose by almost 10% in 1995, to 15.6 million m^3. This increase was primarily due to growth in Indonesian and Malaysian plywood production. Indonesia's plywood production recovered in 1995 from a major decline in 1994, while Malaysia's production continued its steady climb. Plywood production in producer countries fell to 15.1 million m^3 in 1996. ITTO consumer countries also produced substantial quantities of tropical timber products in 1995. Tropical China and Australia produced a total of 0.7 million m^3 of tropical logs. Consumer countries produced 2.7 million m^3 of sawnwood, 0.5 million m^3 of veneer and 5.6 million m3 of plywood, largely from imported tropical logs. Production levels of tropical sawnwood, veneer and plywood in ITTO consumer countries dropped in 1996 as the supply of tropical logs available for processing continued to shrink.

Total ITTO producer country exports of primary tropical timber products were worth $11.5 billion in both 1994 and 1995, with Asia accounting for 79% of this total, Africa for 14% and Latin America the remainder. ITTO producer countries exported 15.0 million m^3 of logs in 1995 worth $2.3 billion, with Malaysia providing 53% of this volume, down from almost three-quarters in 1992. Log exports in 1995 were down almost 10% from 1994 levels, continuing the steady decline of the past decade. Rapidly declining Malaysian log exports together with stricter controls on African exports led to a further fall to 13.2 million m^3 in 1996, a near halving of ITTO's tropical log exports in just five years. Sawnwood exports by producer members fell almost 7% to 7.9 million m^3 valued at over $2.8 billion in 1995, declining further to 7.3 million m^3 in 1996. Falling Asian (primarily Malaysian) sawnwood exports account for these decreases. However, Malaysia remained the largest tropical sawnwood exporter in 1995, accounting for 53% of the total volume of ITTO producer country exports. Malaysia's intention to stop all sawnwood exports from Peninsular Malaysia in favour of further processed products by 2000 is already being felt and will continue to affect the tropical timber trade. Tropical veneer exports by producer members fell almost 4% in 1995 to 1 million m^3 (valued at $462 million), falling further to 984 000 m^3 in 1996. Plywood was the only primary tropical timber product for which exports from ITTO producer countries increased in 1995, up over 10% from 1994 levels to 12.4 million m^3 worth $5.9 billion. This increase was due to a reported recovery in Indonesian exports in 1995 and the continuing expansion in Malaysian exports; together, the two constituted

over 93% of ITTO producer country plywood exports in 1995. Exports declined to 12.2 million m^3 in 1996. Malaysia's plywood exports, which have risen from 10% in 1991 to almost 30% of ITTO exports in 1996, appear to be levelling off. The decision to restart log exports from Sabah, taken in late 1996, may affect future domestic log availability in the Malaysian state and thus exports of plywood and other processed products. ITTO consumer countries also exported or re-exported substantial quantities of tropical timber in 1995, led by sawnwood and plywood exports of 230 000 and 394 000 m^3 respectively. Log and veneer exports by consumer countries are smaller (128 000 and 65 000 m^3 respectively in 1995). Sawnwood, veneer and plywood exports by consumer countries increased slightly in 1996, with log re-exports experiencing a significant decline, reflecting decreased availability/demand for tropical logs in Europe, where the majority of the trade in tropical timber products between consumer countries occurs. The total value of exports by consumer countries in 1995 was $557 million, bringing the ITTO total tropical timber export value figure to just under $12.1 billion. This figure was virtually unchanged from 1994, when it constituted about 10% of the global value of all timber products exported.

Total consumer country imports of tropical timber products in 1994 were worth $11.9 billion, dropping to $11.7 billion in 1995, with Japan (37%), the European Union (EU - 26%), China - including Taiwan Province of China - (21%) and Korea (9%) the main importers by value. Producer country imports of tropical timber products totalled almost $1.3 billion in 1994, rising to over $1.5 billion in 1995, giving a total ITTO import value of $13.2 billion. Thailand (71%) and the Philippines (11%) were the main producer country importers by value.

Tropical hardwood log imports by ITTO consumer countries fell by almost 9% to 14.6 million m^3, worth $3.1 billion, in 1995. If imports by producing members are taken into account, total 1995 tropical log imports by ITTO members were 17.3 million m^3 (valued at almost $3.7 billion), 6% less than in 1994. The 1995 total log import figure is 2.2 million m^3 greater than total ITTO exports, with the shortfall presumably made up by non-ITTO suppliers (including Indochina, the Solomon Islands and several relatively minor African log exporters), although under-reporting of log exports or misclassification of imports may also be a factor. This gap increased to 2.6 million m^3 in 1996, indicating that additional pressure was probably placed on non-ITTO log suppliers. Japan maintained its position as the dominant importer of tropical logs in 1995, accounting for over 45% of all consumer country log imports, despite a drop in imports of over 13% to 6.5 million m^3. Japanese tropical log imports dropped further to 6.4 million m^3 in 1996. Thailand and the Philippines are the major ITTO producing country log importers, at 1.3 million m^3 and 0.5 million m^3 respectively in 1995. Imports by Thailand fell sharply in 1996, while those of the Philippines continued to increase.

Thailand's imports of tropical sawnwood tumbled almost 17% to just under 2 million m^3 in 1995 and further to under 1.75 million m^3 in 1996. Despite these drops in imports, Thailand remains ITTO's largest tropical sawnwood importer. Japan's imports of tropical sawnwood were stable at almost 1.3 million m^3 in 1995, declining to just over one million m^3 in 1996. Almost all other major tropical sawnwood importing countries had relatively stable or declining imports of tropical sawnwood in 1995-96. The decrease in total ITTO tropical sawnwood imports of over 4% (to 9.4 million m^3 valued at almost $3.9 billion) in 1995 is primarily attributable to the decrease in Thai imports. Total ITTO imports fell to 8.5 million m^3 in 1996, about one million m^3 greater than total ITTO exports of tropical sawnwood in these years, with the gap explained by the same factors given for logs.

Total ITTO veneer imports increased by 12% in 1995, to 1.1 million m^3 valued at $648 million. Total imports were stable in 1996. The bulk of the increase in 1995 imports was due to increases in the People's Republic of China (PRC - 331 000 m^3), which remained ITTO's dominant

importer of tropical veneer in 1995-96. The EU absorbed 281 000 m^3 of tropical veneer in 1995, dropping slightly to 280 000 m^3 in 1996. Japan imported 131 000 m^3 of tropical veneer in 1995, 18% less than in 1994. Japan, with substantial restructuring underway in its wood panels industry, saw tropical veneer imports drop to 108 000 m^3 in 1996.

In contrast to veneer, tropical plywood imports continue to be led by Japan, which absorbed over 4.0 million m^3 in 1995, up 8% from 1994. Japan's imports made up 40% of total ITTO imports of 10.9 million m^3 (valued at $5.1 billion) in 1995. Tropical plywood imports dropped slightly to just over 10.8 million m^3 in 1996. In contrast to logs and sawnwood, total ITTO imports of tropical veneer and plywood have been consistently less than or equal to total ITTO exports of these products, indicating the dominance of ITTO exporters in these markets.

Real prices for most primary tropical hardwood products by species exhibited stable or declining trends during 1995-96, although there were significant fluctuations in prices in many cases. Asian log prices were flat for most major species, while major species of Asian sawnwood saw declining real prices in 1995 and the first half of 1996. For many products and species, real prices are now only slightly above the levels that prevailed prior to the price spike caused by the cessation of Sabah log exports in early 1993. Real plywood prices were also stable during 1995-96, with prices in the Japanese market showing more volatility than those in European markets. Apart from supply and demand determinants, the recorded prices for tropical timber products in all regions in 1995-96 have fluctuated due to exchange rate variations, consumer stockpiles and general economic conditions.

Markets for secondary processed wood products (SPWP) from developing countries and ITTO producers in particular continued to expand in the first half of the 1990's. Japan and the USA continue to have the largest proportion of their markets for SPWP accounted for by ITTO producers, at 37 and 23% respectively. Although ITTO producer countries had only a 10% share of the EU market for SPWP in 1994, the magnitude of this huge market meant that the value of this share (at over $1.1 billion) exceeded that of their Japanese market share and almost equaled that of their share of the US market. Imports of SPWP by ITTO consumers from ITTO producers reached almost 30% of the value of their imports of primary tropical timber products in 1994. The top ITTO producer country exporters of SPWP in 1994 were Indonesia, Malaysia, Thailand, Brazil and the Philippines.

Introduction

Overview

This report reviews developments in the global tropical timber sector through 1996. It contains data series on production and trade for 1992-96, with a focus on the past three years. 1994 is used as the base year for all global comparisons as this is the latest year for which global data were available at the time of preparation.

A major factor of relevance to the global tropical timber sector in the period under review was the decision in September 1996 that the new International Tropical Timber Agreement (ITTA) will enter into force on January 1, 1997. This will have implications for ITTO's statistical coverage and in particular the format of this report in 1997 and beyond, with consideration of all timbers and the global timber market to be incorporated in ITTO's Annual Review and Market Discussions under the terms of the new agreement. A Technical Working Group has reported on the implications of the new agreement for ITTO's statistical work; this report will be considered during the twenty-first session of the International Tropical Timber Council.

In other related developments, ITTO continued to participate in the work of the CITES Timber Working Group (established to review the procedures, criteria and logistics for listing timber species in Appendix II of the Convention on International Trade in Endangered Species), the Inter-governmental Panel on Forests and the various processes aimed at establishing common grounds for ascertaining the status of forest management (Helsinki, Montreal, Tarapoto, etc.). Full reports on all these activities are contained in separate reports to the Council.

Timber certification remained a topical issue in 1995-96, with forestry operations in many countries seeking some form of certification, either through the Forest Stewardship Council or other avenues (e.g. ISO 14000, national standards authorities). ITTO followed up its 1994 study on certification with a review of developments over the past two years ["Timber Certification in Transition", document ITTC(XX)/8 Rev.1], and decided to continue this review process with the next report to be considered by Council in November 1997.

Growth of economies in North America, Europe and many parts of the developing world slowed in 1995. North American growth increased in 1996, but European growth remained low. Japan's economy is recovering from the near recession of 1994-95, with housing starts at six-year high in 1996. A new World Trade Organization (WTO) came into being in January 1995, following the successful completion of the Uruguay Round, with tariff reductions achieved in several markets for timber products.

Many other relevant developments have occurred in 1995-96 in the markets for tropical timber, both domestic and export. This Review attempts to summarize some of these in relation to their impacts on production and trade of tropical timber by ITTO member countries.

Scope and Structure

This Review consists of four substantive chapters. The first two chapters summarize production/consumption statistics, and market developments, trade and prices, respectively, for the primary tropical timber products covered by the ITTA. The third chapter analyzes recent trends in the trade of secondary processed tropical wood products, which are of increasing importance to many ITTO producer members. The final chapter of the Review provides brief notes of relevant trends and developments in ITTO producing countries not covered elsewhere.

A chapter on Resources and the Environment has not been included in this edition of the Review, partially due to constraints within the Secretariat and partially due to the poor nature of responses to the section of ITTO's Forecasting and Statistical Enquiry on forest area and management. In recent years, forest area data for many members have been derived from those published by FAO in the 1990 Forest Resource Assessment for tropical countries. Readers are referred to this source or to previous editions of the Review for forest area data, which is not generally subject to large annual variations. Information on forest management in ITTO member countries is provided by members in periodic, qualitative reports on progress towards ITTO's Year 2000 Objective (the year by which all tropical timber in trade is to arise from sustainable sources). A synthesis of these progress reports ["1995 Mid-term Review of Progress towards the Achievement of the Year 2000 Objective", document ITTC(XIX)/6] has recently been published by ITTO. Additionally, the 2000 Forest Resource Assessment (FRA) will attempt to collect data on several indicators of forest management/status (e.g. areas managed for various primary goals, carbon stocks, biomass, areas burned/converted annually) as well as the standard forest area information. If ITTO members are able to provide this information, it will provide a useful tool for assessing progress towards the Year 2000 Objective. Relevant information on forests and/or forest management provided by members has been included in the Country Notes.

Unless otherwise noted, all value units quoted in this Review are in nominal USA dollars, while volumes are reported in cubic meters. "Tropical timber," unless otherwise defined, refers only to those products specified in the ITTA (1983) - tropical hardwood saw and veneer logs, sawnwood, veneer and plywood. Trade figures for saw and veneer logs are difficult to collect due to the Harmonized System of customs classification, which now fails to distinguish between different types of industrial roundwood. Some trade figures for this product may therefore incorporate other types of industrial roundwood.

Statistics have been derived from responses to the 1996 ITTO Forecasting and Statistical Enquiry wherever possible. The number of countries responding to the 1996 Enquiry was stable, with 22 of 26 producers (22 of 25 in 1995) and 24 of 27 consumers (24 of 27 in 1995) providing at least partial responses by 31 December 1996. As in previous years, however, many of the responses contained significant and obvious errors in one or more data categories. As the majority of responses were also received late, there was insufficient time to adequately analyze the figures and request clarification where necessary. The complete, unedited listing of member country responses to the Enquiry published in previous years as "Results of the Forecasting and Statistical Enquiry" was not published this year due to manpower constraints within the ITTO Secretariat. Countries which did not respond to the 1996 Enquiry are identified in the notes preceding the Appendices.

A range of supplementary sources were consulted to verify members' responses to the Enquiry, to fill in incomplete or obviously incorrect responses and to provide data for non-responding countries. These supplementary sources are listed in the notes preceding the Appendices and in the references following the Country Notes. Estimates of production and trade were derived for partial and non-responding countries based on direction of trade statistics reported by trading partners, proposed capacity changes (if available) and the other sources listed in the references and the notes to the Appendices. Comparisons with global totals or totals for all developing countries in the production and trade chapters are based on statistics from the 1994 FAO Yearbook of Forest Products, the latest summary of global forest statistics available. All other data used in the preparation of the Review are compiled in Appendices 1-7. Notes relevant to all data precede the Appendices.

Many members that responded to the 1996 Enquiry reported at least some categories of data for both 1994 and 1995, an improvement over responses in previous years. Summary tables for both years are included in Appendices 2, 3 and 5, although many estimates have been required to

complete some of these tables. Most members failed, however, to report any partial year data or forecasts for 1996; caution should therefore be used when interpreting the estimates for these countries and the ITTO totals for 1996 given here. Countries for which estimates were made (or alternate sources used) are identified by the superscripts used in the Appendices.

Despite the best efforts of the Secretariat to ensure data consistency and accuracy, it should be noted that considerable discrepancies exist between available data sources in many categories, for both producing and consuming countries. The final statistics compiled for presentation here are the result of analysis and synthesis of the available data sources by the Secretariat, and of consultations with member countries and other agencies.

Analysis of stock change statistics submitted by members led to the decision to abolish accounting for stock changes in domestic consumption statistics from this year (see Production and Consumption). Data for trade between members of the European Union became largely inaccessible with the dismantling of customs controls between members in January 1993. Countries have been able to capture some data using (for example) tax receipts, but it is acknowledged that some inter-EU trade is not included in official statistics. The trade figures presented here for the EU should be viewed with this proviso in mind. These factors, together with the submission of revised or updated data by members, resulted in several modifications and amendments to statistics reported in previous editions of the Review, so the data series presented here sometimes differ from those in previous editions.

The assistance of those countries which responded to the 1996 ITTO Forecasting and Statistical Enquiry is gratefully acknowledged, as is the support of the FAO Forestry Department, the ECE/FAO Timber Section, the Japan Lumber Importers' Association, the Japan Plywood Manufacturer's Association and the International Trade Center in providing relevant primary and supplementary data for the Review.

Production and Consumption

This chapter provides statistics on production of primary tropical forest products in ITTO member countries, and the apparent domestic consumption of such products in these countries. Data on production has been derived from ITTO Forecasting and Statistical Enquiry returns supplemented by other available data sources (see Appendix 1). Production statistics in many ITTO member countries are often weak or non-existent. The primary problem in many producer countries appears to be the lack of a comprehensive forest outturn measurement system as well as any kind of regular industrial survey to obtain production figures, while consumer countries usually are unable to distinguish the processing of tropical timber from all timber processing. In some cases, production figures have been estimated by working backward from available log supply. Apparent domestic consumption (production plus imports minus exports) statistics do not include changes in stock levels which are generally not reported or reported incorrectly by countries responding to the ITTO Enquiry. This change of approach to the calculation of domestic consumption resulted in significant changes to the consumption series for the few countries (e.g. Japan) that have in the past reported stock changes.

Appendix 5 presents information for producer members on industrial structure, capacity of production, average recovery rates (units of product per unit of log) and employment levels in each country's forest sector in 1994 and 1995. Quality of responses varied as usual, with some countries providing detailed information and many others responding that such information was not collected or was otherwise unavailable. Consumer countries did not in general have information on mills processing tropical wood. Although many estimates of total employment have been made, Table 5-2 indicates that in ITTO's producing member countries almost 3.6 million people are directly employed in logging and primary processing of tropical forest products. Three-quarters of these are employed in the forest industries of Asia, including an estimated 1.6 million in Indonesia. Indonesia expects its forestry sector to generate between 6 and 8 million jobs by 2000, about half of which are to be direct employment in timber harvesting and processing. Apart from an estimated increase in Indonesia in line with stated this policy goal, employment in producing country forest industries appears to have remained relatively stable in most countries between 1994 and 1995, although the many countries not providing timely statistics make generalizations and analysis of regional and product totals difficult. Logging employment in Malaysia is decreasing as log harvests decrease.

Appendix 5 also shows average conversion rates for primary processing industries in ITTO producer member countries. Particularly notable are the low average conversion rates given for sawnwood from Papua New Guinea and Togo (25 and 35% respectively) and the high recovery rates (70%) reported for Malaysian plywood and Indonesian veneer production. Several countries also reported the existence of secondary processing mills of various types. Details of "other" wood processing industries are given in the Country Notes or the chapter on secondary processed wood products as applicable; these are primarily mouldings factories, although some countries (particularly in Asia) have a growing reconstituted board and/or pulp industry.

Logs

The production of tropical saw/veneer logs in ITTO producer member countries totalled 132 million m^3 in 1995, 79% of production of non-coniferous (53% of all species) saw/veneer logs in developing countries and 45% of global non-coniferous (15% of all species) saw/veneer log production. This total was down 2% on 1994 levels, with production continuing to decline to 126.8 million m^3 in 1996.

Decreases in Asian production (primarily Malaysia and Indonesia) were responsible for most of this decline, although several major African producing countries also decreased production substantially in 1995-96 as controls were imposed to limit production and exports (see next chapter). Figure 1 shows ITTO's five major log producers for 1994-96, ranked by 1995 production, as well as aggregate production by all other members. A ranking of all producers is contained in Appendix 1 (Table 1-3). Of the top five, only Brazil increased log production through 1996, although this increase was more than offset by decreases in Malaysia and Indonesia. Malaysia alone reported a drop of almost 1.5 million m^3 in log production between 1994 and 1995, from 37.1 million m^3 to 35.7 million m^3. Malaysian production, which peaked at 43.5 million m^3 in 1992, dropped to about 33 million m^3 in 1996, a reduction of almost one-quarter in just five years. This decrease reflects lower harvests in both Sabah and Sarawak, with the latter's harvests from its permanent forest estate now close to the annual level of 9 million m^3 recommended by the ITTO Mission to Sarawak in 1990.

Figure 1 illustrates the dominance of the top four tropical log producing countries (Malaysia, Indonesia, Brazil and India) which together comprise over 83% of ITTO production. All figures are based on total estimated removals, including those from forest conversion operations. Indonesia announced plans to clear one million hectares of forest in East Kalimantan for rice production in 1996, which will offset log production decreases from production forests scheduled for the next three to four years (see Country Notes). Papua New Guinea (PNG) was the fifth largest ITTO log producer in 1995, although its production dropped over 14% to 3 million m^3 where it remained in 1996.

Appendix 1 (Table 1-3) shows that seven other ITTO producer members had log production exceeding 1 million m^3 in 1995. All of these (Cameroon, Côte d'Ivoire, Gabon, Ecuador, Peru, Ghana and Myanmar) experienced relatively stable or declining log production in 1996. Of the main producers, log production has increased fastest over the past five years in Gabon (52%), Peru (47%), PNG (35%), Brazil (29%) and Cameroon (29%). Log production has fallen by 50% or more since 1992 in the Philippines and Myanmar, although official statistics in the latter country may not include all production. The Philippines banned logging in virgin forests in 1993, with production falling sharply since. Two ITTO consuming countries possess significant tropical timber resources: Australia and China. Aggregate production from these sources for 1995 was estimated at 710 000 m^3, with the bulk of this coming from China's southern provinces. Australia's production was estimated based on previously reported production levels of tropical sawnwood and is probably largely plantation grown hoop-pine. China's production is from Hainan Island and Southern Yunnan Province and consists largely of tropical eucalyptus and pines. Log production from these areas is consumed almost entirely domestically.

The regional breakdown of tropical log production is given in Appendix 1 (Table 1-2); the Asia-Pacific region produced 68% of ITTO members' tropical hardwood logs in 1995 (90.1 million m^3), down almost 4% from 1994. Asia's share of ITTO log production fell to 67% in 1996, due to Malaysian and Indonesian production decreases. Africa's share of production remained at 7% in 1995-96, with Latin American production growing from 25 to 26%. Growth in the Latin American and African share of total ITTO production will likely continue to the turn of the century and beyond, as few of ITTO's Asian members have the potential to substantially increase log production sustainably.

Figure 2 shows that tropical log consumption for 1994-96 was stable or decreasing in the main Asian producing countries of Indonesia, Malaysia India and Japan, with only Brazil showing a steady increase over the period (note that Japan maintains and consumes significant stockpiles

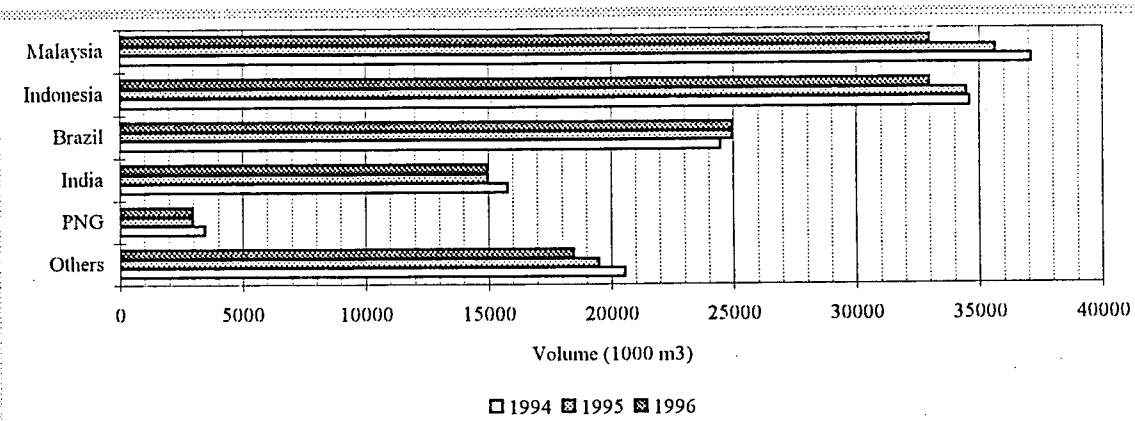


Figure 1. Major Tropical Log Producers

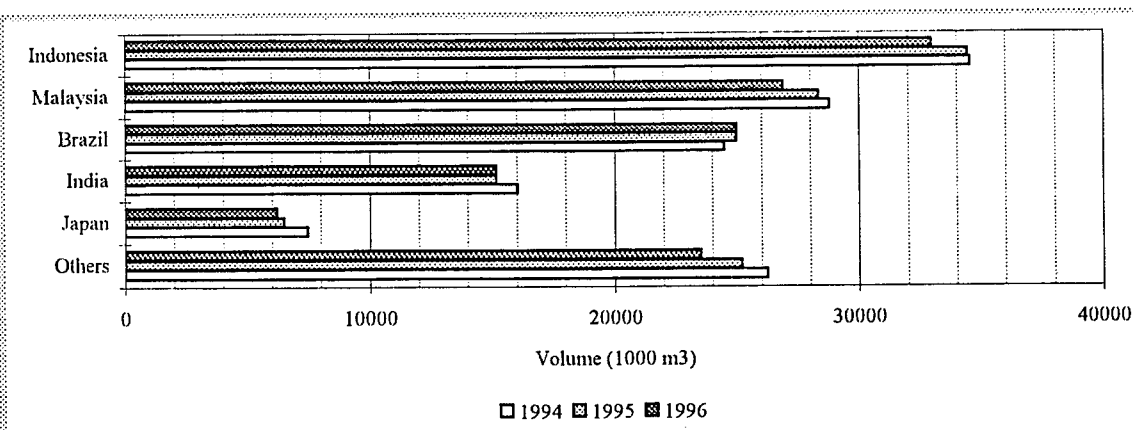


Figure 2. Major Tropical Log Consumers

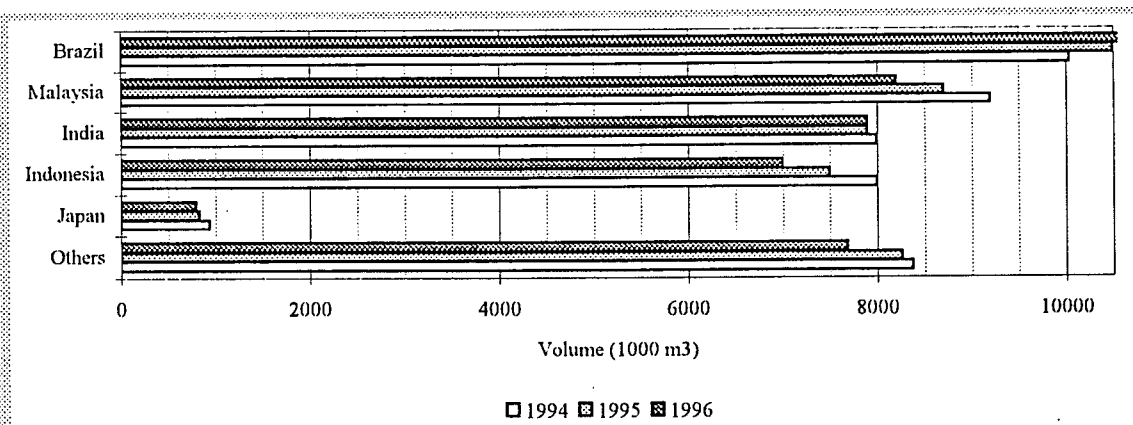


Figure 3. Major Tropical Sawnwood Producers

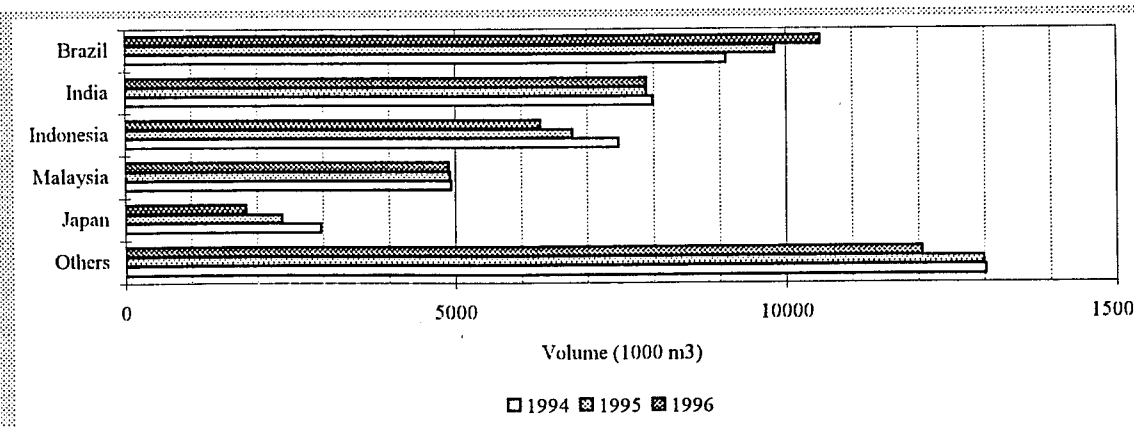


Figure 4. Major Tropical Sawnwood Consumers

of tropical logs annually, accounting for the relatively high production levels of sawnwood and plywood reported as compared to log consumption). These five countries accounted for an average of almost 82% of total ITTO consumption of tropical logs in 1994-96. Latin America experienced slight growth in domestic log consumption in 1995, while consumption in Africa and Asia fell with production. The figures in Appendix 1 show that apparent domestic log consumption declined in all three producing regions in 1996. Despite the drop in absolute domestic log consumption, the proportion of log production utilized domestically (i.e. production minus exports) remains stable or is rising slightly in Asia (88%) and Latin America (virtually 100%), with only Africa seeing a declining proportion of its production utilized domestically (62% in 1996, close to a 10% drop in five years), due to a recent increase in exports to Asia. The general trend towards an increasing proportion of log production being processed domestically will accelerate and affect all regions in the next few years as tropical log supplies tighten and as increased processing capacity comes on line in producing countries. Rapid population growth in Africa (which will rise from 12 to almost 25% of the world total over the next 150 years according to the World Bank), and economic growth and investment in Asia and Latin America, will ultimately contribute to pushing long-term domestic log processing upwards in producing countries.

The aggregate figures for tropical log and sawnwood production and consumption presented here should be viewed with some caution. Indonesia's official statistics do not account for timber from conversion forests, and log production figures have been estimated based on other sources. In addition, the large production figures for both India and Brazil are estimates based on unofficial sources. Finally, a few countries (e.g. Fiji, Honduras, Venezuela) include tropical softwoods in the data reported to ITTO. Production and trade of tropical softwoods is small but growing, and the definition of tropical timber used in the ITTA should be revised to allow proper recognition to be given to this component of tropical wood supply.

Sawnwood

Production of tropical sawnwood in ITTO producing countries totalled over 41.1 million m^3 in 1995, 60% of non-coniferous (37% of all) sawnwood produced in developing countries and 38% of global non-coniferous (10% of all) sawnwood production. This figure represents a 2% decrease from 1994 production due to lower Asian production. African and Latin American production increased in 1995, with Latin American production continuing its upward trend in 1996. However, Asian production continued to drop (reflecting the focus on further processing in the region), and combined with a reduction in African production to reduce total production by producer countries to 40.4 million m^3 in 1996.

Figure 3 shows the major ITTO producers of tropical sawnwood in the 1994-96 period, ranked by 1995 production. Malaysia remains a major producer of tropical sawnwood, although production fell by over 5% from 1994 levels to 8.7 million m^3 in 1995. Malaysian production fell even more sharply to about 8.2 million m^3 in 1996 as log production fell and available logs were increasingly diverted to veneer and plywood mills. Peninsular Malaysia's decision to phase out sawnwood exports by 2000, discussed in the 1995 Annual Review, will result in further significant production decreases (estimates range up to 50%) from this level by the turn of the century. In contrast to the other tropical sawnwood producers shown in Figure 3, Brazil's production is estimated to have grown significantly during the period under review, to over 11 million m^3 in 1996, making it the largest ITTO producer. Appendix 1 shows that six other countries produced over 500 000 m^3 of tropical sawnwood in 1995. Production decreased or remained stable in 1996 in all of these (Ecuador, Cameroon, Côte d'Ivoire, China, Peru and Ghana). Thailand's tropical sawnwood production has fallen by over 80% in the last five years, together with declining log production/imports and spiraling sawnwood

imports (see next chapter). The Asian region accounted for 62% of sawnwood production in producer countries in 1995, falling to 60% in 1996. Africa's share of ITTO production remained at 5%, while Latin America's share rose from 33 to 35% during the same period.

Consuming countries produced approximately 2.7 million m^3 of tropical sawnwood in 1995, down 3% from 1994 levels. Substantial production decreases due to log shortages in the Republic of Korea, Taiwan Province of China and Japan in 1995 accounted for most of this drop offsetting a slight increase in production in the EU. Production in consuming countries fell another 9% in 1996, to 2.4 million m^3.

Figure 4 shows the main ITTO consumers of tropical sawnwood, ranked by 1995 consumption. Consumption of tropical sawnwood by ITTO consumer countries decreased by 12%, from 8.8 million m^3 to 7.7 million m^3, between 1994 and 1996 due to decreases in production and imports. Consumption by producer countries fell by 2% (from 36.9 to 36 million m^3), giving rise to the 4% decrease in aggregate consumption for all members shown in Appendix 1. Considered over a five-year period, however, consumption of tropical sawnwood in producing countries has increased in contrast to the traditional "consuming" countries where consumption has declined dramatically. Figure 4 shows that all of the major "consumers" of tropical sawnwood are now ITTO producer countries. These five countries (Brazil, India, Indonesia, Malaysia and Thailand) accounted for over 70% of ITTO members' consumption of tropical sawnwood in 1995. Appendix 1 shows that Thailand's consumption of tropical sawnwood fell sharply in both 1995 and 1996, bringing it level with Japan as the fifth largest consumer. China, Taiwan Province of China, the Republic of Korea and France are the other major non-tropical consumers of tropical sawnwood, all consuming over 600 000 m^3 per year.

Veneer

Production of veneer in ITTO producing countries totalled just over 3 million m^3 in 1995, about 85% of total veneer produced in developing countries globally, and 50% of global veneer production. The global comparisons in this case are estimates as FAO's figure for China's veneer production (almost 15 million m^3 in 1994, up from 8.8 million m^3 in 1993 and a remarkable 2100% increase from the 7000 m^3 reported in 1988) appears to be in error, with this error carried on to the global and developing country totals. Veneer production figures should not include veneer used in domestic plywood production and therefore represent only the production of veneer intended to be traded as such. Veneer production in producing countries was stable in 1995, but increased by 7% in 1996 due largely to a reported increase in Malaysian production as shown in Appendix 1. Malaysia's reported veneer production rose from 2.1 to 2.3 million m^3 between 1994 and 1996.

The Asian region produced 2.2 million m^3 of veneer for trade in 1995, Latin America produced 439 000 m^3 and Africa produced 421 000 m^3. Aggregate production rose in Africa and Asia but fell in Latin America in 1996. The main ITTO veneer producers in 1994-96 are shown in Figure 5 - Malaysia's dominant role is clear from this chart. Equally clear is the falling production in Japan, where the tropical veneer and plywood industries are shrinking together with log availability. Three other ITTO members (Italy, Gabon and Ghana) had veneer production exceeding 50 000 m^3 in 1995, with Gabon and Ghana reporting increased production in 1996. The decline in veneer production in the Philippines and Thailand, formerly major producers, has been particularly swift (see Table 1-3c, Appendix 1).

ITTO consuming countries produced about 535 000 m^3 of veneer in 1995, down 6% from 1994 levels, with a similar drop in 1996. Production of veneer in consumer countries in 1995

was split between Japan (32%), Taiwan Province of China (29%) and the EU (39%). Japan and Taiwan Province of China consume virtually all of the veneer they produce, however, while about 20% of the total produced in Europe is re-exported to other European countries (see following chapter). European and Japanese decreases accounted for the bulk of the drop in consumer country veneer production in 1996.

Consumption of veneer in the furniture and other secondary processing industries of producing countries rose steadily from just over 1 million m^3 in 1992 to almost 2.4 million m^3 in 1996. Aggregate consumption of tropical veneer in consumer countries rose by 3% in 1995 to 1.4 million m^3, before declining by 4% in 1996. Figure 6 shows the major ITTO consumers of tropical veneer from 1994-96.

Plywood

Production of plywood in ITTO producing countries totalled 15.6 million m^3 in 1995, 78% of plywood production in all developing countries and 32% of global plywood production. Plywood production in producing countries increased by 10% from the 1994 level, with the increase due to rising Indonesian, Malaysian and Brazilian production as shown in Appendix 1. The large increase in Indonesia's production in 1995 is somewhat questionable, as most observers reported a decline in Indonesian exports (and thus, probably production) in 1995. Nonetheless, Indonesian production is slowing after increasing rapidly (averaging almost 1 million m^3 per year) throughout the 1980s, with production decreasing 15% from reported 1995 levels to 8.6 million m^3 in 1996. Malaysia's plywood production, in contrast, continued to rise steadily through 1996 to almost 3.7 million m^3, a 76% increase from 1992 levels. Malaysian production appears to be levelling off below 4 million m^3 per year based on the figures in Appendix 1.

The Asian region produced 13.5 million m^3 of plywood in 1995, Latin America produced 1.9 million m^3 and Africa produced 221 000 m^3. The three regions utilized 15, 63 and 73% respectively of their production domestically. Asia's low consumption/production ratio is due to the export led industries of Malaysia and Indonesia. The proportion of aggregate production utilized domestically for all other products and regions except African sawnwood (43%) and veneer (41%), exceeded 50% in 1994. Thus the low domestic utilization of plywood in Asia is an anomaly, with domestic markets consuming a majority or a near majority of all other primary tropical timber products in all three regions.

The main ITTO plywood producers in 1994-96 are shown in Figure 7 - Indonesia's dominant but declining role is clear from this chart. Plywood production in Malaysia and Brazil is growing, while production in major "consuming" countries is falling or stable. China (including TPC), India, Philippines and Thailand all produced over 200 000 m^3 of tropical plywood in 1995, although production in all these countries was stable or declining in 1996.

ITTO consuming countries produced 5.6 million m^3 of plywood in 1995, an 11% decrease from figures for 1994. Production dropped a further 2% to 5.5 million m^3 in 1996. This decrease in production reflects the declining availability of tropical veneer logs. Most of the drop in consumer country production is accounted for by Japan. Japan's tropical plywood production has fallen by 40% since 1992, and its 1995 production of 3.3 million m^3 fell below that of Malaysia for the first time. Domestic plywood production fell below plywood imports in May 1995, the first time monthly production was less than imports in the history of Japanese plywood production. As mentioned in previous Reviews, Japanese plywood manufacturers are increasing the proportion of softwoods used in plywood production, as well as investigating lamination and other techniques to allow re-use of concrete form-ply. These

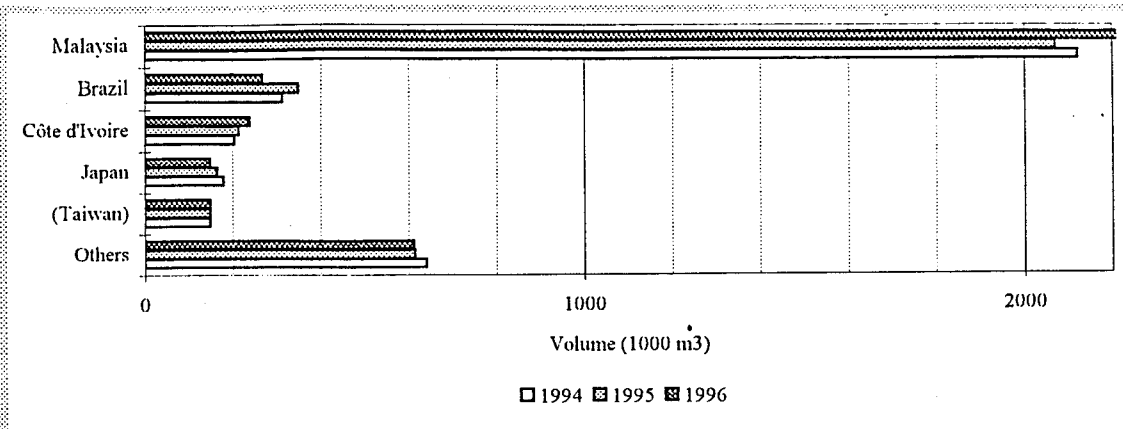


Figure 5. Major Tropical Veneer Producers

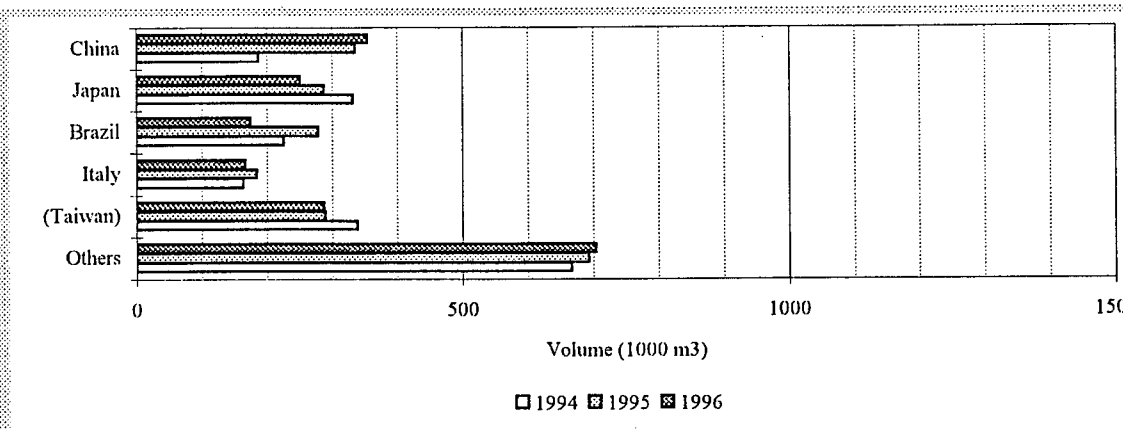


Figure 6. Major Tropical Veneer Consumers

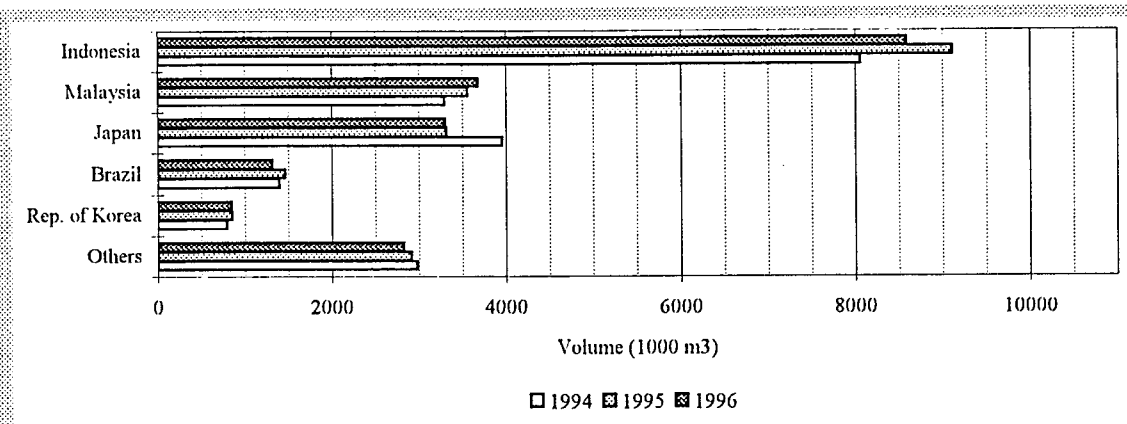


Figure 7. Major Tropical Plywood Producers

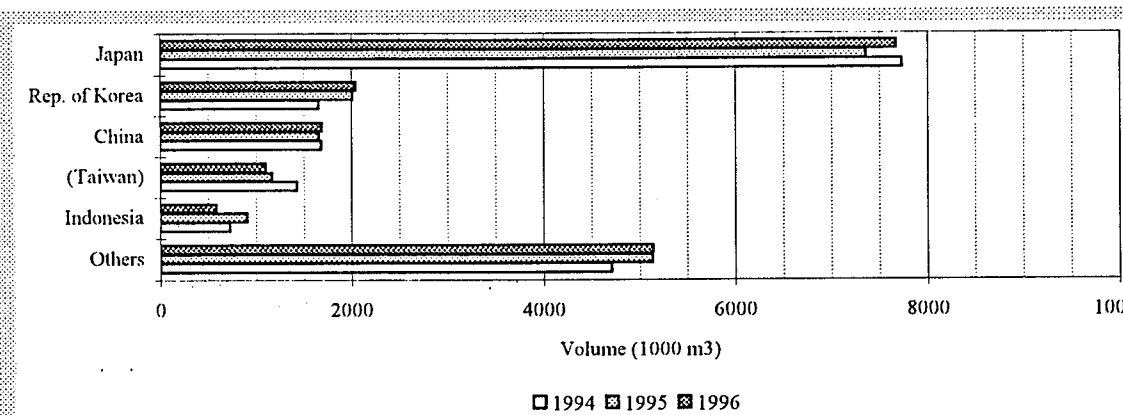


Figure 8. Major Tropical Plywood Consumers

factors, together with the declining supply of logs, mean that Japanese (and most other consuming countries') production of tropical plywood will continue to decline.

Figure 8 shows the main ITTO consumers of tropical plywood for 1994-96. Aggregate consumption of plywood in producing countries increased 10% in 1995 to 3.4 million m^3 due largely to apparent consumption increases in Brazil, before declining by a similar amount in 1996. Aggregate consumption in consumer countries totalled 16 million m^3 in 1995, decreasing slightly to 15.7 million m^3 in 1996. Tropical plywood consumption in traditional markets will remain stable or decrease in future as substitutes and more efficient uses are developed. Japan remains by far the largest consumer of tropical plywood, however, as shown in Figure 8. Indonesia and Brazil (almost 900 000 m^3 in 1995) are major "producing" country plywood consumers. The USA, UK and India all consumed over 300 000 m^3 of tropical plywood in 1995, with consumption stable or falling in all these countries in 1996.

It should be noted here that substantial quantities of reconstituted panel products, particularly MDF, are now being produced in several tropical countries, primarily in Asia. Many new plants are currently under construction to meet the expected surge in demand for such products in the Asian region. Reconstituted panel products will become increasingly important as limits on the growth of plywood production are reached and as more countries move further into downstream processing. Such products will substitute for plywood and sawnwood in many uses, resulting in decreasing or slower growth in production of these traditional tropical timber products in many countries.

Markets, Trade and Prices

This chapter focuses on developments in the markets for and trade of tropical timber as well as an analysis of general price trends. The first section presents a brief overview of relevant market developments in 1995-96, based on responses to the ITTO Enquiry submitted by members, International Monetary Fund (IMF) forecasts and a review of other available literature. The following sections report on the export, import and prices of each of the four primary timber products covered by the ITTA. Detailed trade statistics are presented in Appendices 1, 2 and 3, with data sources given in the notes preceding the Appendices. Major species in trade in 1995, together with volumes and average prices when these were reliably reported, are summarized by country in Appendix 6. Price trends for important species of logs, sawnwood and plywood were prepared from the ITTO/ITC Market News Service (MNS) database and are contained in Appendix 7. Average price levels are also presented for veneer (prices of which were not included in the MNS database) based on sources identified in the text.

Market Developments

In the third quarter of 1996, the IMF reported that global output (real GDP) grew by 3.5% in 1995, down slightly from the 3.8% achieved in 1994 which was the highest global growth rate since 1988. The IMF projected growth of 3.8% in the world economy in 1996, and 4% for 1997. World trade volume grew by 8.9% in 1995, but was projected to have slowed to 6.7% in 1996, before rebounding to 7.2% in 1997. Developing countries' trade growth, at about 11.5% in 1995 (average of import and export growth), was far higher than that of industrial countries (about 7.5%). Average non-fuel commodity prices grew by 8.2% in 1995, but were projected to have remained almost level in US dollar terms in 1996 and to fall 2.5% in 1997, a reflection of declining inflation in developed and developing economies during this period.

Many EU economies saw economic growth slow in 1995, with an aggregate increase in real Gross Domestic Product (GDP) of 2.5%, down from 2.8% in 1994. Economic growth was projected by the IMF to have fallen to 1.6% in 1996 before recovering to 2.5% in 1997. The German economy grew only 1.9% in 1995 after 2.9% growth the previous year. German growth was projected to drop to 1.3% in 1996 before recovering to 2.4% in 1997. The UK economy grew by 2.5% in 1995, with 2.2% growth projected for 1996 and 3% in 1997. In France, GDP grew 2.2% in 1995, following growth of 2.8% in 1994. Italy was the only major EU economy that experienced an increased rate of growth in 1995, at 3% as compared to 2.2% in 1994. Italy's growth rate slowed to 1.1% in 1996, however. The IMF's projections of increased growth in most European economies in 1997 may be tempered by fiscal policies being implemented by some countries to satisfy the Maastricht criteria for a common currency by 1997, and by unemployment which remains at 10% or higher in most countries and is projected to rise. Those countries that provided data on housing starts generally indicate slow growth or contraction in this index of timber consumption in 1995-96. The UK is typical of most European economies in reporting a recent contraction of housing starts, from the five year high of 199 500 units in 1994, to 170 300 units (-15%) in 1995. Housing starts were projected to have fallen further in 1996 to 163 000 units. The Market Statement released in September 1996 by the ECE/FAO Timber Committee is summarized in Box 1, providing an overview of developments in the European timber market.

In North America, the US economy also slowed in 1995, growing 2% compared to 3.5% in 1994. Growth recovered to 2.4% in 1996-97. The slowing growth in the USA was passed on to its major trading partner, Canada, which had one of the highest growth rates among developed countries in 1994 (4.1%), dropping to 2.3% in 1995 and 2.2% in 1996, before

Box 1. ECE/FAO Timber Committee Statement on Forests Products Markets in 1996-97

Softwoods

Europe's sawn softwood consumption started to fall in the second half of 1995 and continued to fall into 1996 due chiefly to decreased construction. Sawn softwood consumption in 1996 is forecast to continue to decline since its recent peak in 1994, to 69.6 million m^3 and to stay near that level in 1997. Part of the decline may be due to substitution by both non-wood building materials and composite wood products. Similarly, production is forecast to fall by 4.6% in 1996 from its record 1995 level of 74.7 million m^3. Production has been greater than consumption since European imports fell below export levels for the first time in 1995. In 1996 European sawnwood exports are forecast to fall by 2.9% to 30.0 million m^3 from their record 1995 level of 30.9 million m^3. Sweden however predicts record exports in 1996, partly due to non-European markets like Japan. Other European countries have also successfully entered the Japanese market. European exports are forecast to increase to 30.1 million m^3 for 1997. Imports are forecast to drop by 0.7 m^3 in 1996, the second year after 1994's record level of 32.4 million m^3. European softwood prices have lost 25% over the past year although prices appeared to have stabilized somewhat in mid 1996. Stock changes have played a major role: stock building by both producers and consumers accelerated price increases in the first half of 1995, while destocking accelerated price declines later and into 1996. The North American housing strength in 1996 led to an increase in sawn softwood consumption. Consumption is forecast to increase slightly in 1996, to 126.0 million m^3, still below 1994's recent high. The new "Softwood Lumber Agreement between the Government of the United States of America and the Government of Canada", limits duty-free Canadian sawnwood exports to the United States (unless a specified price level is reached) at 34.7 million m^3. The consequences of this measure for markets and prices are not yet clear, although Canada's sawnwood exports, of which 73% went to the United States in 1995, are forecast to decrease by 3.2% in 1997. Despite the potential downturn in exports to the United States, Canadian exports to Europe were not forecast to increase significantly. Apparent consumption of sawn softwood is forecast to fall heavily in the Russian Federation in 1996, by 10.8% to 14.3 million m^3, with the hope to rebound by the same percentage in 1997. Production, which has fallen significantly since 1992, is likewise forecast to bottom out in 1996 but to be lower than in 1995 and then to increase by 9.0% in 1997. Exports are also forecast to continue falling in 1996, down to a level of 4.5 million m^3. Exports in 1996 are being negatively affected by low European prices, rising production costs and escalating transportation costs. The drop in Russian exports to Europe has been partly made up by the Baltic Countries, all three of which forecast production increase in 1996, attributable to a combination and labour. Their total sawnwood exports are forecast to reach 1.9 million m^3 in 1996.

A levelling off of production and exports is forecast for 1997. Softwood logs follow the same trends as sawnwood in Europe and the Russian Federation with decreases forecast for 1996 in consumption, production and trade. However, Lithuania forecast heavier harvests in 1996 due to sanitation cutting to control bark beetles. United States exports have fallen due to reduction in harvests in the Pacific Northwest for environmental reasons. North American log trade is dominated by United States exports which are forecast to continue to decline in 1996 by 10.4% to 10.7 million m^3 : a lesser decline is forecast for 1997 as domestic consumption moves slightly upward.

Hardwoods

Europe's sawn hardwood consumption is forecast to continue to decline to 17.2 million m^3 (2.5%) in 1996, and to stay steady in 1997. Hardwood consumption is under pressure from substitution of composite wood and non-wood products, changes in fashion, and declines in construction. Promotion of alternative (lesser-known or lesser-used) species, lower grades, character-marked and value-added products could promote hardwood use in Europe. Production is forecast similarly to decline, by 2.2% to 13.4 million m^3 and to stay at that level in 1997. In 1996, European sawnwood imports, which are very price sensitive, are forecast to fall, by 2.5% from 1995 to 6.7 million m^3, as tropical sawnwood imports continue to their steady decline to Europe, by 1.4% to 2.4 million m^3, and temperate imports fall 3.1% to 4.3 million m^3. In 1996, exports are forecast to drop by 1%, to 2.9 million m^3. Imports, both temperate and tropical, are forecast to move up slightly in 1997 and exports are forecast to move up more by 4.9%. While tropical timbers decline in European markets, they still dominate Asian markets, increasingly as value-added products like plywood. The desirability of monitoring trade in further processed products such as furniture, in order to have a comprehensive view of the situation, was mentioned. In North America sawn hardwood consumption and production are forecast to rise 3.0% and 2.8% respectively in 1996 and to stay steady in 1997. United States exports are forecast to fall 3.8% to a level of 2.4 million m^3 in 1996 and 1997. European hardwood log consumption, production and exports show no significant changes in 1996 and 1997. However, imports of tropical logs continue to drop, by 5.8% in 1996 and by 2.6% in 1997. Tropical timber producing countries are increasing value-added exports, but in the ECE region, only Portugal cited significant substitution of tropical sawnwood for tropical logs. Temperate and boreal logs are partially substituting for tropical logs in Europe. In the United States consumption and production of hardwood logs are forecast to continue to climb steadily, reaching 69.6% and 70.5 million m^3 respectively in 1996 and rising less than 1% in 1997. Exports drop to 1.1 million m^3 for 1996 and 1997, or by 9.3% from 1995, according to forecasts.

Wood-based panels

In Europe apparent consumption of wood-based panels (particle board, plywood and fibreboard) is expected to drop in 1996 by 1.5% to 40.9 million m^3 following the record high of 1995, which nevertheless only partially reflected real consumption as stocks built up to high levels. The markets in 1996 are very competitive with prices under pressure. A slight recovery is expected in 1997 of 1.3% to nearly 41.5 million m^3. In North America the wood-based panels sector has been steadily increasing since 1992 as a consequence of continued demand from the construction sector. Further expansions in consumption are forecast for 1996 and 1997 of 2.5% and 0.7% respectively, to reach 48.2 million m^3. Consumption of particle board, the leading panel in Europe is also expected to drop by 1.2% in 1996 and slightly recover in 1997. Stocks increased during the second half of 1995 by one-third on average, due to depressed activity in the construction and furniture sectors, and failure to adapt production to real demand. Consumption of plywood in Europe is also forecast to drop in 1996 by 5.4% to 5.6 million m^3, the 1.7% recovery expected for 1997 will maintain consumption below the 1995 level of 5.9 million m^3. Medium Density Fibreboard (MDF) has continued to be the dynamic element in the expansion of the fibreboard industry. European production in 1995 was 3.8 million m^3, nearly a 12% increase from 1994, and 49% of fibreboard production. In 1995 and early 1996 prices have been under pressure, as a sign of temporary overcapacity due to the rapid growth of the industry at a moment of slowdown of activity. Japan and other countries in the Far East have eased this situation by continuing to absorb significant volumes. The Committee's forecast for total fibreboard apparent consumption is an increase of 1.6% and 3.6% in the two years to 1997. United States production of plywood which was in 1995, 12.5% below the peak of 1987 is expected to continue to drop, by 2% in 1996 and a further 4.8% in 1997, thus continuing to lose market share to oriented strand board (OSB). OSB now represents 31% of total United States production of structural panels and 38% of consumption. Canadian production of OSB continues to increase significantly and is forecast to reach 4.5 million m^3 in 1996 or +33% as 4 new plants come on stream. 88% of this volume is exported, mainly to the United States. Particle board (excluding OSB) consumption in North America is forecast to increase by 2.9% in 1996 to 10.6 million m^3. Canadian exports to the United States will drop by 10.9% as a consequence of increased demand of its domestic furniture industry. Following the important increases in production and consumption of fibreboard as a whole in North America between 1994 and 1995, further expansions of 3.3% and 1.3% are forecast for 1996 and 1997, respectively, as a consequence of new MDF capacity coming on stream.

Roundwood / pulpwood and fuelwood

The downturn in the world pulp markets, which started in late 1995, continued to affect market conditions for pulpwood. Weak final demand, combined with excess capacity and high stocks, forced prices of market pulp sharply down, despite production cutbacks in many countries. It is uncertain, in autumn 1996, whether stronger demand and lower stock levels are now causing market pulp prices to recover, or at least to fall no further. Waste paper prices are also very low. As a consequence of reduced pulp production, European pulp wood demand in 1996 is weak: apparent consumption of pulpwood (including round and split and residues and chips) in Europe is expected to be 171 million m^3, 15 million m^3 (8.1%) lower than in 1995, despite relatively satisfactory demand from the particle board and MDF industries. In both the largest pulpwood consumers, Finland and Sweden, consumption in 1996 is expected to fall by nearly 15%, for a total drop of 11.6 million m^3 in these two countries alone (which between them account for nearly half Europe's pulpwood consumption). European pulpwood production however, is expected to drop rather less steeply than consumption, by nearly 8 million m^3 (4.8%). In line with the expected reduction in consumption, imports are forecast to drop sharply, by nearly 20% (7 million m^3). Finland's pulpwood imports are expected to drop by 2 million m^3, to 7.3 million m^3 and Sweden's by 2.5 million m^3, to 5.0 million m^3. The decreases in imports are expected to be less marked for residues and chips than for roundwood. European pulpwood exporters, however expect substantially unchanged exports, at just over 15 million m^3. The situation is expected to change for the better in 1997, with apparent consumption of pulpwood rising by over 6 million m^3 (3.6%), and production by 5 million m^3 (3.2%) although it would still be below the level of 1995. In the United States, however, both consumption and production of pulpwood are forecast to rise slightly (by round 0.5%) in both 1996 and 1997. Exports of pulpwood are also forecast to rise steadily in both years. Overall, European removals are expected to fall quite sharply in 1996, by a total of 13 million m^3, to 348 million m^3. Removals of both logs and pulpwood are forecast to fall by over 5%. The largest falls in total removals are in Finland (5.6 million m^3 or 11.4%) and Sweden (4.5 million m^3 or 7.5%). However, European removals are expected to recover in 1997, by 5 million m^3, with pulpwood removals growing rather faster than removals of logs.

recovering to a projected 3% in 1997. Increased growth projections are based on low interest rates in both countries. Both countries experienced increased housing starts in 1996. US housing starts, which slumped to a 50 year low of 1.05 million units in 1992, reached 1.43 million units in 1994, the highest level since 1988. Housing starts fell to about 1.36 million units in 1995, but grew strongly in 1996 to about 1.45 million units despite an

increase in mortgage rates. Canadian housing starts recovered from a 28% drop in 1995 (to 111 000 units) and should exceed 130 000 units in 1996, led by the lowest mortgage rates in nearly two decades.

The recovery of the Japanese economy appears to be established, with growth increasing by 1% in 1995, 3.5% in 1996 and a projected 2.7% in 1997. At least part of the increase in 1996 growth was due to a one-off increase in public investment to stimulate the economy, but low interest rates, inflation, unemployment and a weakening yen (down 40% against the dollar between April 1995 and late 1996) also played a role. Wooden housing starts which increased 3% in 1994 to 722 000 units (the highest level since 1990), decreased 8% in 1995 to 666 000 units. Based on data for the first eight months of 1996, Japanese housing starts exceeded 1.6 million units, with wooden starts totalling about 760 000 units. Wooden homes are on average about 50% larger than non-wooden homes in terms of floor area and have increased in size by over 18% since the beginning of the decade, to an average of 118 m^2 per home in 1996. These developments in the Japanese housing market are reflecting policies of the Japanese government, which has declared the provision of affordable housing to be a priority, making low interest loans available, approving North American lumber grading rules and 2 x 4 construction methods (2 x 4 home starts are projected to reach 100 000 units in 1996) and authorizing construction of multi-story wooden houses. These measures should continue to drive wooden housing starts in 1997, although the increase in Japan's consumption tax (payable on new houses) from 3% to 5% in April 1997 has contributed to the growth in 1996 housing starts and will likely have a slight dampening effect in 1997.

Real GDP growth in all developing/newly industrialized economies was 5.9% in 1995, mostly due to Asia which expanded by 8.6%, more than double the rate of any other developing region. Growth in Asia slowed to 8% in 1996, while Africa (3% in 1995 to 5% in 1996) and Latin America (1% in 1995 to 3% in 1996) grew more rapidly. Some economies in Asia (e.g. China - 10.2%, Malaysia - 9.5%, Thailand - 8.7%) expanded rapidly in 1995, leading to fears of inflation. Tighter monetary policies in many of these economies contributed to the slowing of growth in 1996 and to a reduction in inflation in Asia as a whole from 10.9% in 1995 to 7.9% in 1996. While inflation also fell in Africa (from 32.1% to 21.3%) and Latin America (from 35.6% to 20.4%) in 1995-96, spiraling prices still impose constraints on growth in many of the economies of these regions. In the countries of the CFA franc zone in West Africa, growth has recovered since the 1994 currency devaluation, increasing by 4.4% in 1995 compared to 1.6% a year earlier. Inflation was almost halved in the same period to 14.9% in 1995, and will drop further (5.1% was projected by the IMF for 1996, among the lowest levels in the developing world) if the restrained fiscal policies which accompanied the devaluation are maintained. The improvement in Latin American growth in 1996 is due to stabilization of the Mexican peso and renewed confidence in the region. However, several Latin American ITTO members (Brazil, Colombia, Peru and Venezuela) had lower growth rates in 1996 compared to 1995. Brazil's currency stabilization programme has been a major success: following the introduction of the real, Brazilian inflation dropped from over 2000% in 1994 to an estimated 15% in 1995. Domestic markets for timber products will continue to grow and become increasingly sophisticated in many developing countries as their economies and populations expand.

Trade

One of the major developments affecting the trade in tropical timber during 1995-96 was the successful conclusion of the Uruguay Round of trade talks and establishment of the World Trade Organization (WTO). Tariffs on finished wood products are set to fall in accordance with the Uruguay Round accords in most major markets over the next several years. Table 1

provides a summary of current (late 1996) tariff rates and other trade barriers in place for tropical timber products and schedules for Uruguay Round reductions for those ITTO consumer member countries that responded to this portion of the 1996 Forecasting and Statistical Enquiry. Tariffs and other trade barriers in producer member countries that reported them are summarized in the Country Notes.

The direction of trade tables for 1994 and 1995 contained in Appendix 2 were derived from responses to the 1995 Forecasting and Statistical Enquiry and other sources listed in the notes accompanying the Appendices. Few supplementary data sources were available for 1995 so the tables are not generally as complete as those for 1994. Minor trade flows are not included in Appendix 2, with only the top 15 importers and top ten exporters (as listed in Appendix 1) for each product included.

Table 1. Tropical Timber Trade Barriers in Major ITTO Consumer Countries, 1996

Country	Product	Description
Australia	Sawnwood	4-5% import tariff, depending on species and country
Canada	Logs, sawn, ven.	None
	Plywood	1-8% import tariff, depending on species and country
China	Logs	2-6% import tax, 17% value-added tax
	Sawnwood	3-9% import tax, 17% value-added tax
	Veneer	5-12% import tax, 17% value-added tax
	Plywood	20% import tax, 17% value-added tax
Egypt	Sawnwood	5% customs tariff on lumber imports
EU		
France	Logs and sawn	None
	Plywood	10% (except waivers under GSP, Lomé)
Netherlands	Logs	None
	Sawnwood	0-2.5% import tariff, depending on species
	Veneer	4-6% import tariff, depending on species
	Plywood	10% import tariff, depending on species
Portugal	All	None
UK	Logs, sawnwood, veneer	None
	Plywood	9.4-10% (5.3-7% for GSP), depending on species
Japan	Logs	None
	Sawn	None for GSP; 7.6% tariff (falling to 6% in 1999) for non-GSP imports of *Dipterocarpaceae* spp
	Veneer	0-0.5% tariff GSP, 5% others
	Plywood	10-15% tariff (GSP reductions apply); falling to 8.5-10% by 1999
New Zealand	All	None
Norway	All	None
Rep. of Korea	Logs	2% import tariff
	Sawnwood	5% import tariff
	Veneer	5% import tariff
	Plywood	8% import tariff
USA	All	None (GSP scheme)

Total 1994 and 1995 import and export values by product are summarized in Appendix 3, together with unit values based on the volume of trade reported in Appendix 1. Value data is reported poorly or not at all by many countries, making the use of supplementary sources essential. As the most up-to-date source of forest product trade values is the 1994 FAO Forest Products Yearbook, values for 1995 have in many cases been estimated using average unit values.

Many countries made errors or omissions in providing trade data, particularly importers who reported all wood imports (not just tropical) and re-exporters who failed to report exports of tropical timbers. If available, other data sources were used for these cases. Entries in the tables of Appendix 2 consist of importers' reports (bold) and exporters' reports (italicized). The discrepancies which are illustrated by many of these entries are due to a number of factors. Carelessness or inadequate training of reporting officials or correspondents is often a prime reason; this can only be remedied with better training and supervision, particularly in the application of customs classification systems. Problems with consistency in conversion factors (some countries report weights and/or surface area instead of volumes) and/or product definitions can explain some discrepancies. Also, different scaling or measurement systems are sometimes used in different countries. Definitions of the reporting period may differ from exporter to importer, or shipments sent at the end of one period may not arrive until the following. Imports destined for re-export may not be correctly recorded, and (re-)exports of tropical timber from non-tropical countries may not be recognized as tropical by the importing country. Finally, smuggling and transfer pricing to avoid tariffs, quotas and/or taxes have been documented for some tropical forest products and countries. It is clear that if ITTO is to fulfill its mandate to monitor the trade in tropical timbers, major improvements in the collection and reporting of statistics are still required, in both producing and consuming countries. The following discussion on exports uses exporters' reports unless stated otherwise; that on imports uses importers' reports.

Exports

Logs

The composition of exports for 1994-96 from the ITTO producing regions is shown in Table 2 and graphically for 1995 in Figure 9. The areas of the pie charts in Figure 9 are proportional to total log production in each region. The contribution of logs to total tropical timber exports of ITTO producers (in terms of both value and roundwood equivalent volume) has fallen dramatically from over 60% in 1980 to less than a quarter in 1996. Only Africa continues to export a higher volume equivalent of logs than processed products, with log exports making up 40% of log production and 56% of total roundwood equivalent export volume in 1995.

Table 2. Composition of Exports by Region, 1994-96 (1000 m^3 rwe)

	Log Production			Log Exports			Processed Exports			Total Exports		
Region	1994	1995	1996	1994	1995	1996	1994	1995	1996	1994	1995	1996
Africa	10255	9775	9200	4181	3911	3733	2946	3066	2929	7127	6977	6662
Asia-Pacific	93424	90051	85745	12277	11020	9431	35011	37150	35780	47288	48170	45211
Latin America	31818	32154	31839	49	38	21	5306	4592	4602	5355	4630	4623
Total	135497	131980	126784	16507	14969	13185	43263	44808	43311	59770	59777	56496

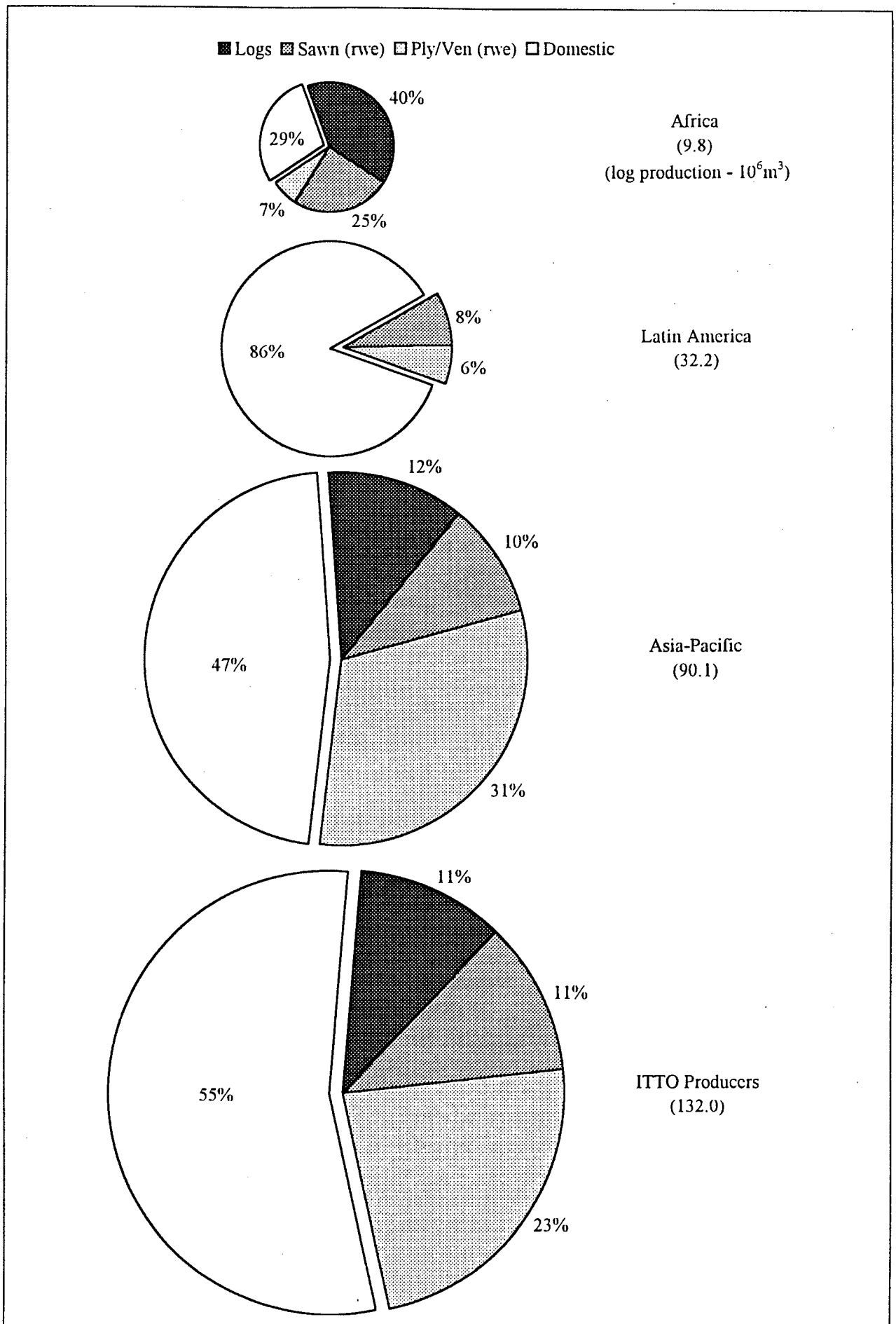


Figure 9. Domestic Log Consumption and Composition of Exports (percentage of log production, roundwood equivalent, 1995)

The Asia-Pacific region is rapidly replacing log exports with the export of processed products, spurred by Indonesian plywood exports and Malaysian exports of sawnwood, veneer and plywood. Asian log exports made up 23% of total export volume in 1995 (12% of log production), dropping to 21% of total exports in 1996. Latin American log exports are a small fraction of both production and total exports. Total roundwood equivalent export volume as a percentage of log production decreased from 17 to 15% in Latin America in the period 1994-96, increasing in Africa (70 to 72%) and Asia (51 to 53%). Total ITTO producer member exports (rwe) fell 6% from 59.8 million m^3 to 56.5 million m^3 in 1994-96, due largely to declining exports of logs and sawnwood from Asia. Figure 9 shows that the roundwood equivalent of 45% of total log production in ITTO producer countries was exported in the form of logs, plywood or veneer in 1995. This proportion remained constant in 1996.

Figure 10 shows the major ITTO tropical log exporters in 1994-96, ranked by 1995 export volume. Total ITTO producer member exports of 15.0 million m^3 valued at $2.3 billion (Appendices 1 and 3) comprised over 80% of global exports of non-coniferous tropical industrial roundwood, the only tropical timber product for which global trade estimates are provided by FAO. As industrial roundwood includes pulpwood and other categories of roundwood, ITTO's proportion of exports of saw and veneer logs (for which separate customs statistics are no longer collected) is in reality somewhat higher than the figure given here, probably approaching 90% of total tropical sawn/veneer log exports. ITTO producer country log exports made up almost 80% of non-coniferous (47% of all) exports of industrial roundwood from developing countries and 50% of global exports of non-coniferous (13% of all) industrial roundwood in 1994. Malaysia continues to dominate the trade in tropical logs, with the 7.9 million m^3 exported in 1995 constituting 53% of ITTO producer member exports. Malaysia's log trade in 1995 decreased in volume by 8% from 1994 levels and continued to decrease steadily (to 6.4 million m^3) in 1996. These reductions are due to decreased exports from Sarawak, with log exports (except those arising from plantations) banned from Sabah during this period.

The phasing out of log exports in Sabah was due to a temporary ban on exports which remained in place for almost three years to ensure sufficient raw material for local industries. In November 1996 an announcement lifting the ban was released by the state government, indicating that up to 2 million m^3 per year (one-third of the annual harvest) would be available for export. It remains to be seen how the lifting of the ban will affect Sabah's annual harvest and wood processing industry. The production and export reductions in Sarawak have brought the state in line with the recommendations of the ITTO Mission, which concluded that a sustainable level of production would be about 9.2 million m^3 per year from a permanent forest estate of 4.5 million ha, provided that the necessary silvicultural improvements were undertaken. Log production in Sarawak fell from 18.8 to 16.5 million m^3 between 1992 and 1995, including production from conversion forests. Production from Sarawak's permanent forest reserves fell from 12.5 million m^3 in 1992 to 9.5 million m^3 in 1995, with the ITTO target figure of 9.2 million m^3 attained in 1996. Appendix 2 (Table 2-1-a) shows that Malaysia's major log customers are all in Asia, with Japan, China (including Taiwan Province of China) and the Republic of Korea accounting for over 80% of Malaysia's reported log export volume in 1995. Malaysia's log exports were worth over $1.02 billion to the country in 1994 (Appendix 3), falling to $910 billion in 1995. The unit values for Malaysia's log exports based on these figures (under $120/$m^3$ - see Appendix 3) appear somewhat low, however.

Papua New Guinea is the second largest tropical log exporter, with 1995 exports of 2.6 million m^3 worth $326 million. Exports dropped 16% from 1994 levels due at least partially to the imposition of increased export taxes, which now average about 31% of FOB

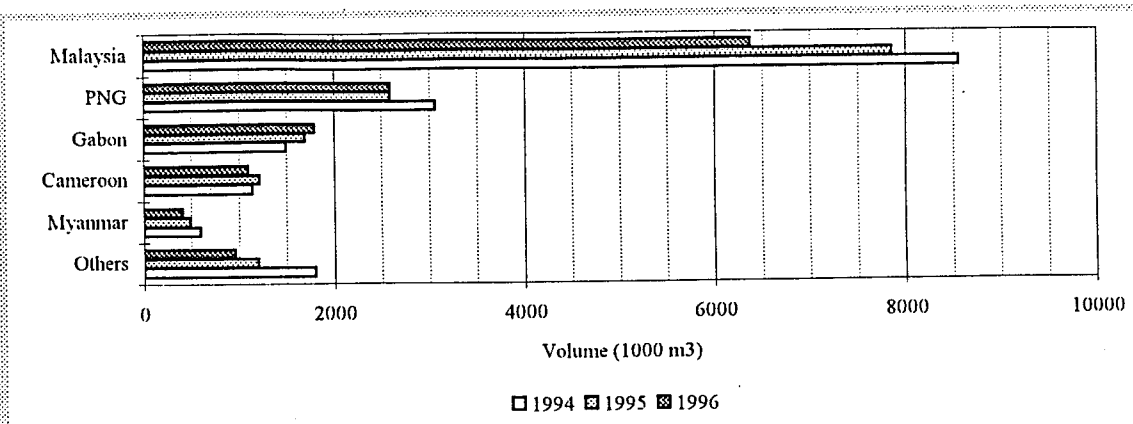


Figure 10. Major Tropical Log Exporters

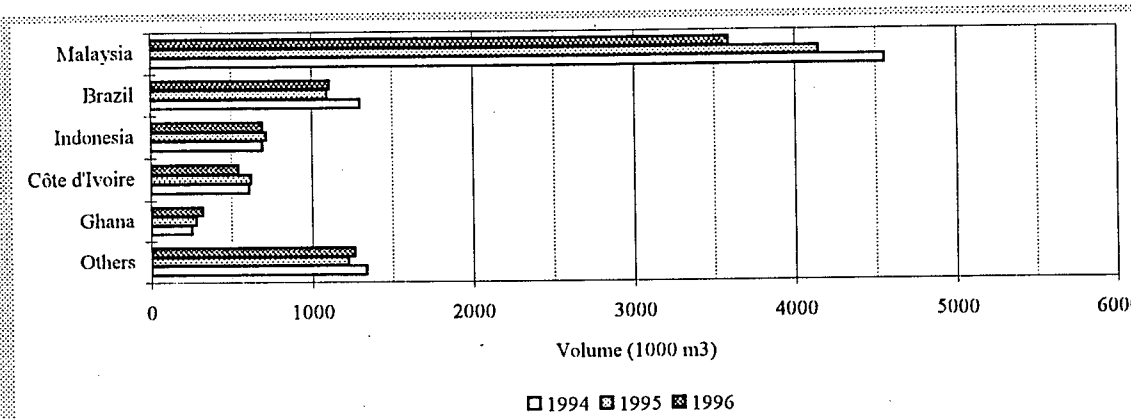


Figure 11. Major Tropical Sawnwood Exporters

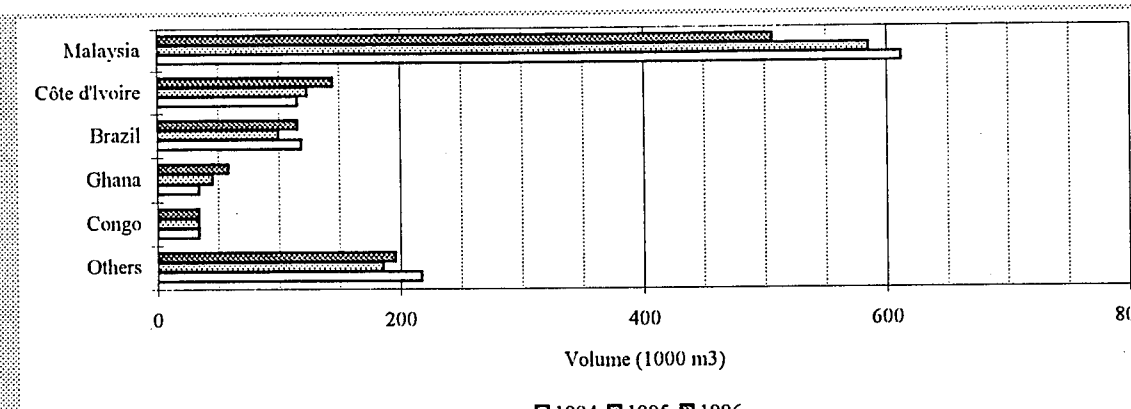


Figure 12. Major Tropical Veneer Exporters

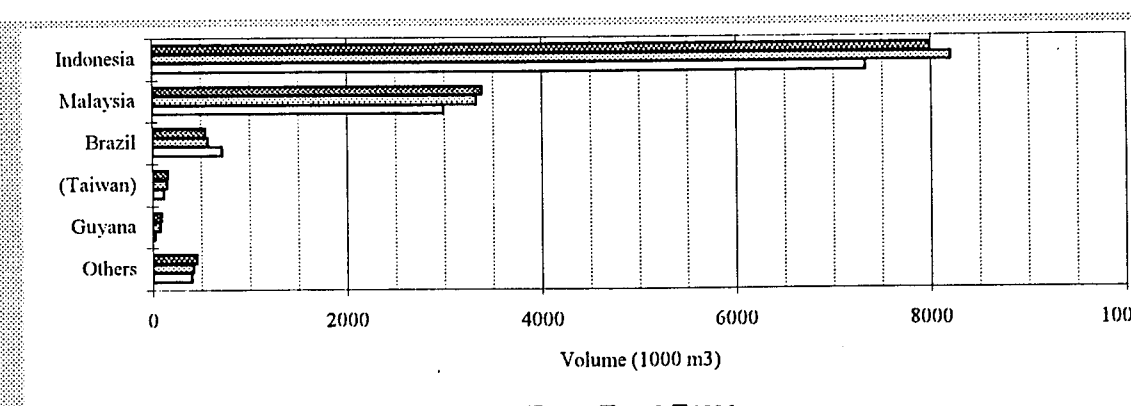


Figure 13. Major Tropical Plywood Exporters

prices. Exports from PNG were stable in 1996, but will eventually fall as the PNG government's goal is to promote more local processing. Appendix 2 shows that the bulk of PNG's log exports go to Japan and the Republic of Korea (over 80% in 1994-95), with the Philippines assuming increasing importance, especially for lower grades. PNG's log export controls appear to be working, as the discrepancies between export/import reports identified in previous Reviews continue to shrink for most trading partners. Official log export statistics for Myanmar (the fifth largest log exporter in 1995 at 500 000 m^3) continued to decline in 1995-96, but all exports may not be accounted for by official figures. Myanmar's main trading partners are Thailand and India, although the trade figures reported by Myanmar are often below import reports from partners.

Africa supplies the majority of the remainder of world tropical hardwood log exports. Gabon and Cameroon are the largest exporters (Figure 10), but Congo, Côte d'Ivoire, Zaire and Ghana all exported substantial quantities of logs in 1995 (Appendix 1). All of these countries experienced large increases in exports in 1994, primarily to China, Korea and Japan, which sought new log supplies to offset decreases from Malaysia. The recent lifting of Sabah's log export ban may have an impact on African logs exports to these markets as will attempts by several countries to control or ban log exports. Ghana's exports dropped sharply in 1995 due to a log export ban on several popular species, and dropped to zero in 1996 when the ban was extended to all species (see Country Notes). A similar ban announced in late 1995 by Côte d'Ivoire reduced that country's exports by 50% between 1994 and 1996. A 1996 logging ban on iroko (*Chlorophora excelsa*) in the northern half of the country where most of this species occurs will further reduce exports. Liberia's civil war has led to drastic decreases in official production and exports, as reported in Appendix 1. It is likely that unofficial exports exist, but no reliable estimates for these could be obtained. Indonesia replaced log export bans with levies in 1993, but their magnitude ($500 to $4500/$m^3$) continues to ensure that few logs are legally exported. Nonetheless, some importing countries (e.g. China, Malaysia) reported substantial imports of Indonesian logs in 1994 and 1995.

Re-exports of logs by consumer countries fell 29% to 128 000 m^3 in 1995, 77% of which was accounted for by inter-European trade. France, Belgium/Luxembourg, Germany and the Netherlands were the major log re-exporters in 1995, selling tropical logs to each other and other EU countries. Consumer countries did not in general provide detailed breakdowns of re-exports (value or destination). The magnitude of the European trade declined by over 40% in 1996, together with tropical log supplies in Europe. Total consumer country exports, led by the EU, fell by 37% in 1996.

Sawnwood

Figure 11 shows the major ITTO tropical sawnwood exporters in 1994-96, ranked by 1995 export volume. Total ITTO producer exports of 7.9 million m^3 (valued at almost $2.85 billion) comprised 85% of non-coniferous (64% of all) sawnwood exports by developing countries and 48% of global exports of non-coniferous (7% of all) sawnwood in 1994. Malaysia continues to dominate the trade in tropical sawnwood, with the 4.2 million m^3 exported in 1995 constituting 53% of total ITTO producing member exports. Malaysia's sawnwood trade fell 9% in 1995 and further to just under 3.6 million m^3 in 1996 as more raw materials were directed to plywood production and other secondary processing. Peninsular Malaysia and Sabah accounted for 32 and 31% of Malaysian sawnwood exports in 1995 respectively, with Sarawak making up the remainder. Appendix 2 (Tables 2-2-a and -b) shows that Malaysia's major sawnwood customers in 1994-95 were all in Asia (Thailand, Japan, China, Taiwan Province of China and Korea). The total value of Malaysia's 1995 sawnwood exports was $1.45 billion.

Malaysia announced in late 1995 that it would stop all sawnwood exports from Peninsular Malaysia by 2000, due to reductions in timber supplies brought about by stricter management standards and the country's commitment to further and more efficient processing of its forest resources. Substantial adjustments will be forced on the timber sectors of Malaysia's main sawnwood customers, many of which depend on Malaysia for the majority of their sawnwood consumption. It is expected that export reductions will be phased in (this is already in evidence in the steady decline shown by 1992-96 figures), allowing importers time to seek other sources and/or substitutes.

Indonesian exports of sawnwood increased 3% to 722 000 m^3 in 1995 before falling back to 700 000 m^3 in 1996. Indonesia has imposed export levies ranging from $250 to $2400/$m^3$ on all sawnwood exports since 1994. These high apparent exports may include some further processed products (e.g. mouldings) as well as sawnwood. Sawnwood exports from Brazil and Ghana increased slightly in 1996, as shown in Figure 11. Appendix 1 shows that other major traders are Cameroon, Bolivia, Honduras and Gabon, all with 1995 exports of over 100 000 m^3. Bolivian sawnwood exports, primarily of mahogany to the USA and UK, have stabilized at about 160 000 m^3 per year after growing rapidly in the early 1990's. Exports from Honduras are at least partially tropical pine sawnwood.

ITTO consumer countries exported 230 000 m^3 of tropical sawnwood worth over $144 million in 1995, primarily (68%) from the EU countries. EU exports of tropical sawnwood decreased from 222 000 m^3 in 1994 to 157 000 m^3 in 1995-96, with the ITTO consumer country total dropping at about the same rate. The Netherlands, a larger tropical sawnwood exporter than most producing countries, was the main EU sawnwood exporter, although its exports have more than halved since 1992 to 65 000 m^3 in 1995-96. The unit value of the Netherlands' sawnwood exports, $734/$m^3$ in 1995, was 17% above the average export unit value for consumers and double the average unit value for all ITTO members, indicating that mostly high-value (or high value-added) species of sawnwood are being exported. Tropical sawnwood exports from the Netherlands and other EU countries are absorbed almost wholly within Europe.

Veneer

Figure 12 shows the top ITTO tropical veneer exporters in 1994-96, ranked in order of 1995 export volume. Total ITTO producing member exports of just over 1 million m^3 (worth $462 million) were down 2% from 1994 levels. ITTO producer countries accounted for 90% of exports of tropical veneer by developing countries and 40% of global exports in 1994. Total exports by producers fell to 984 000 m^3 in 1996. Malaysia continues to be ITTO's dominant veneer exporter, with fluctuations in its exports driving the ITTO total. Malaysia's exports of 586 000 m^3 in 1995 constituted 58% of total ITTO producer member exports. Malaysia's veneer trade is declining after rising rapidly in the early 1990s, with exports down by 13% in 1996. This is due to production decreases due to tightening log supplies and the focus on plywood and further downstream production/exports. Veneer exports in 1995 were split between Sarawak and Sabah in a 2 to 1 ratio, with minimal exports from Peninsular Malaysia. Appendix 2 shows that Malaysian exports, worth $230 million in 1995, are mainly directed to China, Taiwan Province of China and Japan.

Côte d'Ivoire was the second largest tropical veneer exporter in 1995 at 124 000 m^3. Its exports rose 17% in 1996, to 145 000 m^3. Its main markets are the EU (mainly Germany and Italy) and the USA. Brazil is the only other substantial tropical veneer exporter with exports rising from 100 000 m^3 in 1995 to 116 000 m^3 in 1996. Brazil's exports are primarily to the USA.

The EU accounted for almost 65% of consumer country tropical veneer exports of 65 000 m^3 in 1995, with 1996 levels of EU exports rising 19% to 50 000 m^3. Germany and the Netherlands are the largest EU tropical veneer exporters. Japan also reported 8 000 m^3 of tropical veneer exports in 1995, falling to 6 000 m^3 in 1996. Total exports by ITTO consumer countries rose in 1996 because of the increase in EU exports.

Plywood

Figure 13 shows the major ITTO tropical plywood exporters in 1994-96. In 1994, total ITTO producing member exports of 11.2 million m^3 (worth $5.41 billion) comprised almost 90% of all developing country plywood exports. ITTO producing members account for about 65% of global exports of all types of plywood, the only forest product for which tropical countries have captured a majority of the global market. Indonesia continues to dominate the trade in tropical plywood with the 8.2 million m^3 exported in 1995 constituting two-thirds of total ITTO producer member exports, although this is down from 84% in 1991. Indonesia's share of ITTO exports fell further in 1996, when exports decreased to 8 million m^3. Indonesia earned an estimated $4.17 billion from plywood exports in 1995, second only to its exports of petroleum products, but this figure has been levelling off. The proportion of Indonesian plywood exports to other Asian countries (primarily Japan, China and Korea) fell between 1992 and 1995, due to increased exports to the USA and Western Europe (see Appendix 2).

Malaysia is Indonesia's major competitor in the tropical plywood trade. Exports from Malaysia grew by over 10% in 1995 to 3.3 million m^3. Exports stabilized in 1996, reaching 3.4 million m^3, as production slowed. Malaysia's rapid growth in plywood exports in the 1990's has been due to the construction of new plywood mills in Sabah and Sarawak to process peeler logs formerly exported; the two eastern Malaysian states each accounted for 42 and 46% of Malaysian plywood exports respectively in 1995. The slowdown in production and export growth will probably continue in 1997 as logs begin to be exported from Sabah again. In 1995 Malaysia exported over $1.37 billion worth of plywood, mainly to Japan, China (including Taiwan Province of China) and non-ITTO members Singapore and Hong Kong. Latin American plywood exports, led by Brazil, dropped in 1996 to 717 000 m^3. Brazil's export growth slowed in 1995-96, due primarily to the strength of the Brazilian real. The UK and the USA are the major markets for Brazil's plywood. Africa's plywood exports, mainly from Gabon and Cameroon, are relatively minor but increased to 75 000 m^3 in 1995 before dropping back to 53 000 m^3 in 1996.

ITTO consumer countries exported 394 000 m^3 of plywood worth almost $297 million in 1995. Taiwan Province of China accounted for 159 000 m^3 (to Japan and other Asian countries), the EU (primarily Belgium, the Netherlands and France to other EU countries) for 128 000 m^3 and the USA for 45 000 m^3 (various destinations reported). Exports from all these sources increased or remained stable in 1996, raising ITTO consumer country exports of tropical plywood to 443 000 m^3.

Imports

Table 3 provides an overview of the dependence of major ITTO importers on imports of tropical wood products in 1994. Major importers are defined here as those with imports of at least 100 000 m^3 of one or more products. Countries which reported tropical imports to ITTO in excess of all imports given in the 1994 FAO Yearbook of Forest Products are considered totally dependent on tropical timber.

Table 3. Tropical Proportion of Total Imports by Major ITTO Importers in 1994 (1000m^3)

Country	Import Tropical				Import All[1]				Tropical Percentage			
	Log	Sawn	Ven	Ply	Log[2]	Sawn	Ven	Ply	Log	Sawn	Ven	Ply
Australia	5	139	16	42	11	1080	18	61	4.5	12.9	88.9	68.9
Belgium-Lux.	46	160	17	136	3951	1886	37	267	1.2	8.5	45.9	50.9
Brazil	10	378	31	2	2	153	1	2	100.0	100.0	100.0	100.0
China	2030	717	193	1800	4587	2400	252	3042	44.3	29.9	76.6	59.2
(Taiwan)[3]	1800	769	194	1065	2040	1514	220	1092	88.2	50.8	88.2	97.5
Egypt	35	12	5	120	118	1011	10	129	29.7	1.2	50.0	93.0
France	880	344	31	141	2789	2064	88	304	31.6	16.7	35.2	46.4
Germany	192	256	72	195	2173	5769	194	967	8.8	4.4	37.1	20.2
Greece	125	27	1	2	27	395	3	3	100.0	6.8	33.3	66.7
India	250	4	1	2	285	6	0	10	87.7	66.7	100.0	20.0
Italy	478	421	72	49	7156	6566	139	257	6.7	6.4	51.8	19.1
Japan	7494	1257	160	3777	45586	10717	731	4074	16.4	11.7	21.9	92.7
Malaysia	233	307	2	13	215	51	9	26	100.0	100.0	22.2	50.0
Netherlands	120	461	12	162	762	3745	29	560	15.7	12.3	41.4	28.9
Philippines	350	287	0	6	464	449	5	7	75.4	63.9	0.0	85.7
Portugal	358	31	2	6	1106	130	6	9	32.4	23.8	33.3	66.7
Rep. of Korea	1944	617	54	868	10503	1152	66	1032	18.5	53.6	81.8	84.1
Spain	360	240	10	5	1232	1560	36	35	29.2	15.4	27.8	14.3
Thailand	1533	2435	12	29	1429	2375	13	29	100.0	100.0	100.0	100.0
UK	23	450	23	485	393	8687	87	1202	5.9	5.2	26.4	40.3
USA	4	222	13	742	1526	39021	666	1547	0.3	0.6	2.0	48.0

1. 'Import All' figures from 1994 FAO Yearbook.
2. Industrial roundwood used; no import figures given for saw/veneer logs in 1994 FAO Yearbook.
3. Unofficial figures.

Of the traditional tropical timber consumers in Table 3, Taiwan Province of China appears to be the most dependent on tropical wood product imports, with almost all of its substantial log, veneer and plywood imports of tropical origin. Unsurprisingly, given the dominance of tropical plywood in international plywood trade, most of the countries in Table 3 have a fairly high dependence on tropical plywood imports, with Japan almost totally dependent on tropical imports (although this dependence is decreasing). Most major ITTO consumer countries are not so highly dependent on tropical veneer imports. Tropical sawnwood has an even lower market share in most non-tropical countries, with only Taiwan Province of China and Korea dependent on it for more than half their sawnwood imports. The percentage figures for dependence on imports of tropical saw and veneer logs may be underestimated as total imports of all industrial roundwood were used for comparison due to the revision of the Harmonized System of customs classification and the consequent lack of FAO statistics on total trade of saw/veneer logs in 1994. Nonetheless, only Taiwan Province of China amongst the major traditional consumer countries appears to have imported a significantly greater proportion of tropical than non-tropical logs in 1994. In contrast to consumer countries, all of the major ITTO producer country importers in Table 3 depend on tropical imports for the majority of their wood needs. The following sections break down import trends by each tropical wood product.

Logs

Total imports of tropical hardwood logs by ITTO members (consumers and producers) fell 5% to 17.3 million m^3 (worth over $3.66 billion) in 1995. This exceeded total log exports by ITTO members by about 2.2 million m^3. This difference was probably made up by legitimate log exports from Indochina, the Solomon Islands and non-member tropical African countries, plus unrecorded or under-reported exports from both members and non-members. The gap between reported imports and exports in 1996 increased to 2.6 million m^3, indicating greater

pressure on these non-ITTO members, more errors in statistics, or (most likely) a combination of both.

Figure 14 shows the top ITTO log importers in 1994-96, ranked by order of import volume in 1995. Japan still dominates the global tropical log market, with 6.5 million m^3 (worth almost $1.41 billion) imported in 1995, 62% of which came from Sarawak. Japan's imports were valued substantially higher than Malaysia's exports, however, which totalled $910 million for 7.9 million m^3 in 1995 (Appendix 3). The resulting discrepancy in unit prices ($215/$m^3$ vs. $116/$m^3$) is too large to be explained by freight and insurance charges; it could be due to variations in exchange rates used to report export values, the existence of other abnormally high/low value trade partners and/or one or both partners could have made errors in reporting log trade values. Japanese tropical log imports decreased by 13% in 1995 due to contraction in Sarawak exports and the continuing ban on exports from Sabah, as well as the increasing quantities of non-tropical logs being imported. Japanese demand for tropical logs continued to be met primarily by output from Malaysia in 1996 (54% of tropical log imports of 6.4 million m^3), although the decreasing log exports from Sarawak and the export ban in Sabah have resulted in a greater diversity of suppliers to the Japanese market, including softwood and temperate hardwood suppliers. Japan has increased tropical log imports from Africa, with the 1994 level over six times the 100 000 m^3 imported in 1992, mostly from Gabon and Cameroon. Imports from Africa dropped by a quarter to 471 000 m^3 in 1995-96, as these countries placed tighter controls on exports. Imports from PNG followed a similar pattern, dropping to 1.6 million m^3 in 1995 from 1.9 million m^3 a year earlier.

China is the second largest ITTO tropical log importer, at over 2 million m^3 for each of the past three years. Aggregate imports by China and Taiwan Province of China fell in 1996, due to decreases in the latter. Official Chinese statistics do not include Taiwan Province of China; prior to 1993 they did not include imports of logs to joint venture plants which export the products made from them. The figures given for China and Taiwan Province of China are based on a combination of official and unofficial sources and should be viewed with this in mind. These factors may underlie some of the inconsistencies between export and import reports shown in Appendix 2 for China and Taiwan Province of China. The return of Hong Kong to Chinese rule in mid-1997 will result in a one-off increase in Chinese import statistics. According to UN Comtrade statistics, Hong Kong's imports of tropical wood products in 1994 were 750 000 m^3 of logs, 100 000 m^3 of sawnwood and about 400 000 m^3 of plywood.

The Republic of Korea is also a major ITTO log consumer, absorbing 1.7 million m^3 (worth $301 million) in 1995, from Malaysia (38% of total imports, down from 71% in 1993) and PNG (43%, up from 23% in 1993). Korea's imports were down 12% from 1994 levels, with a further decrease to 1.5 million m^3 in 1996. Korea, like Japan and some other Asian consumers, is undertaking to shift processing capacity to producing countries, closer to resources and cheaper labour. Korea has also been importing increased quantities of logs from Africa (primarily Ghana) with 1994 levels of 251 000 m^3 compared to 21 000 m^3 in 1992. Ghana's partial log export ban in 1995 and the complete ban in 1996 has forced Korea to look to other suppliers; imports from Africa dropped to 41 000 m^3 in 1995.

The EU countries imported almost 2.6 million m^3 of tropical logs worth $647 million in 1995, most of which came from African producers. France remains the largest of the EU log importers, with average annual imports of around 900 000 m^3 per year dropping to 800 000 m^3 in 1996. The bulk of France's tropical log supplies come from Gabon, Cameroon and Congo (Appendix 2). Italy, Portugal and Spain are also major European log importers, with over 300 000 m^3 of log imports each in 1995. European log imports, stable in 1995,

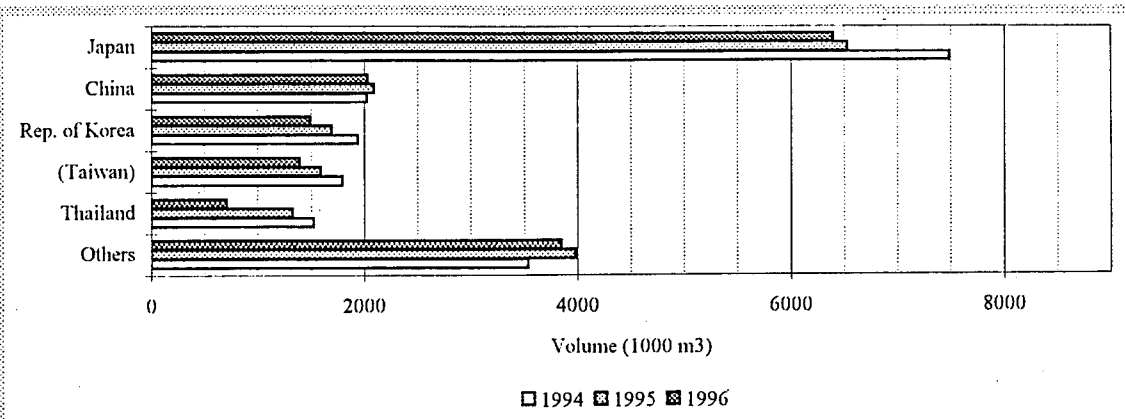


Figure 14. Major Tropical Log Importers

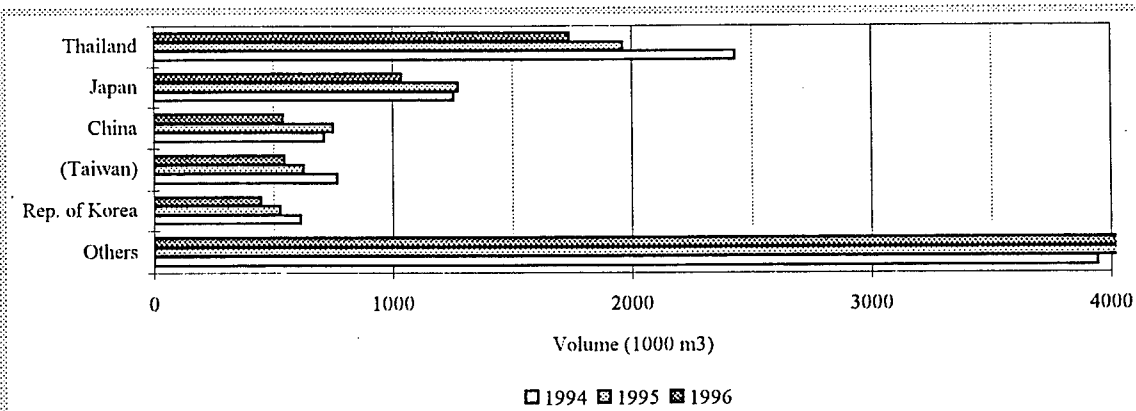


Figure 15. Major Tropical Sawnwood Importers

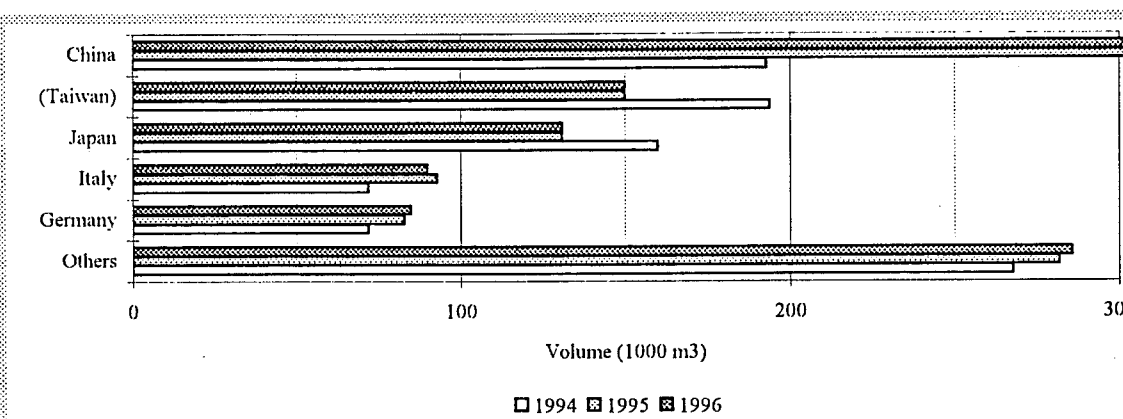


Figure 16. Major Tropical Veneer Importers

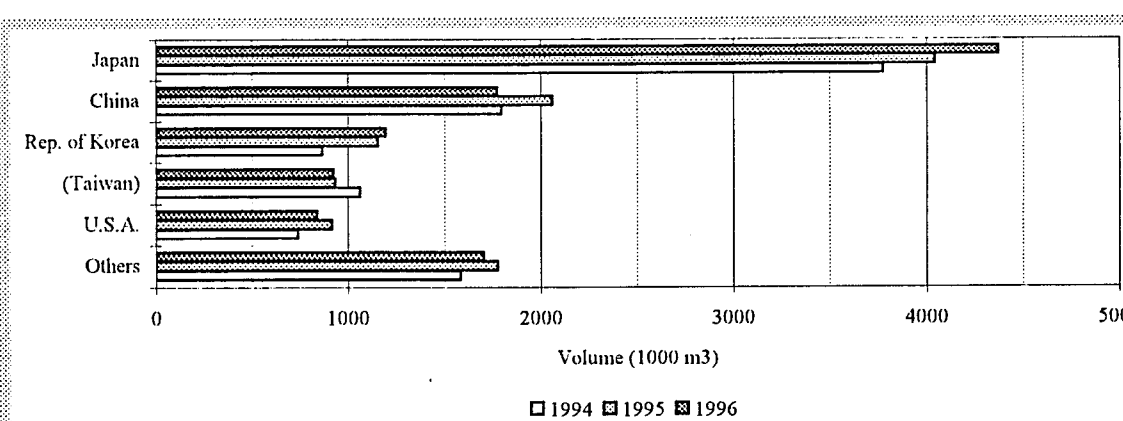


Figure 17. Major Tropical Plywood Importers

dropped to under 2.4 million m^3 in 1996 due to depressed demand and increased competition from Asian log buyers in Africa.

Several ITTO producing countries have become net importers of logs, indicating the extent of wood shortages in their domestic forest sectors. Thailand (1.3 million m^3), Malaysia (Peninsular Malaysia, 573 000 m^3) and the Philippines (540 000 m^3) were the major ITTO producer country importers of tropical logs in 1995, reflecting resource scarcity in these countries. Malaysia reported that the bulk of its log imports (over 400 000 m^3) were from Indonesia, which requires clarification given that country's log export policies. Some Malaysian imports are occurring under a Malaysian Timber Council scheme to assist processors in Peninsular Malaysia obtain logs for their own use. Apart from the alleged Indonesian logs, shipments in 1994-95 were mainly from PNG and Africa. Total imports of tropical logs by ITTO producing members rose 11% in 1995, to 2.7 million m^3 worth $563 million. Total imports dropped 20% to under 2.2 million m^3 in 1996. This demand is still substantial, however, and will, in combination with demand from traditional log consumers, place considerable pressure on the forest resources of the remaining log exporters. Careful regulation of log exports is required in these countries to ensure that the tightening supply situation does not exacerbate problems in their forest sectors. The new "consumer" countries must also attempt to uphold ITTO's principles on sustainability when sourcing log supplies. This is particularly true of the logging and other forestry operations currently being established in Latin America and Africa by several companies from ITTO producer nations in the Asian region.

Sawnwood

Total ITTO imports of tropical sawnwood decreased 4% to 9.4 million m^3 in 1995. Total ITTO imports dropped to 8.5 million m^3 in 1996, about 900 000 m^3 greater than total ITTO exports, with the gap explained by the same factors discussed under logs. Figure 15 shows the major ITTO sawnwood importers in 1994-96, ranked by order of 1995 import volume. Thailand remained the top ITTO sawnwood importer during this period, although its imports dropped by over a quarter between 1994 and 1996, to 1.7 million m^3. The logging ban in Thailand, together with its growing economy and large furniture and secondary processing industries are responsible for its large log and sawnwood imports, with the country's net imports of all timber worth close to $1.08 billion in 1995. Thailand's economy slowed in 1996 and this, together with tight supplies, drove down its imports. Thailand's imports of tropical sawnwood, worth over $623 million in 1995, are sourced primarily from Malaysia. Japanese imports were stable at 1.3 million m^3 worth $838 million in 1995, falling to just over 1 million m^3 in 1996 as tropical sawnwood supplies tightened and the use of substitutes (softwoods and non-wood) increased. Japan's tropical sawnwood imports are primarily from Malaysia (45%), but it also imported substantial quantities of sawnwood from Indonesia in 1994-95 (Appendix 2). China (including Taiwan Province of China) and Korea are also major Asian sawnwood importers, as shown by Figure 15 and Appendix 1. All had declining imports in 1996, sourced primarily from Malaysia and (to a lesser extent) Indonesia. As the size of the bar for "Others" in Figure 15 indicates, the tropical sawnwood market is the most diversified of all primary tropical timber products, with the five largest importers accounting for only slightly over half of total ITTO imports in 1995-96.

Total tropical sawnwood imports by EU countries increased by 3% in 1995 to 2.6 million m^3 (worth almost $1.3 billion). More than half of this was supplied by Asian producers, principally Malaysia. Côte d'Ivoire, Ghana, Gabon, Cameroon and Brazil supplied virtually all of the remainder of European imports. EU imports were stable in 1996. The Netherlands, until 1994 the largest importer of tropical sawnwood in the EU, absorbed 395 000 m^3 in 1995,

down 14% from 1994. Imports by both Italy (479 000) and the UK (429 000) surpassed those of the Netherlands in 1995.

Amongst ITTO producer members, the other major tropical sawnwood importers in 1995-96 were Brazil, Malaysia and the Philippines. Malaysia reported substantial imports of sawnwood from Indonesia in 1995, contributing to total imports of 376 000 m^3 in 1995, more than four times 1992 levels. The large jump in imports of tropical sawnwood by the Philippines in 1995-96 should also be noted. Imports rose by almost one-quarter in 1995 to 350 000 m^3, increasing further to 450 000 m^3 in 1996. This jump in imports of sawnwood, combined with the country's large log imports, are convincing evidence of wood scarcity in the Philippines. Once a major exporter of tropical timber, the Philippines was a net importer in 1995 to a value of almost $140 million.

Veneer

Many importing countries do not differentiate between different types of veneer and plywood (e.g. softwood/hardwood, temperate/tropical). For plywood, different types of wood are increasingly used in panel production. This lack of resolution in trade statistics is compounded by the fact that countries use a wide variety of scales to measure trade in panel products. Some countries use volume (as is used here), some use surface area and still others use weight. All of these can be reported in metric or imperial units, depending on the country. Some countries report trade in all veneers and panels (tropical and non-tropical) while others aggregate veneer and plywood into a single category. The many discrepancies evident in the direction of trade tables for veneer are at least partially due to the use of different conversion factors in different countries. The adoption of a standard measurement system for panel products and veneer is a priority if improvements in the accuracy of these statistics are to be achieved.

Figure 16 shows the major ITTO veneer importers for 1994-96. Total ITTO imports of veneer rose 12% to 1.1 million m^3 (worth $648 million) in 1995. China accounted for 31% of this total, TPC for 14%, Japan for 12%, with members of the EU (led by Germany and Italy) accounting for an aggregate 26%. Imports to all of these destinations were relatively stable in 1996, leaving total ITTO imports stable. Chinese and Japanese imports are primarily sourced from Malaysia, while the majority of European imports are from African producers (mainly Côte d'Ivoire, but increasingly from Ghana and Congo).

Plywood

Figure 17 shows the largest ITTO plywood importers for 1994-96, ranked by import volume in 1995. Total ITTO imports of tropical plywood rose 11% to over 10.9 million m^3 (worth over $5.09 billion) in 1995. Imports dropped slightly to 10.8 million m^3 in 1996. Exports of plywood by ITTO members continue to substantially exceed aggregate imports by members, indicating the dominant position of ITTO producers in world markets for this product. The majority of all tropical plywood imports came from Indonesia (80-85% in 1994-95 for the top importer, Japan). Japan continues to replace domestic plywood production with imported plywood (tropical and non-tropical) and substitutes like OSB and MDF. Its imports of tropical plywood are likely to continue the upward trend shown in Figure 17 over the next 2-3 years, as more Japanese mills shut down or change to softwood inputs. Several major importers reported a continuing increase in the proportion of Malaysian plywood imported in 1994-95, in an apparent attempt to diversify supply sources. This trend is most pronounced in China, where almost 40% of 1995 imports of 2.1 million m^3 were reported as coming from Malaysia (note that Malaysia's reported exports to China in 1995, given in Appendix 2, Table 2-4b, account for over half of China's reported imports). The bulk of China's imports, which fell to 1.8 million m^3 in 1996, are directed to the construction industry in the southern provinces.

EU imports of tropical plywood totalled 1.4 million m^3 (worth over $857 million) in 1995, up 12% from 1994 due to increased imports by the UK, Germany and Belgium-Luxembourg. Most of this amount came from Indonesia and Malaysia, with Brazil, Guyana, and inter-European trade providing the bulk of the remainder of European imports. European imports of tropical plywood declined to under 1.3 million m^3 in 1996.

The Republic of Korea (1.2 million m^3), Taiwan Province of China (935 000 m^3), and the USA (920 000 m^3) were also substantial tropical plywood importers in 1995. US imports, 70-75% of which came from Indonesia in 1994-95, fell to 843 000 m^3 in 1996. In Korea, tropical plywood imports rose by one-third in 1995, with no decrease in production, evidence of a large increase in demand. Indonesia has traditionally supplied almost all of Korea's plywood imports, but Malaysia captured 18% of the market in 1994, rising to 31% in 1995.

Prices

Export price trends from mid-1990 through late 1996 for major log and sawnwood species and plywood from each exporting region are examined in this section. The price trend charts contained in Appendix 7 were developed based on the nominal prices reported biweekly by the ITTO/International Trade Center Market News Service (MNS) until the end of 1995, and by the ITC MNS thereafter. These nominal prices were corrected to exclude inflationary factors affecting major consumer markets and converted to real prices (1990 = 100) using the G5 Manufacturing Unit Value inflation index as calculated and used by the World Bank for calculating real commodity prices. Both nominal and real price trends are given. As not all species were reported in each issue of the MNS, some charts only portray partial price series. An attempt was made to prepare price trend charts for species identified as important by importers/exporters. Some species covered in previous years have dropped out of regular trade due to export bans or restrictions, and are therefore not included in Appendix 7. Details of species banned from export by individual countries are included in the Country Notes where this data has been provided. Species are identified by internationally accepted pilot and scientific names; the local names of timber species used by producer countries, where they differ from pilot names, are given in Appendix 6.

For logs and sawnwood, the values employed reflect FOB (free on board, port of origin) prices and the price trends are aggregated by the most frequently traded grades for a given species across countries within a region (when more than one country exported a given species) and across size and quality categories, for each period reported. The MNS often quoted high and low prices within grades for major species. These were averaged to create a single price trend for all species charted. High and low prices result from differences in grade, quality, markets, etc.

For plywood, the values employed reflect CIF (cost, insurance, freight - Europe) prices of a specified plywood product for each of the major producing countries, as stipulated by the base price lists developed by the major plywood trade organizations. A standard grade and thickness (9 mm Moisture Resistant B/BB grade) of plywood was selected for consistency and ease of comparison between plywood from different regions. In addition, price charts (cost and freight) for three major categories of plywood imported to Japan from 1992 to 1996 are included.

The charts shown in Appendix 7 indicate recent trends in regional prices, and are included due to the importance of the price factor in tropical timber markets. The price figures are indicative only of trends during the period under review; actual prices paid by merchants or received by producers may vary considerably with quantity traded, specifications, port of

shipment and quality within grade. More up-to-date price data can now be obtained from ITTO's bi-weekly Market Information Service (MIS), which since ITC's MNS ceased publication in May 1996 is the only regular source of price data on a range of tropical timber products. Efforts will be made to continue collating data for many of the species included in Appendix 7 by integrating data collected by the MIS with the existing price database.

Average export prices for species/products traded in 1994 are also included in Appendix 6 for those countries that provided this data in the ITTO Enquiry. No attempt has been made to adjust or verify these nominal prices. Finally, Appendix 3 contains the average unit values of exports and imports for all products and countries in 1994-95. While these figures are highly aggregated, including all species, grades and markets for each product (and in many cases based on estimates due to poor responses to this portion of ITTO's Enquiry), it should be noted that the unit values for some countries/products still appear to diverge widely from the regional price trends given in Appendix 7.

Logs

Appendix 7 shows indicative real and nominal FOB price trends for eight species and/or grades of African and eight species/grades of Asian log exports from mid-1990 to late 1996. Real FOB prices for most important species of African log exports were relatively stable or declining during the 1994-96 period, although real prices of okoume and acajou were both rising slightly in the second quarter of 1996. This was due to continuing demand from Asian markets for these popular species, as well as the decline in log availability brought about by export bans in Ghana and Côte d'Ivoire. Species of the genus *Entandrophragma* (one of the most valuable African log species) were proposed for listing in Appendix II of CITES in 1994, but listing was not approved. Real prices have since dropped dramatically, to less than $\$250/m^3$ (just over $\$275/m^3$ nominal) for sapelli and sipo (two well-known species of this genus). The factors surrounding this price decrease, which commenced from real levels of over $\$300/m^3$ for sipo in late 1994/early 1995, are unclear. However, the devaluation of the CFA franc and the large increase in export volume in 1994 probably had a dampening effect on real African export prices over this period. The continuing interest in some species of African logs by Asian consumers, coupled with the log export bans already referred to, should have a generally positive effect on prices of those species still available for export in the short-term, although real prices are unlikely to increase significantly in the face of global competition.

Real export prices of most species of Asian tropical logs increased sharply in the first half of 1993, falling back in the second half of the year before experiencing another upward surge in the first half of 1994. This volatility was largely due to the perception of log shortages in Asia, brought about by the ban on log exports from Sabah together with tightening supplies from other tropical and non-tropical suppliers. Real prices more than tripled in dollar terms in some cases, causing substantial confusion in major markets. Prices underwent a generally steady decline throughout the last three quarters of 1994 as the Sabah export ban was relaxed (although only plantation logs were subsequently exported) and importers adjusted to the new supply situation. Real Asian log export prices have remained more or less stable in 1995 and 1996, with several important species/species groups exhibiting slight upward trends in the second quarter of 1996. The graphs in Appendix 7 show that most species of Asian logs were trading at real prices of $\$100$-$\$150/m^3$ at the end of 1992, and that a real sustained price increase (averaging over 50%) in Asian tropical log prices has occurred since then.

Sawnwood

Real and nominal sawnwood price trends (FOB) for eight African species/grades, four Asian species/grades and eight Latin American species/grades are included in Appendix 7. Real

African sawnwood prices firmed in 1994 for several important species (acajou, dibetoh, iroko, niangon, sapelli and sipo). The gradual firming in real prices of most of these species followed at least two years of declining real prices. Real prices dropped sharply in 1995 for most species, due to decreased demand. Real prices for sipo (the most valuable African sawnwood export species shown in Appendix 7) fell from $\$750/m^3$ in mid-1994 to under $\$500/m^3$ two years later. As African sawnwood exports are directed almost entirely to Europe, and since European consumption will not rise significantly, African sawnwood price trends will probably at best remain level in coming years.

Asian sawnwood price trends were also generally downward in 1995 and the first half of 1996, as shown in Appendix 7. The trends in real prices of both dark and light red meranti show the follow-on effects from the increase in Asian log prices observed in 1993-94. The two types of meranti sawnwood showed a slightly lagged price spike following the log price increase, as would be expected. Real prices for both types peaked at around $\$800/m^3$ in mid-1994. Dark red meranti continued to fluctuate around this level for much of 1994 before dropping to a real price of around $\$600/m^3$ by late 1995, where it fluctuated in the first two quarters of 1996. Real prices for light red meranti have dropped to the same level, although no data have been available for this species since mid-1995. With Asian sawnwood exports shrinking, price increases are possible.

Three of the Latin American sawnwood species that were reported in the MNS are relatively well known and traded in substantial volumes (mahogany, cedro and virola). Appendix 7 shows real price trends for these species, as well as for several others. Real price trends for Latin American species of sawnwood have been mostly stable in 1995-96, with a few notable exceptions. Mahogany prices have moved steadily upward during the period, after falling through most of 1994. Prices reached $\$800/m^3$ early this year ($\$925/m^3$ nominal), with markets reacting to decreased supplies and a ban on new concessions for mahogany and virola in Brazil, a main supplier (see Country Notes). Continuing attempts to ensure that mahogany is sourced from sustainable supplies will probably lead to further price increases for this species. Prices of Latin American sawnwood exports in general should remain stable or increase in response to improved economic performance in major markets such as the USA and the UK

Veneer

Veneer prices were not included in the coverage of the MNS. Tropical veneer prices were not regularly quoted by any other available sources during the period under review. Based on the export value data in Appendix 3, the nominal unit FOB price of Malaysian veneer exports was $\$393/m^3$ in 1993. African unit values for veneer exports are generally higher, but the export values and/or volumes reported by some of the African countries may not be reliable. Average values for veneer species traded are also given for several countries in Appendix 6, based on country responses to the ITTO Enquiry. Brazil's nominal unit value for veneer exports in 1995 was estimated at $\$542/m^3$. The regional price differences reflect species and market differences, as well as price differentials for sliced decorative and peeled veneers (which ideally should be considered as two separate products, although this is impossible under the current system of customs classification). Although little data is available on veneer prices, it is reasonable to assume that prices will remain stable or increase as exports decline and major plywood manufacturers like Japan, Korea, China and the EU continue to seek substitutes for dwindling tropical log supplies. Appendix 6 (Table 6-2-c) shows that while African and Latin American countries exported a range of species as veneer in 1995, most of Malaysia's exports are of three species: meranti, kapur and keruing.

Plywood

Plywood export prices are generally regulated by price lists issued by trade associations [Indonesia (APKINDO) - INDO 96; Malaysia - M96; Brazil - K14 and BR96], with prices quoted as per the list plus a given percentage (e.g. M96 plus 2). The ITTO price database converts these quotes into nominal and real dollar figures. Note that the plywood price lists are based on CIF (or C and F) prices - in the case of the first three graphs in Appendix 7, Europe is the common destination for comparison purposes. Appendix 7 includes graphs showing trends in real prices for Indonesian, Malaysian and Brazilian plywood. Three graphs showing plywood price trends in Japan (the major import market for this product) through mid-1996 have also been included, based on data published regularly by Japan Lumber Reports.

Plywood prices from all three of the exporting countries shown in Appendix 7 have been quite stable in 1995-96. The inter-dependence and competition between the three countries is evident in the similar trends and price levels observed in the charts. All three exporters released new price lists more or less simultaneously in 1996. Plywood prices increased quite markedly from all three suppliers following the increases in Asian log prices in 1993 discussed previously. Real prices peaked at about $\$500/m^3$ from Indonesia and Malaysia in mid-1993, with Brazilian exports hitting their peak of around $\$450/m^3$ a couple of months later. Prices from all three exporters dropped sharply in 1994, however, due to competition with each other and with substitute products for market share. Real prices have stabilized around the $\$400/m^3$ mark ($\$450/m^3$ nominal) since. The Japanese price graphs in Appendix 7 show slightly increasing real (and nominal) prices in 1995, with a levelling in the first two quarters of 1996. Given the strength in the Japanese housing industry discussed earlier, demand in this important market will remain strong, with positive pressure on prices possible. The primary species contained in export plywood in 1995 are given in Appendix 6 (Table 6-2-d) for those countries which reported this data.

Secondary Processed Wood Products

Although secondary processed wood products (SPWP) are not explicitly included in the statistical coverage spelled out in the ITTA, their importance to members is evident from the Agreement's objective of promoting further processing of tropical timbers and the inclusion of this objective in the ITTO Action Plan. The data presented here were derived from the International Trade Centre's PC-TAS database, which contains foreign trade statistics for major importers/exporters. PC-TAS allows data for 1990-94 to be extracted from the UNSO Comtrade data base for a range of major reporting countries. This chapter is based on these data, which are summarized as Tables 4-1 to 4-3 in Appendix 4, as well as any information on further processing provided by members in their responses to the ITTO Enquiry.

Major Importers

The primary categories of SPWP in trade are wooden furniture (the major category, accounting on average for 70% of trade values), builder's woodwork, products for domestic/decorative use (table/kitchenware, ornaments picture frames, etc.), packaging/pallets, coopers' products (casks, barrels, etc.) and other manufactured products (tools, handles, brooms, shoe lasts, etc.). Table 4-1 shows the top ten ITTO importers of SPWP from all sources, with imports from developing market economies plus China (DMEC) and from ITTO producers also given for 1990 to 1994. Note that the values quoted here are subject to the same caveats regarding exchange rate fluctuations given in the previous chapter.

ITTO consumer country imports of SPWP from all developing countries and China were 23% of total imports of these products from all sources in 1994, almost double the level achieved five years earlier. Imports from ITTO producer countries increased their share of global import value by ITTO consumers from 7 to 14%, reaching $3.34 billion in 1994. This value was 28% of the total value of primary tropical timber product imports by ITTO consumers in 1994, with this proportion set to increase as imports of primary products stagnate or shrink, and those of SPWP continue to grow. A measure of this growth is that while ITTO consumer country total imports of SPWP increased by only 15% from 1990 to 1994, imports from ITTO producers increased by 142%. As the trends for ITTO consumer imports from all developing countries are closely correlated with imports from ITTO producer members, figures for the latter group will be emphasized here.

The top ten ITTO importers (all consumer members) accounted for over 90% of ITTO consumer imports of SPWP from ITTO producers in 1994, up slightly from 88% in 1990. The United States is by far the largest single importer of SPWP from ITTO producer countries, which accounted for almost one-quarter of its huge $5.4 billion import market for SPWP in 1994. US imports from ITTO producers more than doubled in value from 1990 to 1994 to $1.23 billion, although market share grew more slowly (from 14 to 23%) as imports from developed countries kept pace. The EU is the world's largest importer of SPWP, with the twelve member states in 1994 importing $11.6 billion worth of these products, led by Germany, France, the UK, the Netherlands and Belgium-Luxembourg, which together accounted for over 90% of total EU imports. However, as Table 4-1 shows, the European countries import a relatively small proportion (13% in 1994) of their SPWP from developing countries. Imports from ITTO producers have driven the growth in EU imports from developing countries, rising from only 4% of the EU market in 1990 to 10% in 1994 (which although a small share, exceeded $1.1 billion, more than the value of total Japanese imports from ITTO producers). In Germany, where imports of SPWP from all sources are almost equivalent to those of the USA, only 7% of the market was captured by ITTO producers in 1994. Japan is the most open market in terms of imports of SPWP from developing countries

in general and ITTO producer members in particular. ITTO producers captured 37% of Japan's $1.25 billion market for these products in 1994, by far the largest share in all of the major markets. Japan is the only major importer of SPWP that obtains more than half of its imports from developing countries. Transportation costs and regional marketing relationships play a role in the differences in market share held by ITTO producers in the major markets for SPWP, but there is clearly a substantial opportunity for all developing countries to increase their share of the huge European market for these products.

Several developing countries are also becoming important importers of SPWP, although the coverage of these by PC-TAS is not as detailed as for developed countries. Table 4-3 in Appendix 4 shows the top ten developing country importers for which data was available, as well as import levels for several other ITTO producers (only Malaysia made the top ten). It is not surprising that the top four developing country importers are all newly industrialized economies. The large imports implied by official trade statistics for small countries like Reunion, Martinique and Guadeloupe are questionable; these countries may be serving as entrepot ports.

Major Exporters

Table 4-2 shows the top ten developing country exporters of SPWP ranked by value of 1994 exports. Indonesia, Malaysia, Thailand, Brazil and the Philippines are the major ITTO producer exporters of SPWP. Other ITTO producer members for which SPWP export values were available are also listed in Table 4-2; most of these have relatively small and stagnant exports of SPWP. The top five ITTO producers accounted for total SPWP exports of about $3.46 billion in 1994, mostly (almost $3 billion) to developed countries. Comparing this figure to the total imports of ITTO consumers (which include all important importers of SPWP) from ITTO producers in 1994 ($3.34 billion), shows that these five countries accounted for around 90% of ITTO consumer imports from producer countries. The other major exporters in Table 4-2 are either ITTO consumer countries (Korea and China, including Taiwan Province of China) or non-member tropical countries (Mexico, Singapore and Hong Kong). Although developing countries enjoy some degree of tariff relief under the Generalized System of Preferences (GSP) or other schemes for these products in many of the major markets, tariffs in many countries remain high compared to those for primary products. This is one reason why the contribution of developing countries to total imports of such products by ITTO consumers is still below their potential.

The newly industrialized economies (NIEs) of Taiwan Province of China, Hong Kong, Republic of Korea and Singapore accounted for the bulk of the exports of SPWP from developing countries in the 1980's. Rising labour costs associated with growing economies together with decreasing wood supplies has resulted in increased imports of finished goods by these producers (see Table 4-3), leading to the development of new markets for and/or joint ventures with other producers in the Asian region. Total SPWP exports of Singapore, Korea and Hong Kong rose 13% from 1990 to 1994, while total imports climbed 60%. In addition to increasing costs, all of the NIEs have had their GSP privileges curtailed in many developed country markets since 1989 -1990, due largely to the healthy state of their economies. This has further enhanced export opportunities for Asian (and other) ITTO producers. Table 4-2 shows that Asia is the dominant region in terms of SPWP exports, with Latin America (primarily Brazil and Mexico) a distant second. High value processing in the African region is still minimal, due largely to a lack of capital, infrastructure and raw materials, although many African governments are making the development of secondary processing a priority (see Country Notes). This breakdown between the main tropical regions is unlikely to change significantly, as countries in all three regions continue to express their desire to further expand

downstream processing capacity. Appendix 5 gives an indication of downstream processing currently installed in some ITTO producing countries ("other" mills).

Indonesia's development of downstream processing has been remarkable, with exports of SPWP increasing by 158% since 1990. Indonesia is now the largest ITTO producing country exporter (and the largest developing country exporter) of SPWP, with exports of $1.28 billion in 1994. The major categories of Indonesian exports are rattan and wooden furniture and mouldings/dowels. An embargo on the export of raw or semi-finished cane and rattan in 1988 was followed by rapid growth in the rattan furniture sector, with export earnings rising from $4.5 million in 1986 to $242.5 million in 1991. Wooden furniture export earnings rose similarly following the log export ban in 1985, from $4.8 million in 1986 to $139.9 million in 1991. There are currently over 1000 furniture companies/factories in Indonesia, providing employment for an estimated 500 000 people. As mentioned in the previous chapter, Indonesia has replaced its export bans on logs and rattan with substantial export levies. Due to the magnitude of these levies, no effect on downstream processing has occurred. Indonesia had also established four pulp mills and about 40 particle board mills as of 1995.

Malaysia's growth in exports of SPWP between 1990 and 1994 has eclipsed even Indonesia's expanding by a factor of four to almost $800 million. Malaysia reported over 500 furniture factories, 302 dowel/moulding factories, 18 reconstituted board mills and two paper mills in 1995. Furniture has been identified in the Malaysian Industrial Master Plan (IMP) as a priority sector for the country's growth, and export targets have been regularly exceeded. About 70% of Malaysian wooden furniture exports are manufactured from rubberwood. Malaysia reported a slowing of growth in exports of SPWP in 1995, to about $842 million, 16% of the value of all wood products exports.

Thailand has also linked the development of its furniture industry to its rubberwood resources, with all new sawmill licenses now contingent on use of this material. As noted in the previous chapter, the ban on logging in Thailand's native forests imposed in 1990 has increased its dependence on imports as well as former rubber plantations for wood supplies; exports of SPWP have therefore grown more slowly than in Malaysia and Indonesia due to wood supply constraints. Most of Thailand's wooden furniture exports are manufactured at least partially from rubberwood. Both Thailand and Malaysia have been successful in penetrating high value markets with their rubberwood furniture, particularly in Japan. Regulations in both countries favour further processing, restricting exports of raw rubberwood.

Brazil is the only other major ITTO producing country exporter of SPWP that has experienced rapid recent growth in exports of these products. From a relatively low base, Brazilian exports grew to almost five times their 1990 level, to $411 million in 1994. This was due to expanding regional economies and trade (about 20% of total exports went to other developing economies) and to growth in the major markets of the USA and Europe. China is also experiencing rapid growth in SPWP exports (over 50% from 1992 to 1994). This trend will continue, as many companies from Taiwan Province of China, Hong Kong and other traditional Asian producers establish furniture and other SPWP joint ventures in southern China because of its low wages.

The development of new processing technologies (e.g. MDF, veneer lamination, etc.) and raw material supplies (e.g. rubberwood) will allow the use of a wider range of tropical wood species in furniture and other SPWP production in ITTO producer countries and consequent increases in production and exports. As stated in previous chapters, domestic markets in many producing countries will become increasingly important as economies grow, particularly in Asia. The contribution of SPWP to the forest sectors of ITTO producers and other developing

countries will continue to grow rapidly in coming years, with corresponding reductions in production and especially exports of primary tropical timber products.

Country Notes

The following notes provide details of relevant recent developments in ITTO producing countries, including information on trade barriers, new or increased processing capacity and domestic economic trends solicited through the ITTO Enquiry. Information from other sources is included where relevant and available. The notes, grouped by producing region, are not meant to be comprehensive country reports. They provide a synopsis of some of the relevant forest sector and related developments in several ITTO producing nations during the period under review.

Cameroon

Cameroon imports very small quantities of wood products (2 000-3 000 m^3 of plywood from Gabon). However, all tertiary wood products are imported, with customs duties varying according to import prices and the country of origin. Special agreements govern customs duties for products imported from countries of the UDEAC zone (Central African Customs and Economic Union). In July 1994 Cameroon approved a balanced 1995/1996 budget which included a 25% tax on the value of all logs exported.

Cameroon adopted a tropical timber trade law at the end of 1993 limiting the size of forest concessions to 200 000 ha and reducing the maximum duration of a concession to 15 years. In 1994, the government introduced a law by which concessionaires would be permitted to export a maximum of 30% of their annual cut as logs. After five years, this would be reduced to zero, so that the entire volume harvested would have to be processed in Cameroon. Tax-free zones have been established to encouraging the processing and export of finished products. Law No. 94/01 of 20/01/94 requires all logging companies to cease log exports by the year 2000, and to process all their production locally. Timber concessions are exclusively granted to companies which have invested in processing industries.

The export market for Cameroon timber experienced good growth in 1993-94, but stagnated in 1995. The stagnation in export demand continued in 1996 with competition from Asian exporters and high prices of Cameroon timbers. In fact, these prices will probably remain high due to high forest taxes. Ten timber species represent more than 90% of the total volume exported in 1995, with ayous and sapele representing more than 50%. In spite of this highly selective harvesting, diversification of customers resulting from entering new markets in Asia, South Africa and North Africa opens new prospects for lesser-used species. Secondary species such as ekop and bete are in demand in the local markets, and the Government of Cameroon is seeking to increase the export of such species, which have doubled in the past 3 years, in both volume and value.

Following devaluation of the CFA franc, prices of imported goods (especially building materials) have increased more than twofold. On the other hand, cutbacks in staff in the public sector and bankruptcy of many firms have generated unemployment and poverty. Many of these unemployed workers have encroached on forest land and are involved in logging activities for supplying firewood as an alternative to prohibitively expensive LPG, and timber for woodwork and structural timber. Unit prices of local sawnwood are declining in view of plentiful supply, e.g. the price of red woods decreased from 125 000 to 100 000 CFA francs/cu.m. during the period 1994-1996, while prices of white woods decreased from 100 000 to 80 000 CFA francs/cu.m. during the same period.

In 1996 the World Wide Fund for Nature (WWF) Belgium, the Belgian Timber Federation and WWF consulted with government officials, NGOs and major concessionaires in Cameroon, with a view to obtaining a supply of certified wood products for the Belgian

market. There was agreement among all parties that certification could help the application of new forest legislation and sustainable forest management in the field.

Côte d'Ivoire

In April 1995, the Forestry Department of Côte d'Ivoire introduced a temporary ban on logging to allow the introduction of a new form of forest concession distribution. This is now based on an assessment of each applicant company's performance since 1988 according to certain criteria including the degree to which the company has increased its value-added facilities and assisted rural development.

In September 1995, the Government of Côte d'Ivoire announced a ban on the export of most logs, scantlings and planks in an attempt to boost its local wood processing industry and to protect its remaining forests. In the second half of 1996, a ban was imposed on the logging of iroko (*Chlorophora excelsa*) in the northern half of the country, to control exports. The ban was affecting log supplies to local sawmills and may increase prices for sawnwood exports of this species.

The government has made the establishment of new wood processing facilities in Côte d'Ivoire conditional on a commitment to undertake the further processing of timber and to use smaller diameter timber from plantations. The local timber market in 1996 is very limited due to a recession in the building industry, which is tending to substitute aluminium for timber.

Gabon

In Gabon, timber products are imported as finished products and their tax system follows the same scale as that for furniture and furniture products. The annual harvest has been set at 2 million m^3. Most of the production is exported in the form of logs.

In an attempt to consolidate forest management and encourage the development of a timber industry, the Government aims to: institute a forest management policy; develop new logging regulations; establish tools for the monitoring and control of logging operations; reform the methods for allocating permits by introducing a single permit so as to secure supplies for local industries; and to withdraw out-of-order permits.

As regards industrialization, the Gabonese authorities will require the advice of an interministerial committee before any industrialization project is started. They will also impose a progressive rate for the local processing of 50% of harvested timber by the year 2000 and 90% by the year 2025, as well as a timber utilization quota at the time of awarding public contracts. A phased reduction of log exports is planned: a decrease of 7% in 1996, 10% in 1997, 27% in 1998, 35% in 1999 and 50% in the year 2000. Coinciding with this will be increased tariffs for all exports in excess of the quotas as early as 1997 and the strengthening of training and research in all occupations related to timber and forests.

Following the 1994 devaluation of the CFA franc, the forest sector has experienced a significant increase in activity which has led to an increase in the number of forestry companies in operation. It has also led to increased demand for some secondary species for which previously there was little demand. Domestic demand has been strong for the construction of hardwood housing and schools.

Ghana

Ghana has banned the export of logs of the following commercial species: African mahogany, African walnut, afrormosia, asanfona, avodire, danta, edinam, emeri, hyedua, kosipo, makore, mansonia, niangon, ofram, wawa and plantation teak. In March 1996 new export

levies on logs of 25 other species were introduced in an effort to maintain sustainable levels of log harvesting and to promote in-country downstream processing. The levy for afzelia, canarium, ceiba, kyenkyen and ogea was raised to 30%, on kusia to 25%, on bombax, dahoma, kaku, ofram and otie 20%, on Albizia, ananta, aprokuma, denya, esa, esia, guarea, potrodum, sterculia, tetekon, wawabima, wonton and yaya 15% and on teak 10%. In addition, levies on air-dried sawn timber of 9 well-known species were increased: these now stand at 30% for afrormosia, 15% for hyedua and odum and 10% for edinam, mahogany, makore, sapelewood, utile and wawa.

With these bans and levies, the government has curbed the rapid increase in the volume of logs harvested for export observed in 1993-94 (see Markets, Trade and Prices). A timber terminal has been built recently at Takoradi to consolidate and containerize Ghana's timber exports. Loading equipment has also been purchased.

The Forestry Department has assumed responsibility for the management of the nation's timber resources outside the Forest Reserves and has begun a survey of the timber in these areas. This measure is intended to bring to sustainable levels the harvesting of timber outside the reserves. A National Timber Task Force has been formed to eradicate illegal chainsaw operators operating outside the reserves.

Under the new Forest and Wildlife Policy, the Ministry of Lands and Forestry, in consultation with various stakeholders, has drafted a long-term Forestry Development Master Plan as a basic framework for sector institutions to prepare and implement development programmes. The Master Plan identifies potential projects for public participation and international donor support and this has been presented at an International Donor Roundtable on Forestry Development and Wildlife Conservation in Accra.

A review of existing Forests and Wildlife legislation towards consolidation of all forestry and wildlife laws in an updated and unified code is in the process. These moves are geared towards Ghana's commitment to sustainable development of tropical timber.

Since the Economic Recovery Programme, the policy for the wood industry has been to encourage more downstream processing as a means of reducing volumes consumed while increasing yields and incomes. This is being done through a package of incentives submitted to the Ghana Investment Promotion Centre to attract investments for growth and development of further processing. Already, arrangements have been put in place for the provision of technical assistance to the private sector to bolster further processing in Ghana. Under the Ghana Forest Resource Management Project, the government has also made loans available, through Ecobank (Gh) Ltd for industry refurbishment aimed at facilitating further processing.

Based on the current status of forest resources, future promotion and development of species for use by the trade and industry will be focused on what has been termed by the Ghana Forestry Department as the 'pink star species'. These consist of about 30 lesser-used species thought to be commercially exploited but at very low rates, together constituting less than 50% of the annual allowable cut. It is also envisaged that a shift to the use of the pink star species will enhance sustainable forest management efforts since, over the years, certain traditional species have been over-exploited.

The harvesting of rattan/cane from natural forest is increasing dramatically, although there remains a need for proper co-ordination between the numerous small scale producers. Skills development in production and design to effectively promote rattan and cane products in Ghana is also urgently required.

Domestic building activity and housing starts continue to grow in line with government policy to provide affordable houses for workers. The general enabling environment created by the government has induced private sector participation in estate development and investments in this area are visible. On the domestic scene, there is a trend towards the use of plastics as a substitute for wood in the manufacture of crates, tables and chairs. Aluminium and glass wares are also gaining prominence in the manufacture of door and window frames. These are generally being used by the private sector, namely hotels, restaurants, beach resorts, churches, etc.

The Ghanaian government has announced its intention to set up a national working group to develop new forest management standards which will eventually lead to a certification and labelling scheme in the country. The working group is to consist of government officials and representatives from Ghanaian forestry agencies, the Ghana Standards Board, landowners/chiefs, an environmental non-governmental organization and the timber industry.

Liberia

Liberia's civil war has resulted in the 'creaming' of the natural forests by the warring factions, neglect of plantations and damage to infrastructure, as well as overall damage to the country's economy. During the break in fighting in 1995, a Malaysian company shipped timber machinery and supplies worth 10 million Malaysian ringit to the country as part of plans to log about 154 000 hectares of land near Monrovia.

India

In April 1996, the Government of India liberalized imports of wood products by lifting import licensing requirements on almost all items in Harmonized System code Chapter 44. In August 1996, the Government cut wood product import duties from previous levels of 15-50% to 10-30%.

India's forest cover continues to decrease while demand for timber increases. The government has proposed a plan to lease large tracts of degraded forest and wasteland to wood-based industries for commercial planting. The government will ask industry to grow forest species on 15-20% of the degraded land on lease.

Indonesia

Import duties of certain forest products were lowered by 5–10% in 1996. Current import duties for those forest products within the Harmonized System code 44.01 and 44.21 now range from 0 to 30%. This followed a statement from the Minister of Forestry in which he suggested Indonesia may have to import logs as a short-term means of coping with a shortage of raw material for the wood-based industries. He said that logs may not be imported from neighbouring countries such as Malaysia and Papua New Guinea because of the potential for illegal trading. Instead, they should come from countries such as Vietnam, Myanmar and Solomon Islands.

A boost to log supply in the short term will come from a Government-instigated 1 million hectare agricultural development project in Central Kalimantan. According to the Minister of Forestry, the logs generated from the land clearing for this project will supply around 6 million m^3 of logs per year over a three year period.

A World Bank report suggested that the current rate of logging in Indonesia, estimated by the Bank to be about 40 million m^3 per year, could affect the country's plywood exports by the turn of the century, unless management of its forestry sector was deregulated to make it more transparent. The estimated sustainable yield according to the Bank is 22 million m^3 per year.

The Indonesian Government was reported to be considering the issue of new fiscal, monetary and administrative policies for selected labour-intensive industries, including timber and furniture, in a bid to boost exports. The new policies were also aimed at simplifying administrative procedures such as the processing of export-import documents.

The Indonesian Forestry Association and the Indonesian Ecolabelling Institute signed a memorandum of understanding during 1996 to support the development of a credible certification system by the year 2000.

In 1995, a presidential decree banned the clearing of forests by fire in Indonesia. This follows large fires in 1994 which were reported to have destroyed some 5 million hectares of forest.

Due to increased domestic demand for pulp and paper, a policy to expand the capacity of this processing industry is being promoted. Plantations of fast-growing hardwood species are being established by the Government of Indonesia through its Ministry of Forestry to meet the anticipated increase in wood demand by the pulp and paper industry. To date, a total area of approximately 1,718,035 ha has been forested with such fast growing species as *Acacia mangium* and *Eucalyptus* species.

Indonesia's Panin group was awarded a 50-year concession covering 1.43 million hectares of forest in the northeast of Cambodia in 1995.

The growth of Indonesia's middle class has led to an increased demand for wood in house construction. However, most wood currently used is not treated with chemicals and this has a significant impact on timber consumption. Hence, preserving wood is now being escalated by the Indonesian Government.

Malaysia

Log and sawnwood imports to Malaysia are duty free, as are imports of face veneer. Core veneer and mouldings have an import tariff of 25%, while the tariff on plywood imports is 45%. Peninsular Malaysia and Sabah both prohibit the export of logs, the latter since January 1994. While there are no plans to further expand the forest industry of Sabah, several projects are planned in Sarawak. The state's first MDF mill will be built by a Japanese joint venture with the Sarawak Timber Development Corporation and other local investors.

In 1996 the government announced new export levy rates on sawn timber, veneer and selected timber products from Peninsular Malaysia, taking effect from 1 June. The new levy structure, which contains higher rates for some timber products, was last revised in September 1993.

Domestic building is expected to continue buoyant over the next two to three years, boosted by large projects such as the new airport at Sepang, the Kuala Lumpur City Complex and infrastructure development projects in preparation for the Commonwealth Games in 1998 in Kuala Lumpur. Building of low to medium cost houses will continue to be the government's priority in Malaysia's five year plan. Timber consumption in the form of finished products such as wooden doors, windows, panels and cabinets will also increase in the housing and building sectors.

Work began this year on two large pulp mills in Sarawak. One of the ventures was granted a 200 000 hectare timber concession to provide timber for the mill in its first years of operation, while the other will use low-grade timber from the site of the proposed Bakun dam for its first four years. Both mills plan to establish *Acacia* plantations to feed the mill in subsequent years.

The Malaysian state of Sabah has changed its rules on the allocation of timber concessions. A committee on the implementation of forestry policy has been established which will oversee the allocation of timber concessions through a tendering system. In Sarawak, the construction of the Bakun dam will result in the clearing of 69 000 hectares of forest, producing timber reported to be worth $200 million. This project was halted by a high court ruling in 1996 which found that it had violated environmental laws, although the ruling was overturned and the project commenced.

The European Union announced funding for a project to map and monitor Malaysia's forests. The project aims to produce detailed maps of woodland areas in Peninsular Malaysia and will provide training in the use of the maps and databases for Malaysian State Forestry Department personnel.

Malaysia is actively promoting further processing industries, such as value-added furniture and joinery, for export. Chipboard, medium density fibreboard and laminated board production capacities are also expected to increase. The composition of export species is not expected to change much; however, in the near future there will be an increase in export of plantation species.

Papua New Guinea

Log export taxes were increased in April 1994, with the basis for calculating being changed in November 1995. The average log export tax rate of current prices is about 13% of FOB. In 1996, there were suggestions that the PNG government was contemplating a large increase in royalties on export logs. This was resisted by the trade and at the time of writing no firm decision had been taken on the matter. High rates should encourage greater domestic processing but there is little evidence yet. The Government is currently finalizing funding arrangements for a study to be undertaken which will investigate the best options for domestic processing in PNG and the most efficient package of measures to encourage viable domestic processing ventures. The Government appears to be caught between the conflicting needs of employment creation and revenue generation. Hopefully, an impending processing study will provide the basis for a workable long term domestic processing policy.

PNG reported 1995 import tariff levels of 30% on logs and sawnwood, and 175% on plywood and veneer. Current government policy is to reduce log exports by 10% each year from 1995-2000, following which a log export ban is to be imposed.

Papua New Guinea is setting up a domestic logging code in line with a structural adjustment program laid down by the World Bank and the International Monetary Fund in granting a $340 million concessional loan to the nation. PNG adopted a National Forest Plan and a Logging Code of Practice during 1996.

Both the Japanese and Korean markets continue to dominate the PNG log export markets. However, it appears that the Philippines has become a very strong competitor for the lower groups of species as well.

There has been an increase in building activity, especially for domestic dwellings in major urban and mining townships. Home ownership schemes have been introduced by Government and corporate bodies for their staff. There has been a decrease in interest rates on housing loans to complete the scheme.

The Malaysian-owned timber company SINO-PNG Pty Ltd, was reportedly looking for partners during 1996 to undertake downstream processing in PNG after it was granted a five-year logging concession covering one million hectares of forest.

Philippines

In its response to the 1996 Enquiry, the Government of the Philippines noted that no expansion of tropical timber processing capacity is expected in the next few years, citing a lack of raw material supply and excess mill capacity. The major concern of government now is the infusion of new machinery and equipment to increase the efficiency and competitiveness of local processors in the world market.

The Philippines imposes import tariffs of 3% on logs, 30% on sawnwood and 50% on veneer and plywood. Log and sawnwood exports are restricted to those arising from plantation forests or (for sawnwood) from imported logs.

Many lesser-used timber species are left in the forest during harvesting operations. In view of the diminishing supply of timber, the utilization of such species would expand the resource base of the local wood-based industries and thus reduce the pressure on the commercial species. Some lesser-used species are now finding their way to the local markets. Among them are toog (*Combretodendron guadrialatum*) which is commercially known as the Philippine rosewood, binuang (*Octomeles sumatrana*), logtob (*Duabanga moluccana*), alupag (*Euphoria didyma*) and amugis (*Koordersiodendron pinnatum*). Studies are presently being carried out by the Forest Products Research and Development Institute (FPRDI) to determine their most suitable uses.

The Philippines has a large number of micro and cottage industries based on minor tropical forest products. Among the most important non-wood forest products are rattan, bamboo, almaciga resin and Manila elemi. Rattan and bamboo furniture and handicrafts are among the major forest products exports of the country. Almaciga resin and elemi are being exported in their raw form.

The real estate and housing construction industry during the third quarter of 1994 remained on the upswing as the government concentrated on providing low cost dwellings for people on lower incomes. The sector registered a combined growth of 2.82% during this period; similarly, consumer lending activities and financial services experienced 5.26% growth in real terms. The housing sector will continue to boom, possibly until the end of 1998, posting a demand of 600,000 units per annum with an estimated P90 billion in financial support for mortgage lending.

There is increasing substitution of tropical timber by non-wood products due to the scarce supply of wood as a result of the logging ban in virgin forests. Among the non-wood products now being utilized for housing construction are coconut lumber, bamboo and, lately, steel.

Thailand

Since 1988, a tariff of 1% has been imposed on imported logs and 2% for sawnwood (except for planed, sanded or finger-jointed products). As of 1 January 1995, tariffs on many wood products have been reduced. For those products bearing certificates of origin from ASEAN countries, further reductions apply.

In its response to the 1995 Enquiry, the Government of the Thailand noted that no licenses for new sawmills will be issued, except for those that utilize rubberwood as their raw material. Increased capacity in existing wood processing mills is not expected because the industry has

to rely heavily on imported raw material. However, there has been an increase in the number of sawmills intended specifically for the processing of *Hevea brasiliensis* (rubberwood) and *Eucalyptus* species which are readily available from plantations. A 1989 government policy banned logging in and restricted the export of roundwood from Thailand's natural forests. A 1993 government policy restricts the re-export of imported logs. Thailand's major import species are various *Dipterocarpus* species and *Tectona grandis* (teak). Exports primarily consist of rubberwood and teak finished products. Demand for housing is growing due to increasing population. However, the scarcity of wood necessitates non-wood substitutes in construction. The trend is toward using wood in only minor housing components. The Thai timber processing industry has been supplementing its timber supplies from neighbouring Cambodia, a practice which has been the focus of recent controversy between the two countries.

Since logging was prohibited in 1989, sawmills in the country have relied on raw materials both in the forms of logs and processed wood from abroad, particularly Malaysia, Myanmar, Cambodia and Laos and other more distant countries. The products made are for consumption in the country and also for export.

As population increases, demand for building and housing also expands each year. However, when wood products are expensive, they are used only where necessary in construction. Sawmills have tried to use other raw materials which are easier to find and less expensive such as pararubber wood or *Eucalyptus* wood. Also sugar cane fibre, which is a by-product from sugar industry, has been used instead of wood in the production of fibreboard for construction. The state-owned Thai Plywood Company plans to build a Bt1.4 billion MDF factory in Saraburi and has also acquired a plot on which to build another plywood plant in the same town, presumably to process rubberwood and/or imported logs. This is despite recent erosion of Thai Plywood's profits by rising timber costs.

Bolivia

An independent ITTO mission to Bolivia was undertaken in 1995-96 at the Bolivian government's invitation. It was requested to make recommendations for an integrated national programme to enable Bolivia to develop a sustainable forest industry based on its natural forest resources and taking into account the needs and aspirations of indigenous communities. The Mission reported its findings to the XXI Session of the Council in Yokohama. Coinciding with the Mission, the Bolivian Congress passed a new forestry law, superseding the General Forestry Law of 1974.

Brazil

According to a Ministry of Science and Technology study released in 1996, the annual rate of deforestation in the Brazilian Amazon region increased from 11,130 km^2 in 1991 to 14,896 km^2 in 1994. President Fernando Henrique Cardoso signed two decrees in an attempt to slow this rate. One banned the extraction of mahogany (*Swietenia macrophylla*) and *Virola surinamensis* for two years. The other limited farmers to clearing 50% of their lands in the states of Acre, Pará, Amazonas, Roraima, Rondônia, Amapa and Mato Grosso, and in parts of Tocantins, Goias and Maranhao. Where the land is covered by 'virgin' rainforest, only 20% may be cleared. Meanwhile, the Andean Development Corporation agreed to loan Brazil $86 million to pave a 620 km stretch of a road between Manaus and Caracarai, virtually completing the paving of the BR-174 highway from Manaus to the Venezuelan border.

Colombia

Colombia imposes tariffs on forest products imports from all countries outside the Andean Pact as follows: logs and sawnwood - 20%; veneer and plywood - 50%. The government has also

approved Forest Incentive Certificates (CIF) to encourage timber production, and Tax Reimbursement Certificates (CERT) to encourage timber exports. Currently only 17 of 150 commercial timber species in Colombia make up over 70% of production, showing the potential of lesser used species. As the shortage of high-value species has become more evident, the industry has had to improve the understanding and technical management of more abundant species, many of which can be substitutes for more valuable species in their applications.

Some minor tropical forest products (other than timber) are being produced, such as Chontadura (*Pactris* sp.) and palm hearts (*Euterpe Cuatrecasana*), which are marketed domestically and internationally, respectively.

Since 1994 and particularly 1995 there has been a considerable decline in domestic building activity due in large part to high interest rates and other domestic economic factors.

Guyana

The growing interest in certification has affected at least one timber export contract from Guyana. The Borough Council in southern England placed a contract for 12 000 m^3 of Guyanese greenheart (*Chlorocardium rodiei*) to be used in the renewal of groynes at Eastbourne on the south coast. The contract was placed on the understanding that the timber would carry a 'meaningful' certificate demonstrating that it was obtained from a sustainable source. The contract was withdrawn when it was determined that the certificate had been issued by the company responsible for supplying the timber, although the company had commissioned a report from an independent certification agency. Timber was subsequently obtained from a Forest Stewardship Council-approved forest in the country. Construction of the sea defences will start in 1998 and will take eight years to complete.

To date, the Guyanese timber industry has relied heavily on just a few species. With expected growth and expansion in the furniture and plywood industries many of the lesser used species are expected to be utilized in larger volumes.

The building sector in Guyana is now focusing on concrete outer structure with timber limited only to interior work.

Panama

There is now a greater tendency to use traditionally lesser used forest species due to a shortage of traditional timber species; this tendency is particularly evident in the case of hardwoods.

Peru

In August 1996, the Peruvian government introduced a temporary ban on logging in various regions of the country while it reviews compliance with management plans. It also prohibited the transport of logs along three major rivers bordering Brazil, Bolivia and Colombia and the export of rough-sawn timber of mahogany (*Swietenia macrophylla*) and *Cedrela oderata*, permitting their export only as value-added products.

Peru's import tariff rates are 15% on FOB values for roundwood, sawnwood, veneer, plywood, fibreboard, etc. The government is promoting and encouraging national and foreign investment within a free market economy. An increase is expected in the national timber industry, in terms of both logging and timber processing, prompted by a demand increase in the domestic and export markets. A general increase is expected in the building sector during the next few years due partly at least to an expected decrease in mortgage/interest rates as a result of greater availability of capital; therefore, the timber demand for construction will

increase. Lesser-known tropical timber species are gradually being incorporated into the trade for various uses.

Trinidad and Tobago

With the proposed divestment of the state-owned TANTEAK, it is expected that there will soon be an increase in the volume of teak available for export. Lesser used timber species are not important in Trinidad and Tobago, but they are expected to become more important as awareness grows of the potential for handicraft, medicine, etc.

Venezuela

Import tariffs into Venezuela are 5% for logs and between 10 and 15% for further processed forest products. However, imports from other Andean Pact countries are duty-free. Current trade policy regulations in Venezuela detail the phasing out of tariff and non-tariff restrictions. This is aimed at adjusting the macro-economic framework to the changing economic conditions in Venezuela and throughout the world. One of the objectives established by the Government of Venezuela is the expansion of industrial production capacity, and four major programs have been adopted as strategies within the Venezuelan Agenda, i.e. Macro-economic Stabilization, Product Processing, Institutional Reforms and Production Re-structuring. Within these programs the government has planned the following actions: production implementation under management plans, revision of logging concessions under annual permits, facilitating the access to forest concessions by the small and medium scale industry, and introducing new species into the market, among others.

Venezuela sees the main obstacles to further development of its forest products industry as a lack of quality standards, the small range of species currently being utilized and obsolete or inadequate technology. The high price of concrete relative to timber means that timber could become more widely used in the construction industry. However, the low production capacity of the timber processing industry and the lack of kiln-drying facilities is restricting development of this domestic market.

Housing construction in Venezuela is still based on the traditional block and cement model, using timber for struts, form work, frames, doors, windows and decorative components. Since timber is not a central element in construction, consumption is expected to remain at the same level in the medium to long term.

References

The following reference texts, periodicals, etc. were consulted in the preparation of the Review:

ATIBT. 1996. *Tropical Timber General Nomenclature*. Paris.

ECE/FAO Timber Bulletin. 1996(a). *Forest Products Prices 1991-1995*. Volume XLIX, No. 1. Geneva.

Ibid. 1996(b). *Forest Products Annual Market Review 1993-1994*. Volume XLIXI, No.3. Geneva.

Ibid. 1996(c). *Forest Products Statistics 1991-1995*. Volume XLIX, No. 2. Geneva.

FAO. 1993. *Forest Resources Assessment 1990 - Tropical Countries*. Rome.

Ibid. 1995. *Monthly Bulletin: Tropical Forest Products in World Timber Trade. 1994 Annual Totals*. Rome.

Ibid. 1996. *Forest Products Yearbook-1994*. Rome.

ITTO 1994. *Report of the Working Party on Certification of All Timber and Timber Products*. Document PCM,PCF,PCI (XIV)/3 Rev. 1. Yokohama.

IMF 1996. *World Economic Outlook*. Washington, D.C.

World Bank. 1996. *Market Outlook for Major Primary Commodities*. Washington D.C.

1995-96 issues of the following publications were also consulted:

Asian Timber
Asia Pacific Forest Industries
Brazil Environment
E-Sheet
Far East Economic Review
Financial Times
ITTO/ITC Market News Service
Japan Forest Products Journal
Japan Lumber Journal
Japan Times
Malaysian Timber Bulletin
Maskayu
The Economist
Tropical Timbers
UCBD European Imports of Tropical Timber
USDA Foreign Ag. Service (Unofficial Reports)
World Rainforest Report
World Wood Review
World Bank Quarterly Rev. of Commodity Markets

Appendices

The following Appendices contain data on production, trade and consumption by country (Appendix 1), major trade flows by product (Appendix 2), value of trade by producers and consumers (Appendix 3), trade of secondary processed wood products (Appendix 4), industrial structure (Appendix 5), major species traded by country (Appendix 6), and prices for major tropical timber products (Appendix 7).

In Appendix 2, figures reported by importers are shown in bold typeface in shaded rows while those corresponding to export reports are in italics in non-shaded rows. Only major trading relationships are singled out in Appendix 2. In Appendix 4, DMEC refers to developing market economies plus China.

The sources indicated below are applicable to all tables. The notes are of relevance to one or more tables.

Sources: 1995 ITTO Forecasting and Statistical Enquiry. Other sources are indicated by the superscripts after the figures (I: ITTO estimate; F: ECE/FAO Timber Bulletin; M: FAO Monthly Bulletin; Y: FAO Yearbook; * : Other unofficial data including statistical reports, Year 2000 progress reports, ITTO project reports, USDA Foreign Agricultural Service reports, trade association statistics, etc.).

Notes: Apparent Domestic Consumption = Production + Imports - Exports +/- Stock Change (if reported).

The following countries reported realistic levels of stock changes for one or more products which are reflected in Apparent Domestic Consumption figures: The Netherlands, Japan, Republic of Korea, USA, Gabon, Ghana, Myanmar.

The superscript "A" indicates adjustment from veneer area to volume assuming an average veneer sheet thickness of 1 mm.

The superscript "D" indicates adjustment to calendar year figures from figures provided for portions of a calendar year or for a non-calendar fiscal year.

The superscript "R" indicates a figure rounded down to 0.

The superscript "W" indicates adjustment from weight to volume assuming the following factors: logs - 1.37 m^3/ton; sawnwood - 1.43 m^3/ton; veneer - 1.33 m^3/ton; plywood - 1.54 m^3/ton.

Blanks in tables imply no data available and impossible to reliably estimate.

Export values in Appendices 3 and 6 are FOB; import values are CIF.

The following ITTO members did not respond to the 1996 ITTO Forecasting and Statistical Enquiry: Austria, Bolivia, Congo, Honduras, India and the Russian Federation.

Appendix 1

Production, Trade and Consumption of Tropical Timber, 1992-96

Appendix 1.

Table 1-1. Production, Trade and Consumption of Tropical Timber by ITTO Consumers (1000 m3)

		Production					Imports					Exports					Domestic Consumption				
Country	Product	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996
Australia	Logs	395 I	230 I	200 I	210 I	210 I	0	2	5	2	1	1	0	0	0	0	394	232	205	212	211
	Sawn	190 I	100 I	90 I	90 I	90 I	145	170	139	140	87	1	0	0	0	0	334	270	229	230	177
	Ven	0 I	0 I	0 I	0 I	0 I	2	11	16	13	7	1	0	0	0	0	1	11	16	13	7
	Ply	30 I	25 I	22 I	25 I	24 I	28	42	42	43	40	2	0	0	0	0	56	67	64	68	64
Canada	Logs	0	0	0	0	0	2	1	1	1	1 I	0	0 R	0	0	0 I	2	1	1	1	1
	Sawn	0	0	0	0	0	19	14	20	16	15 I	1	1	2	0	0 I	18	13	18	16	15
	Ven	0	0	0	0	0	1	2	3	2	2 I	0	0 R	1	1	1 I	1	2	2	1	1
	Ply	0	0	0	0	0	58	74	69	64	65 I	6	3	2	4	3 I	52	71	67	60	62
China	Logs	300 I	400 I	440 I	500 I	500 I	1776	1595	2030	2099	2038 *	1	9	74	22 *	20 I	2075	1986	2396	2577	2518
	Sawn	350 I	350 I	450 I	663 *	650 I	559	703	717	753	545 *	5	22	18	15 I	15 I	904	1031	1149	1401	1180
	Ven	10 I	10 I	10 I	10 I	10 I	217	287	193	331	350 I	1	0 R	15	4	5 I	226	297	188	337	355
	Ply	500 I	525 I	650	650	650	1424	1371	1800 I	2063	1777 *	0	6 *	57	53	50 I	1924	1890	2393	2660	2377
(Taiwan	Logs	15 *	6 *	8 *	4 *	3 *	3961 *	2180 *	1800 *	1600 I	1400 *	5 *	13 *	7 *	5 *	4 *	3971	2173	1801	1599	1399
Province)	Sawn	400 I	250 I	225 I	200 I	150 I	709 *	1052 *	769 *	629 *	550 *	12 *	15 *	20 *	23 *	25 *	1097	1287	974	806	675
	Ven	250 I	150 I	150 I	150 I	150 I	226 *	204 *	194 *	150 *	150 *	1 *	4 *	4 *	9 *	11 *	475	350	340	291	289
	Ply	1100 I	600 I	500 I	400 I	350 I	741 *	788 *	1065 *	935 *	925 *	159 *	110 *	128 *	159 *	165 *	1682	1278	1437	1176	1110
Egypt	Logs	0	0	0	0 I	0 I	20 I	35 I	35 I	30 I	30 I	0	0	0	0 I	0 I	20	35	35	30	30
	Sawn	3 I	3	4	4 I	4 I	18	16	12	12	11 *	0	0	0	0 I	0 I	21	19	16	16	15
	Ven	5 I	8 I	7 I	5 I	5 I	0	8 F	5 I	12	10 I	0	0	0	0 I	0 I	5	16	12	17	15
	Ply	0	7	7	5 I	5 I	90 *	125 *	120 I	120 I	120 I	0	0	0	0 I	0 I	90	132	127	125	125
EU	**Logs**	**0**	**0**	**0**	**0**	**0**	**2760**	**2455**	**2594**	**2577**	**2359**	**77**	**63**	**97**	**99**	**57**	**2690**	**2392**	**2499**	**2481**	**2302**
(15 Coun-	**Sawn**	**695**	**581**	**676**	**705**	**663**	**2957**	**2610**	**2524**	**2593**	**2555**	**282**	**239**	**222**	**157**	**156**	**3393**	**2974**	**2966**	**3183**	**3062**
tries)	**Ven**	**221**	**207**	**222**	**203**	**188**	**239**	**216**	**250**	**281**	**288**	**44**	**39**	**49**	**42**	**58**	**416**	**380**	**433**	**442**	**418**
	Ply	**454**	**398**	**383**	**366**	**336**	**1657**	**1362**	**1234**	**1386**	**1283**	**186**	**168**	**148**	**128**	**147**	**1925**	**1574**	**1478**	**1624**	**1472**
Austria	Logs	0	0	0	0	0	2	1 F	1	1	1 F	2	0	0	0	0 I	0	1	1	1	1
	Sawn	0	0	0	0	0	17	13	15	15 F	15 F	1	1	1	1	1 I	16	12	14	14	14
	Ven	0	0	0	0	0	1	1	1	1	1 I	0	0	0	0	0 I	1	1	1	1	1
	Ply	0	0	0	0	0	2	1	1	1	1 I	0	0	0	0	0 I	2	1	1	1	1
Belgium	Logs	0	0	0	0	0 I	80	40 I	46 *	74	110 D	17	10 I	10 I	34	20 F	63	30	36	40	90
Luxem-	Sawn	20	14 *	12 I	10 I	15 I	210	158 F	160 F	146	153 D	62	57 F	45 F	22	25 D	168	115	127	134	143
bourg	Ven	5	5 *	5 *	3 I	8 I	16	12	17 *	24	26 D	5	5 *	9 *	6 *	13 D	16	12	13	21	21
	Ply	10	5 I	10 I	10 I	20 I	148	162 *	136	170	185 D	48	40 I	50 I	30	51 D	110	127	96	150	154

Table 1-1. Production, Trade and Consumption of Tropical Timber by ITTO Consumers (1000 m3)

		Production					Imports					Exports					Domestic Consumption				
Country	Product	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996
Denmark	Logs	0	0	0	0	0	2	2	2 W	2 W	2 I	0	0 R	1	0	0 I	2	2	1	2	2
	Sawn	1	1 I	1 I	1 I	1 I	21	19 W	24 W	27 W	26 DW	4	3 W	5 W	5 D	4 F	18	17	20	23	23
	Ven	0	0 I	0 I	0 I	0 I	5	3 W	5 W	8 W	6 DW	1	1 W	1 W	2 D	2 I	4	2	4	6	4
	Ply	0	0 I	0 I	0 I	0 I	50	40 W	30 W	50 W	40 I	6	2 I	3 I	3 I	3 I	44	38	27	47	37
Finland	Logs	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
	Sawn	0	0	0	0	0	6	7	8	7	7	0	0	0	1	1	6	7	8	6	6
	Ven	0	0	0	0	0	1	1	1	1	1 I	0	0	0	0	0	1	1	1	1	1
	Ply	0	0	0	0	0	0	1	1	2	1 I	0	0	0	1	1	0	1	1	1	0
France	Logs	0	0	0	0	0	867 W	920 F	880 F	888 F	800 I	12 W	21 W	59 W	45 W	21 W	855	899	821	843	779
	Sawn	296	231	300 I	300 I	300 F	354 *	360 *	344 M	356 F	350 F	12 W	10 W	13 W	10 W	15 I	638	581	631	646	635
	Ven	0	0	0	0	0 I	19	18 M	31 M	23 *	21 DW	3	5 *	3	3	5 I	16	13	28	20	16
	Ply	150 I	170 I	150 I	140 I	130 I	189 W	180 M	141 M	156 *	100 DW	54 *	44 *	25	25	25 I	285	306	266	271	205
Germany	Logs	0	0	0	0	0	281	213	192	170	160 I	16	14 *	15 *	10 *	5 F	265	199	177	160	155
	Sawn	50	40 F	40 F	60 I	60 I	353	248	256	254	250 F	40	32 F	32 F	24 F	20 F	363	256	264	290	290
	Ven	20	15 I	10 I	10 I	10 I	85	77	72	83	85 I	19	10 *	18 *	15 *	15 I	86	82	64	78	80
	Ply	60	40 I	30 I	25 I	20 I	218	193	195	232	240 I	3	4 *	4 I	4 I	4 I	275	229	221	253	256
Greece	Logs	0	0	0	0	0	155 Y	114 Y	125 *	120 *	120 I	0	1 *	0 R	0 I	0 I	155	113	125	120	120
	Sawn	25	10 *	10 I	10 I	8 I	51	27 *	27 W	28 *	30 I	6	4 *	5 W	5 I	5 I	70	33	32	33	33
	Ven	0	4 I	4 I	4 I	3 I	4	2 *	1 W	1 *	1 I	0	2 *	1 W	1 I	1 I	4	4	4	4	3
	Ply	45 I	40 I	35 I	35 I	30 I	4	2 *	2 *	2 *	2 I	10 I	8 *	5 I	5 I	5 I	39	34	32	32	27
Ireland	Logs	0	0	0	0	0	2	2	7	3 W	4 F	1	0	0	0	0	1	2	7	3	4
	Sawn	1 I	1 I	3 I	2 I	2 I	55 I	51	79	55 W	80 F	3	8	2	2 I	1 I	53	44	80	55	81
	Ven	0	0	0 I	0 I	0 I	1	1	1	2 W	2 I	0	0	0	0	0	1	1	1	2	2
	Ply	0	0	0 I	0 I	0 I	13	13	14	17 W	20 I	0	0	0	0 R	0 I	13	13	14	17	20
Italy	Logs	0	0	0	0	0	439	438	478	462	375 I	0	3 *	0 *	0 I	0 I	439	435	478	462	375
	Sawn	100	110 *	115 I	120 I	100 I	360	369	421	479	450 F	0	5 *	8 *	5 I	5 I	460	474	528	594	545
	Ven	115	90 I	95 I	95 I	80 I	69	58	72	93 *	90 I	2	2 *	2 I	2 I	2 I	182	146	165	186	168
	Ply	8	25 I	30 I	25 I	15 I	53	35	49	79 *	80 I	9	8 *	10 I	10 I	10 I	52	52	69	94	85
Netherlands	Logs	0	0	0	0	0	123	111	120	117	117 F	18	11	10	8	8 F	112	100	112	112	109
	Sawn	40	46	51	49	49 F	578	587	461	395	395 F	141	106	92	65	65 F	500	549	408	421	379
	Ven	21	18	20	19	20 I	13	13	12	14	15 I	6	7	9	8	8 I	28	20	33	25	27
	Ply	11	10	10	10	10 I	322	238	162	168	170 I	37	36	28	30	30 I	296	194	153	148	150
Portugal	Logs	0	0	0	0	0	455	329	358	413	381	10	2	1	1	2	445	327	357	412	379
	Sawn	105	100 F	108	120	100	41	33	31	41	59	4	4	8	6	5	142	129	131	155	154
	Ven	40 I	45 I	45 I	35 I	35 I	2	1	2	1	1	2	2	2	2	1	40	44	45	34	35
	Ply	65	25 I	35 I	40 I	40 I	1	1	6	4	3	3	1	3	1	1 I	63	25	38	43	42

Table 1-1. Production, Trade and Consumption of Tropical Timber by ITTO Consumers (1000 m3)

		Production					Imports					Exports					Domestic Consumption				
Country	Product	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996
Spain	Logs	0	0	0	0	0	334	265	360	310	270 I	0	0 R	0 R	0 R	0 I	334	265	360	310	270
	Sawn	50	17 F	25 F	25 F	20 I	358	282	240	357	360 I	0	1	3	4	3 I	408	298	262	378	377
	Ven	20	30 *	40 I	35 I	30 I	5	10 *	10 *	10 *	10 I	1	1 I	1 I	1 I	1 I	24	39	49	44	39
	Ply	100	80 *	80 I	80 I	70 I	10	8 *	5 *	3 *	5 I	0	12 *	10 I	10 I	10 I	110	76	75	73	65
Sweden	Logs	0	0	0	0	0	1	1	2	2	2 F	0	0	0	0	0 F	1	1	2	2	2
	Sawn	1	1	1 I	1 I	1 I	6	6	8	4	3 F	0	0	0	0	0 F	7	7	9	5	4
	Ven	0	0	0 I	0 I	0 I	1	1	2	1	1 I	0	0	0	0	0 I	1	1	2	1	1
	Ply	0	0	0 I	0 I	0 I	13	10	7	4	3 I	0	0	0	0	0 I	13	10	7	4	3
United	Logs	0	0	0	0	0	19	19	23	14	17	1	1	1	1	1	18	18	22	13	16
Kingdom	Sawn	6 I	10 F	10 F	7 F	7 F	547	450	450	429	377	9	8	8	7	6	544	452	452	429	378
	Ven	0	0	3 I	2 I	2 I	17	18	23	19	20	5	4	3	2	2	12	14	23	19	20
	Ply	5 I	3 I	3 I	1 I	1 I	634	478	485	498	433	16	13	10	9	7	623	468	478	490	427
Japan	Logs	0	0	0	0	0	10990	8324	7494	6535	6407 *	0	0	0	0	0	10990	8324	8981	7974	7673
	Sawn	1364	1050	941	836	801	1248	1805	1257	1275	1040	0	0	0	0	0	2612	2855	2198	2111	1841
	Ven	274	218	181	166	150 I	192	239	160	131	108	12	8	8	8	6	454	490	333	289	252
	Ply	5477	4576	3964	3324	3307	2882	3864	3777	4048	4377	1	8	1	4	1	8358	8432	7740	7368	7683
Nepal	Logs	0	0	0	0	0	0	5	4	4 I	3 I	0	0	0	0 I	0 I	0	5	4	4	3
	Sawn	0	2 I	2 I	2 I	2 I	10	10 I	8 I	8 I	7 I	0	0 I	0 I	0 I	0 I	10	12	10	10	9
	Ven	0	0 I	0 I	0 I	0 I	0	2 I	2 I	2 I	2 I	0	0 I	0 I	0 I	0 I	0	2	2	2	2
	Ply	0	0 I	0 I	0 I	0 I	0	0	0	0	0	0	0 I	0 I	0 I	0 I	0	0	0	0	0
New	Logs	0	0	0	0	0	0	0	0	0	0 I	0	0	0	0	0 I	0	0	0	0	0
Zealand	Sawn	0	0	0	0	0	3	3	2	2	2 I	0	0	0	0	0 I	3	3	2	2	2
	Ven	0	0	0	0	0	1	0	0	0	0 I	0	0	0	0	0 I	1	0	0	0	0
	Ply	0	0	0	0	0	1	1	1	1	1 I	0	0	0	0	0 I	1	1	1	1	1
Norway	Logs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sawn	0	0	0	0	0	4	4	5	5	3	0	0	0	0	0	4	4	5	5	3
	Ven	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	1	1	1	0
	Ply	0	0	0	0	0	15	12	7	5	5	1	0	0	0	1	14	12	7	5	4
Republic	Logs	0	0	0	0	0	3173	2103	1944	1701	1500 *	0	0	0	0	0 *	3173	2103	1944	1701	1500
of	Sawn	655	503	365 *	158 *	70 *	716	970	617	531	450 *	1	0	0	1	0 *	1370	1473	982	688	520
Korea	Ven	0	0	0	0 *	0 I	17	26	54	30	30 I	0	0	0	0	0 I	17	26	54	30	30
	Ply	942	795 *	799 *	861 *	850 *	648	822	868	1159	1200 *	4	1	1	1	1 I	1586	1616	1666	2019	2049
Russian	Logs	0	0	0	0	0	10	10 I	10 I	10 I	10 I	0	0 I	0 I	0 I	0 I	10	10	10	10	10
Federation	Sawn	5	5 I	5 I	5 I	5	8	8 I	8 I	8 I	8 I	0	0 I	0 I	0 I	0 I	13	13	13	13	13
	Ven	0	0 I	0 I	0 I	0 I	3	3 I	3 I	3 I	3 I	0	0 I	0 I	0 I	0 I	3	3	3	3	3
	Ply	0	0 I	0 I	0 I	0 I	2	3 I	3 I	3 I	3 I	0	0 I	0 I	0 I	0 I	2	3	3	3	3

Table 1-1. Production, Trade and Consumption of Tropical Timber by ITTO Consumers (1000 m3)

		Production					Imports					Exports					Domestic Consumption				
Country	Product	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996
Switzerland	Logs	0	0	0	0	0	10	6	12	12	10 F	0	0 R	0 R	0 R	0 I	10	6	12	12	10
	Sawn	6	4 *	5	5	5 F	14	11	8	7	12 I	0	1	0 R	0 R	0 I	20	14	13	12	17
	Ven	1 I	1 *	1 I	1 I	1 I	1	1	0 R	0 R	0 I	0	0 R	0 R	0	0 I	2	2	1	1	1
	Ply	0	0	0	0 I	0 I	7	9	1	1	1 I	0	0 R	0 R	0	0 I	7	9	1	1	1
U.S.A.	Logs	0	0	0	0	0	4	5	4	3	0	4	4	2	2	0	0	8	2	1	2
	Sawn	0	0	0	0	1	193	175	222	231	217	39	40	37	34	38	154	135	185	197	180
	Ven	0	0	0 A	0 A	0 A	20	15 A	13 A	16 A	11 A	1	1 A	1 A	1 A	1 A	19	14	12	15	10
	Ply	0	0	0	0	0	1053	919	742	920	843	82	80	71	45	75	971	839	671	875	768
Consu-	**Logs**	**710**	**636**	**648**	**714**	**713**	**22706**	**16721**	**15933**	**14574**	**13759**	**88**	**89**	**180**	**128**	**81**	**23335**	**17275**	**17890**	**16602**	**15659**
mers	**Sawn**	**3668**	**2848**	**2763**	**2668**	**2441**	**6603**	**7551**	**6308**	**6210**	**5502**	**341**	**318**	**299**	**230**	**234**	**9953**	**10103**	**8760**	**8690**	**7709**
Total	**Ven**	**761**	**594**	**571**	**535**	**504**	**920**	**1015**	**894**	**972**	**953**	**60**	**52**	**78**	**65**	**74**	**1621**	**1594**	**1397**	**1442**	**1383**
	Ply	**8503**	**6926**	**6325**	**5631**	**5522**	**8606**	**9392**	**9729**	**10748**	**10640**	**441**	**376**	**408**	**394**	**443**	**16668**	**15924**	**15655**	**15985**	**15719**

Table 1-2. Production, Trade and Consumption of Tropical Timber by ITTO Producers (1000 m3)

		Production					Imports					Exports					Domestic Consumption				
Country	Product	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996
Africa	**Logs**	**8041**	**9097**	**10255**	**9775**	**9200**	**1**	**0**	**0**	**14**	**2**	**2907**	**3553**	**4181**	**3911**	**3733**	**5135**	**5544**	**6074**	**5907**	**5469**
Total	**Sawn**	**2112**	**2076**	**2290**	**2311**	**2245**	**15**	**7**	**9**	**8**	**8**	**1081**	**1020**	**1309**	**1332**	**1245**	**1046**	**1063**	**990**	**992**	**1008**
	Ven	**316**	**340**	**394**	**421**	**463**	**0**	**0**	**0**	**0**	**0**	**216**	**204**	**246**	**247**	**285**	**100**	**136**	**148**	**174**	**178**
	Ply	**144**	**158**	**165**	**221**	**230**	**21**	**21**	**15**	**15**	**14**	**66**	**55**	**42**	**75**	**53**	**99**	**124**	**138**	**161**	**191**
Cameroon	Logs	2096	2815	3300 D	2995 D	2700 D	0	0	0	0	0	800 I	850 I	1150 D	1225 D	1100 D	1296	1965	2150	1795	1600
	Sawn	600	650	725	715	712	0	0	0	0	0	150	142	220 D	245 D	202 D	450	508	505	475	510
	Ven	23	28	38	30	36	0	0	0	0	0	21	26	38	29	30 D	2	2	0	1	6
	Ply	55	63	78	80	88	0	0	0	5 D	4 D	30	25	20 D	20 D	10 D	25	38	58	65	82
Congo	Logs	635	511	635 F	650 I	700 I	0	0	0	0	0	348	340	450 I	450 I	500 I	287	171	185	200	200
	Sawn	53	40	52 F	55 I	55 I	4	4	0 F	0 I	0 I	28	18 *	25 *	25 I	25 I	29	26	27	30	30
	Ven	45	40	35 F	35 I	35 I	0	0	0	0 I	0 I	37	38	35	35 I	35 I	8	2	0	0	0
	Ply	2	2	1 F	2 I	2 I	15	15	15	10 I	10 I	0	0	0	0 I	0 I	17	17	16	12	12
Côte	Logs	1994	1961	2416	2297	2200 *	0	0	0	0	0 *	248	320	376	311	180 *	1746	1641	2040	1986	2020
d'Ivoire	Sawn	641	577	680	699	650 *	0	0	0	0	0 *	500	460	616	628	550 I	141	117	64	71	100
	Ven	195	195	205	215	240 *	0	0	0	0	0 *	120	110	116	124	145 *	75	85	89	91	95
	Ply	39	41	41	39	45 *	0	0	0	0	0 *	17	15	11	15	13 *	22	26	30	24	32
Gabon	Logs	1395	1815	1909	2249	2115 D	0	0	0 R	14	2 D	1050 I	1500 I	1500 I	1700 I	1800 I	345	315	409	563	317
	Sawn	155	153	160 I	150 I	140 I	4	0 R	1	0	0 R	136	139	130	110	100 I	23	14	31	40	40
	Ven	9	2	47	73 R	75 I	0	0	0	0	0	8	2	15	5	6 D	1	0	32	68	69
	Ply	16	13	11	55	50 I	4	6	0 R	0 R	0 D	16	13	10	36	25 D	4	6	1	19	25
Ghana	Logs	1318	1682	1682	1194	1050 I	0	0	0	0	0	182	496	572	85	0	1136	1186	1110	1113	1050
	Sawn	538	546 I	582 Y	582	550 I	0	0	0	0	0	232	239	259	286	328	306	307	323	296	222
	Ven	28	61	61	58	67	0	0	0	0	0	24	26	35	46	59	4	35	26	12	8
	Ply	20	26	26	35	35	0	0	0	0	0	2	2	1	4	5	18	24	25	31	30
Liberia	Logs	197	10 I	25 I	60 I	100 I	0	0	0	0	0	183	5 I	20 I	40 I	50 I	14	5	5	20	50
	Sawn	7	2 I	3 I	10 I	30 I	0	0	0	0	0	2	0 I	0 I	0 I	0 I	5	2	3	10	30
	Ven	2	0 I	0 I	0 I	0 I	0	0	0	0	0	0	0	0 I	0 I	0 I	2	0	0	0	0
	Ply	0	0 I	0 I	0 I	0 I	0	0	0	0	0	0	0	0 I	0 I	0 I	0	0	0	0	0
Togo	Logs	26	15	16	30	35	1	0	0	0 I	0 I	0	0	1	3	3 I	27	15	15	27	32
	Sawn	13	8	8	15	18	7	3	8	8	8	0	0	0	0 I	0 I	20	11	16	23	26
	Ven	0	0	0	0 I	0 I	0	0	0	0 I	0 I	0	0	0	0 I	0 I	0	0	0	0	0
	Ply	0	0	0	0 I	0 I	1	0	0 R	0 R	0 R	0	0	0	0	0 I	1	0	0	0	0
Zaire	Logs	380	288	272	300 I	300 I	0	0	0 I	0 I	0 I	96	42	112	97	100 I	284	246	160	203	200
	Sawn	105	100 I	80 I	85 I	90 I	0	0	0 I	0 I	0 I	33	22	59	38	40 I	72	78	21	47	50
	Ven	14	14 Y	8 I	10 I	10 I	0	0	0 I	0 I	0 I	6	2	7	8	10 I	8	12	1	2	0
	Ply	12	13 Y	8 I	10 I	10 I	1	0 Y	0 I	0 I	0 I	1	0	0	0	0 I	12	13	8	10	10

Table 1-2. Production, Trade and Consumption of Tropical Timber by ITTO Producers (1000 m3)

		Production					Imports					Exports					Domestic Consumption				
Country	Product	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996
Asia-	**Logs**	**103564**	**96343**	**93424**	**90051**	**85745**	**3366**	**2606**	**2376**	**2653**	**2133**	**21343**	**13323**	**12277**	**11020**	**9431**	**85587**	**85626**	**83523**	**81684**	**78447**
Pacific	**Sawn**	**27421**	**26862**	**26656**	**25417**	**24087**	**1875**	**2357**	**3033**	**2694**	**2497**	**6308**	**6185**	**5409**	**5068**	**4579**	**22988**	**23034**	**24465**	**23043**	**22005**
Total	**Ven**	**1522**	**2333**	**2246**	**2174**	**2393**	**16**	**22**	**19**	**54**	**79**	**825**	**754**	**678**	**656**	**579**	**713**	**1601**	**1587**	**1582**	**1903**
	Ply	**13049**	**13563**	**12225**	**13527**	**13113**	**55**	**27**	**54**	**114**	**140**	**11552**	**12137**	**10382**	**11600**	**11459**	**1552**	**1466**	**1897**	**2041**	**1794**
Fiji	Logs	169 F	130 F	139	131	130 I	0 F	0 F	0	0	0 I	0 F	0 F	0	0	0 I	169	130	139	131	130
	Sawn	51 F	54 F	62	59	55 I	0 F	0 F	0 K	0	0 I	24 F	4 F	11	12	10 I	27	50	51	47	45
	Ven	10 F	10 F	11	10	10 I	1 F	0 F	2	0 K	0 I	4 F	4 F	4	5	5 I	7	6	9	5	5
	Ply	10 F	6 F	6	5	5 I	0 F	0 F	0 K	7	5 I	8 F	1 F	2	3	3 I	2	5	4	9	7
India	Logs	15812 Y	15812 Y	15812 Y	15000 I	15000 I	694 Y	249	250 I	200 I	200 I	3	0	0 I	0 I	0 I	16503	16061	16062	15200	15200
	Sawn	8500 I	8400 I	8000 I	7900 I	7900 I	5 I	4	4 I	4 I	4 I	1 I	1	1 I	1 I	1	8504	8403	8003	7903	7903
	Ven	4 Y	4 Y	4 I	4 I	4 I	4	1 Y	1 I	3 I	5 I	1	2	2 I	1 I	1 I	7	3	3	6	8
	Ply	360 Y	360 Y	360 I	360 I	360 I	5 I	1	2 I	4 I	6 I	25 I	30	30 I	30 I	30 I	340	331	332	334	336
Indonesia	Logs	37500 I	37000 I	34619 Y	34500 I	33000 I	2 Y	7 Y	10 Y	4 *	20 I	114 Y	42 Y	43 Y	30 I	20 I	37388	36965	34586	34474	33000
	Sawn	7200 I	7700 I	8000 Y	7500 *	7000 *	0	0	0	0	0	711	639 Y	700 I	722 *	700 *	6489	7061	7485	6778	6300
	Ven	55	55 Y	50	50	50 I	0	2	2 I	4 I	5 I	30	18 Y	25	30 I	30 I	25	39	27	34	35
	Ply	10100 *	9874	8066	9122	8594	0	1	4 *	0 I	0 I	9761	9627	7333	8210	8000 *	339	248	737	912	594
Malaysia	Logs	43510	37260	37135	35672	33000 I	138	174	233	573	300 *	17797	9382	8561	7864	6381 D	25851	28052	28807	28381	26919
	Sawn	9458	9223	9200	8706	8200 I	85	152	307	376	300 I	5417	5371	4560	4151	3594 D	4126	4004	4947	4931	4906
	Ven	1302	2122	2123	2072	2297	2	4	2	4	0 *	765	720	613	586	507 D	539	1406	1512	1490	1790
	Ply	2062	2774	3300 I	3563	3685	8	11 *	13	10	10 *	1670	2421	3004	3339	3394 D	400	364	309	234	301
Myanmar	Logs	2791	2004 Y	1200 I	1100 I	1200 I	0	0	0	0	0	1500 I	1029	602 Y	500 I	415 D	1291	975	598	600	785
	Sawn	625 I	470 I	309 Y	329	331 D	0	0	0	0	0	50 I	38	36	44	31 D	575	432	273	285	300
	Ven	0	0 K	0 K	0 K	0 D	0	0	0	0	0	0	0	0 K	0 K	0 D	0	0	0	0	0
	Ply	7	6	5	4	9 D	0	0	0	0	0	0	14	1	0 K	1 D	7	5	4	4	8
Papua	Logs	2225	3050	3500	3000	3000	0	0	0	0	0	1929	2867	3066 Y	2600 I	2600	296	183	434	400	400
New	Sawn	140	75 Y	175 I	175 I	175 I	3	0	0 I	0 I	0 I	5	3	3	5	6	138	72	172	170	169
Guinea	Ven	0	5	5 I	5 I	5 I	0	0	0 I	0 I	0 I	0	0	0	0 I	0 I	0	5	5	5	5
	Ply	13	10 I	10	10	10	0	0	0 I	0 I	0 I	0	0	0 K	0 I	0 I	13	10	10	10	10
Philippines	Logs	1438	1022	957	614	395	500	569	350	540	900	0	1	4	0	0	1938	1590	1303	1154	1295
	Sawn	647	440	310 *	279	275 I	43	458	287	350	450	56	78	37	83	186	634	820	560	546	539
	Ven	80	65	39	19	17 *	0	3	0 K	26	49	22	7	30	32	34	58	61	9	13	32
	Ply	331	273	258 *	256	250 *	1	2	6	1	1	85	40	10	17	29	247	235	254	240	222
Thailand	Logs	119	65	62	34	20	2032	1607 *	1533	1336	713	0	2	1	26	15	2151	1670	1594	1344	718
	Sawn	800 I	500 I	600 I	469	151	1739	1743	2435	1964	1743	44	51	61	50	51	2495	2192	2974	2383	1843
	Ven	71	72	14	14	10	9	12	12	17	20	3	3	4	2	2	77	81	22	29	28
	Ply	166	260	220	207	200	41	12	29	92	118	3	4	2	1	2	204	268	247	298	316

Table 1-2. Production, Trade and Consumption of Tropical Timber by ITTO Producers (1000 m3)

		Production					Imports					Exports					Domestic Consumption				
Country	Product	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996
Latin	**Logs**	**27704**	**28949**	**31818**	**32154**	**31839**	**32**	**34**	**35**	**18**	**20**	**21**	**33**	**49**	**38**	**21**	**27715**	**28950**	**31804**	**32134**	**31838**
America/	**Sawn**	**11816**	**11947**	**12870**	**13329**	**14037**	**260**	**441**	**392**	**473**	**467**	**733**	**975**	**1763**	**1488**	**1497**	**11373**	**11413**	**11499**	**12314**	**13007**
Caribbean	**Ven**	**320**	**338**	**405**	**439**	**358**	**18**	**41**	**46**	**44**	**37**	**116**	**200**	**134**	**109**	**120**	**222**	**179**	**317**	**374**	**275**
Total	**Ply**	**1361**	**1408**	**1797**	**1880**	**1718**	**68**	**33**	**41**	**36**	**42**	**550**	**714**	**801**	**729**	**717**	**879**	**727**	**1037**	**1187**	**1043**
Bolivia	Logs	450 I	525 I	625 I	600 I	600 I	0	0	0	0 I	0 I	0	15	15 Y	5 I	0 I	450	510	610	595	600
	Sawn	225 I	250 I	300 I	280 I	280 I	0	0	0	0 I	0 I	122	157	204	160 I	160 I	103	93	96	120	120
	Ven	5 I	5 I	5 I	5 I	5 I	0	0	0	0 I	0 I	4	4	3	1 *	2 I	1	1	2	4	3
	Ply	10	15	23	25 I	25 I	0	0	0	0 I	0 I	5	5	7	2 I	2 I	5	10	16	23	23
Brazil	Logs	21000	22000 I	24500 I	25000 I	25000 *	20	4 W	10 W	10 *	10 *	7	2	0 *	0 *	0 *	21013	22002	24510	25010	25010
	Sawn	9000	9200 *	10037 Y	10500 I	11200 I	250 I	418 W	378 W	450 *	450 *	484	627 W	1303 W	1103 DW	1116 DW	8766	8991	9112	9847	10534
	Ven	250	260 *	315 *	350 *	269 *	11	35 W	31 W	30 I	23 *	109	188 W	119 W	100 D	116 D	152	107	227	280	176
	Ply	1100	1100 *	1400 *	1470 *	1320 *	1	0 R	2 Y	0 *	0 *	509	656 W	726 W	577 D	550 D	592	444	676	893	770
Colombia	Logs	1115 I	1000 I	900 I	900 I	900 I	6	2	8	1	2 I	0	0 R	0 R	2	2	1121	1002	908	899	900
	Sawn	514	450 I	400 I	400 I	400 I	0	0 R	0 R	10	10 D	5	3	5	7	7	509	447	395	403	403
	Ven	5	5	5	5 I	5 I	1	1	0 R	1	1	0	0	0	0 R	0 R	6	6	5	6	6
	Ply	49	55	64 F	65 I	65 I	1	1	8	18	18	5	5	1	4	4	45	51	71	79	79
Ecuador	Logs	2138	2000 I	2000 I	2000 I	2000 I	0	0 I	0 I	0 I	0 I	0	0 I	0 I	0 I	0 I	2138	2000	2000	2000	2000
	Sawn	913	800 I	800 I	800 I	800 I	0	0 I	0 I	0 I	0 I	20	25 I	75 I	60 I	50 I	893	775	725	740	750
	Ven	9	10 I	20 I	20 I	20 I	0	0 I	0 I	0 I	0 I	3	3 I	3 I	6 I	0 I	6	7	17	14	20
	Ply	91	95 I	100 I	100 I	100 I	0	0 I	0 I	0 I	0 I	25	25 I	30 I	50	50 I	66	70	70	50	50
Guyana	Logs	151	224	403	456	468	0	0	0	0	0	1	5	22	20	8	150	219	381	436	460
	Sawn	14	20	29	41	50 I	0	0	0	0	0	10	14	18	15	19	4	6	11	26	31
	Ven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Ply	9	17	57	96	120 I	0	0	0	0	0	1	7	31	87	100	8	10	26	9	20
Honduras	Logs	600	590	697	700 I	700 I	0	0 R	0 I	0 I	0 I	8	9	10	10 I	10 I	592	581	687	690	690
	Sawn	320 I	310 I	350 I	360 I	360 I	0	0 R	0 I	0 I	0 I	53	119	123	120 I	120 I	267	191	227	240	240
	Ven	0 I	0 I	0 I	0 I	0 I	0	1	12	10 I	10 I	0	0 I	0 I	0 I	0 I	0	1	12	10	10
	Ply	14	15	17	20 I	20 I	2	0 R	1	1 I	1 I	5	9	4	5 I	5 I	11	6	14	16	16
Panama	Logs	100	147	168	55	60 I	3	11	11	3	5 I	1	0	0	0	0 I	102	158	179	58	65
	Sawn	36	45 I	50	20	20 I	7	2	2	1	1 I	33	4	2	1	1 I	40	43	50	20	20
	Ven	0	1	2	1	1 I	3	0 R	0 R	0	0 I	0	0 R	0 R	0 R	0 I	3	1	2	1	1
	Ply	18	35 I	50	14	15 I	2	0 R	2	2	2 I	0	0 R	0 R	1	1 I	20	35	52	15	16
Peru	Logs	952	1265	1392	1392	1400 I	1	1	3 W	1 D	1 I	0	0	0	0	0	953	1266	1395	1393	1401
	Sawn	496	589	648	648	650 I	0	1	1 W	1 D	1 I	5	16	27 W	21 D	20 I	491	574	622	628	631
	Ven	1	7	8	8	8 I	0	0 R	1 W	1 D	1 I	0	5	9 W	2 D	2 I	1	2	0	7	7
	Ply	30	36	40	40	40 I	0	0 R	0 W	0 D	0 I	0	6	1 W	2 D	2 I	30	30	39	38	38

Table 1-2. Production, Trade and Consumption of Tropical Timber by ITTO Producers (1000 m3)

		Production					Imports					Exports					Domestic Consumption				
Country	Product	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996	1992	1993	1994	1995	1996
Trinidad	Logs	59	36	46	51	50 I	0	4	3	2	2 I	3	0 I	2	0 R	1 I	56	40	47	53	51
and	Sawn	27	25	25 I	30 I	30 I	0	2	2	1	1 I	1	8	1	0 R	0 I	26	19	26	31	31
Tobago	Ven	0	0	0	0	0	0	0	0	0	0 I	0	0 I	0 R	0 R	0 I	0	0	0	0	0
	Ply	0	0	0	0	0	9	10 I	8 I	10 I	10 I	0	1 I	1 R	1	0 I	9	9	7	9	10
Venezuela	Logs	1139	1162	1087	1000	661	2	12	0 R	1	0 R	1	2	0 R	1	0 R	1140	1172	1087	1000	661
	Sawn	271	258	231	250	247	3	18	9	10	4	0	2	5	1	4	274	274	235	259	247
	Ven	50 I	50 I	50 I	50 I	50 I	3	4	2	2	2 I	0	0 R	0 R	0	0 I	53	54	52	52	52
	Ply	40 I	40 I	46	50	13	53	22	20	5	11	0	0 R	0 R	0	3	93	62	66	55	21
Producers	**Logs**	**139309**	**134389**	**135497**	**131980**	**126784**	**3399**	**2640**	**2411**	**2685**	**2155**	**24271**	**16909**	**16507**	**14969**	**13185**	**118437**	**120120**	**121401**	**119725**	**115754**
Total	**Sawn**	**41349**	**40885**	**41816**	**41057**	**40369**	**2150**	**2805**	**3434**	**3175**	**2972**	**8122**	**8180**	**8481**	**7888**	**7321**	**35407**	**35510**	**36954**	**36349**	**36020**
	Ven	**2158**	**3011**	**3045**	**3034**	**3214**	**34**	**63**	**65**	**98**	**116**	**1157**	**1158**	**1058**	**1012**	**984**	**1035**	**1916**	**2052**	**2130**	**2356**
	Ply	**14554**	**15129**	**14187**	**15628**	**15061**	**144**	**81**	**110**	**165**	**196**	**12168**	**12906**	**11225**	**12404**	**12229**	**2530**	**2317**	**3072**	**3389**	**3028**
ITTO	**Logs**	**140019**	**135025**	**136145**	**132694**	**127497**	**26105**	**19361**	**18344**	**17259**	**15914**	**24359**	**16998**	**16687**	**15097**	**13266**	**141772**	**137395**	**139291**	**136327**	**131413**
Total	**Sawn**	**45017**	**43733**	**44579**	**43725**	**42810**	**8753**	**10356**	**9742**	**9385**	**8474**	**8463**	**8498**	**8780**	**8118**	**7555**	**45360**	**45613**	**45714**	**45039**	**43729**
	Ven	**2919**	**3605**	**3616**	**3569**	**3718**	**954**	**1078**	**959**	**1070**	**1069**	**1217**	**1210**	**1136**	**1077**	**1058**	**2656**	**3510**	**3449**	**3572**	**3739**
	Ply	**23057**	**22055**	**20512**	**21259**	**20583**	**8750**	**9473**	**9839**	**10913**	**10836**	**12609**	**13282**	**11633**	**12798**	**12672**	**19198**	**18241**	**18727**	**19374**	**18747**

Table 1-3-a. Production, Trade and Consumption of Tropical Logs by ITTO Members (1000 m3 - 1995 ranking)

	Production						Imports						Exports						Domestic Consumption					
Rank	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996
1	Malaysia	43510	37260	37135	35672	33000	Japan	10990	8324	7494	6535	6407	Malaysia	17797	9382	8561	7864	6381	Indonesia	37388	36965	34586	34474	33000
2	Indonesia	37500	37000	34619	34500	33000	China	1776	1595	2030	2099	2038	PNG	1929	2867	3066	2600	2600	Malaysia	25851	28052	28807	28381	26919
3	Brazil	21000	22000	24500	25000	25000	Rep. of Korea	3173	2103	1944	1701	1500	Gabon	1050	1500	1500	1700	1800	Brazil	21013	22002	24510	25010	25010
4	India	15812	15812	15812	15000	15000	(Taiwan)	3961	2180	1800	1600	1400	Cameroon	800	850	1150	1225	1100	India	16503	16061	16062	15200	15200
5	PNG	2225	3050	3500	3000	3000	Thailand	2032	1607	1533	1336	713	Myanmar	1500	1029	602	500	415	Japan	10990	8324	7494	6535	6232
	Others	19972	19903	20579	19522	18497	Others	4173	3552	3543	3988	3856	Others	1283	1370	1808	1208	970	Others	29976	25937	26281	25235	23560
6	Cameroon	2096	2815	3300	2995	2700	France	867	920	880	888	800	Congo	348	340	450	450	500	China	2075	1986	2396	2577	2518
7	Côte d'Ivoire	1994	1961	2416	2297	2200	Malaysia	138	174	233	573	300	Côte d'Ivoire	248	320	376	311	180	Ecuador	2138	2000	2000	2000	2000
8	Gabon	1395	1815	1909	2249	2115	Philippines	500	569	350	540	900	Zaire	96	42	112	97	100	Côte d'Ivoire	1746	1641	2040	1986	2020
9	Ecuador	2138	2000	2000	2000	2000	Italy	439	438	478	462	375	Ghana	182	496	572	85	0	Cameroon	1296	1965	2150	1795	1600
10	Peru	952	1265	1392	1392	1400	Portugal	455	329	358	413	381	France	12	21	59	45	21	Rep. of Korea	3173	2103	1944	1701	1500
11	Ghana	1318	1682	1682	1194	1050	Spain	334	265	360	310	270	Liberia	183	5	20	40	50	(Taiwan)	3971	2173	1801	1599	1399
12	Myanmar	2791	2004	1200	1100	1200	India	694	249	250	200	200	Belgium-Lux.	17	10	10	34	20	Peru	953	1266	1395	1393	1401
13	Venezuela	1139	1162	1087	1000	661	Germany	281	213	192	170	160	Indonesia	114	42	43	30	20	Thailand	2151	1670	1594	1344	718
14	Colombia	1115	1000	900	900	900	Greece	155	114	125	120	120	Thailand	0	2	1	26	15	Philippines	1938	1590	1303	1154	1295
15	Honduras	600	590	697	700	700	Netherlands	123	111	120	117	117	China	1	9	74	22	20	Ghana	1136	1186	1110	1113	1050
16	Congo	635	511	635	650	700	Belgium-Lux.	80	40	46	74	110	Guyana	1	5	22	20	8	Venezuela	1140	1172	1087	1000	661
17	Philippines	1438	1022	957	614	395	Egypt	20	35	35	30	30	Germany	16	14	15	10	5	Colombia	1121	1002	908	899	900
18	Bolivia	450	525	625	600	600	Gabon	0	0	0	14	2	Honduras	8	9	10	10	10	France	855	899	821	843	779
19	China	300	400	440	500	500	U.K.	19	19	23	14	17	Netherlands	18	11	10	8	8	Honduras	592	581	687	690	690
20	Guyana	151	224	403	456	468	Switzerland	10	6	12	12	10	(Taiwan)	5	13	7	5	4	Myanmar	1291	975	598	600	785
21	Zaire	380	288	272	300	300	Brazil	20	4	10	10	10	Bolivia	0	15	15	5	0	Bolivia	450	510	610	595	600
22	Australia	395	230	200	210	210	Russian Fed.	10	10	10	10	10	Togo	0	0	1	3	3	Gabon	345	315	409	563	317
23	Fiji	169	130	139	131	130	Indonesia	2	7	10	4	20	U.S.A.	4	4	2	2	0	Italy	439	435	478	462	375
24	Liberia	197	10	25	60	100	Nepal	0	5	4	4	3	Colombia	0	0	0	2	2	Guyana	150	219	381	436	460
25	Panama	100	147	168	55	60	Panama	3	11	11	3	5	Portugal	10	2	1	1	2	Portugal	445	327	357	412	379
26	Trin. & Tob.	59	36	46	51	50	Ireland	2	2	7	3	4	U.K.	1	1	1	1	1	PNG	296	183	434	400	400
27	Thailand	119	65	62	34	20	U.S.A.	4	5	4	3	0	Venezuela	1	2	0	1	0	Spain	334	265	360	310	270
28	Togo	26	15	16	30	35	Australia	0	2	5	2	1	Philippines	0	1	4	0	0	Australia	394	232	205	212	211
29	(Taiwan)	15	6	8	4	3	Trin. & Tob.	0	4	3	2	2	Italy	0	3	0	0	0	Zaire	284	246	160	203	200
30							Denmark	2	2	2	2	2	India	3	0	0	0	0	Congo	287	171	185	200	200
31							Sweden	1	1	2	2	2	Greece	0	1	0	0	0	Germany	265	199	177	160	155
32							Peru	1	1	3	1	1	Brazil	7	2	0	0	0	Fiji	169	130	139	131	130
33							Venezuela	2	12	0	1	0	Panama	1	0	0	0	0	Greece	155	113	125	120	120
34							Colombia	6	2	8	1	2	Ireland	1	0	0	0	0	Netherlands	105	100	110	109	109
35							Canada	2	1	1	1	1	Australia	1	0	0	0	0	Panama	102	158	179	58	65
36							Austria	2	1	1	1	1	Trin. & Tob.	3	0	2	0	1	Trin. & Tob.	56	40	47	53	51
37							Finland	0	0	0	1	0	Denmark	0	0	1	0	0	Belgium-Lux.	63	30	36	40	90
38							Togo	1	0	0	0	0	Austria	2	0	0	0	0	Egypt	20	35	35	30	30
39																			Togo	27	15	15	27	32
40																			Liberia	14	5	5	20	50

Table 1-3-b. Production, Trade and Consumption of Tropical Sawnwood by ITTO Members (1000 m3 - 1995 ranking)

	Production					Imports						Exports						Domestic Consumption					
Rank	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996
1	Brazil	9000	9200	10037	10500	11200	Thailand	1739	1743	2435	1964	1743	Malaysia	5417	5371	4560	4151	3594	Brazil	8766	8991	9112	9847	10534
2	Malaysia	9458	9223	9200	8706	8200	Japan	1248	1805	1257	1275	1040	Brazil	484	627	1303	1103	1116	India	8504	8403	8003	7903	7903
3	India	8500	8400	8000	7900	7900	China	559	703	717	753	545	Indonesia	711	639	700	722	700	Indonesia	6489	7061	7485	6778	6300
4	Indonesia	7200	7700	8000	7500	7000	(Taiwan)	709	1052	769	629	550	Côte d'Ivoire	500	460	616	628	550	Malaysia	4126	4004	4947	4931	4906
5	Japan	1364	1050	941	836	801	Rep. of Korea	716	970	617	531	450	Ghana	232	239	259	286	328	Thailand	2495	2192	2974	2383	1843
	Others	9478	8143	8380	8263	7688	Others	3779	4083	3947	4233	4146	Others	1084	1152	1339	1228	1267	Others	14774	14780	13028	13003	12068
6	Ecuador	913	800	800	800	800	Italy	360	369	421	479	450	Cameroon	150	142	220	245	202	Japan	2612	2855	2198	2111	1841
7	Cameroon	600	650	725	715	712	Brazil	250	418	378	450	450	Bolivia	122	157	204	160	160	China	904	1031	1149	1401	1180
8	Côte d'Ivoire	641	577	680	699	650	U.K.	547	450	450	429	377	Honduras	53	119	123	120	120	(Taiwan)	1097	1287	974	806	675
9	China	350	350	450	663	650	Netherlands	578	587	461	395	395	Gabon	136	139	130	110	100	Ecuador	893	775	725	740	750
10	Peru	496	589	648	648	650	Malaysia	85	152	307	376	300	Philippines	56	78	37	83	186	Rep. of Korea	1370	1473	982	688	520
11	Ghana	538	546	582	582	550	Spain	358	282	240	357	360	Netherlands	141	106	92	65	65	France	638	581	631	646	635
12	Thailand	800	500	600	469	151	France	354	360	344	356	350	Ecuador	20	25	75	60	50	Peru	491	574	622	628	631
13	Colombia	514	450	400	400	400	Philippines	43	458	287	350	450	Thailand	44	51	61	50	51	Italy	460	474	528	594	545
14	Honduras	320	310	350	360	360	Germany	353	248	256	254	250	Myanmar	50	38	36	44	31	Philippines	634	820	560	546	539
15	Myanmar	625	470	309	329	331	U.S.A.	193	175	222	231	217	Zaire	33	22	59	38	40	Cameroon	450	508	505	475	510
16	France	296	231	300	300	300	Belgium-Lux.	210	158	160	146	153	U.S.A.	39	40	37	34	38	U.K.	544	452	452	429	378
17	Bolivia	225	250	300	280	280	Australia	145	170	139	140	87	Congo	28	18	25	25	25	Colombia	509	447	395	403	403
18	Philippines	647	440	310	279	275	Ireland	55	51	79	55	80	Germany	40	32	32	24	20	Netherlands	477	527	420	379	379
19	Venezuela	271	258	231	250	247	Portugal	41	33	31	41	59	(Taiwan)	12	15	20	23	25	Spain	408	298	262	378	377
20	(Taiwan)	400	250	225	200	150	Greece	51	27	27	28	30	Belgium-Lux.	62	57	45	22	25	Ghana	306	307	323	296	222
21	PNG	140	75	175	175	175	Denmark	21	19	24	27	26	Peru	5	16	27	21	20	Germany	363	256	264	290	290
22	Rep. of Korea	655	503	365	158	70	Canada	19	14	20	16	15	China	5	22	18	15	15	Myanmar	575	432	273	285	300
23	Gabon	155	153	160	150	140	Austria	17	13	15	15	15	Guyana	10	14	18	15	19	Venezuela	274	274	235	259	247
24	Italy	100	110	115	120	100	Egypt	18	16	12	12	11	Fiji	24	4	11	12	10	Honduras	267	191	227	240	240
25	Portugal	105	100	108	120	100	Colombia	0	0	0	10	10	France	12	10	13	10	15	Australia	334	270	229	230	177
26	Australia	190	100	90	90	90	Venezuela	3	18	9	10	4	U.K.	9	8	8	7	6	U.S.A.	154	135	185	197	179
27	Zaire	105	100	80	85	90	Togo	7	3	8	8	8	Colombia	5	3	5	7	7	PNG	138	72	172	170	169
28	Germany	50	40	40	60	60	Russian Federat	8	8	8	8	8	Portugal	4	4	8	6	5	Portugal	142	129	131	155	154
29	Fiji	51	54	62	59	55	Nepal	10	10	8	8	7	Denmark	4	3	5	5	4	Belgium-Lux.	168	115	127	134	143
30	Congo	53	40	52	55	55	Switzerland	14	11	8	7	12	Greece	6	4	5	5	5	Bolivia	103	93	96	120	120
31	Netherlands	40	46	51	49	49	Finland	6	7	8	7	7	Italy	0	5	8	5	5	Côte d'Ivoire	141	117	64	71	100
32	Guyana	14	20	29	41	50	Norway	4	4	5	5	3	PNG	5	3	3	5	6	Ireland	53	44	80	55	81
33	Trin. & Tob.	27	25	25	30	30	India	5	4	4	4	4	Spain	0	1	3	4	3	Zaire	72	78	21	47	50
34	Spain	50	17	25	25	20	Sweden	6	6	8	4	3	Ireland	3	8	2	2	1	Fiji	27	50	51	47	45
35	Panama	36	45	50	20	20	New Zealand	3	3	2	2	2	Austria	1	1	1	1	1	Gabon	23	14	31	40	40
36	Togo	13	8	8	15	18	Peru	0	1	1	1	1	Finland	0	0	0	1	1	Greece	70	33	32	33	33
37	Belgium-Lux.	20	14	12	10	15	Trin. & Tob.	0	2	2	1	1	Rep. of Korea	1	0	0	1	0	Trin. & Tob.	26	19	26	31	31
38	Greece	25	10	10	10	8	Panama	7	2	2	1	1	India	1	1	1	1	1	Congo	29	26	27	30	30
39	Liberia	7	2	3	10	30	Gabon	4	0	1	0	0	Panama	3	4	2	1	1	Guyana	4	6	11	26	31
40	U.K.	6	10	10	7	7	Congo	4	4	0	0	0	Venezuela	0	2	5	1	4	Denmark	18	17	20	23	23

Table 1-3-c. Production, Trade and Consumption of Tropical Veneer by ITTO Members (1000 m3 - 1995 ranking)

	Production					Imports						Exports						Domestic Consumption					
Rank	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996
1	Malaysia	1302	2122	2123	2072	2297	China	217	287	193	331	350	Malaysia	765	720	613	586	507	China	226	297	188	337	355
2	Brazil	250	260	315	350	269	(Taiwan)	226	204	194	150	150	Côte d'Ivoire	120	110	116	124	145	(Taiwan)	475	350	340	291	289
3	Côte d'Ivoire	195	195	205	215	240	Japan	192	239	160	131	108	Brazil	109	188	119	100	116	Japan	454	449	333	289	252
4	Japan	274	218	181	166	150	Italy	69	58	72	93	90	Ghana	24	26	35	46	59	Brazil	152	107	227	280	176
5	(Taiwan)	250	150	150	150	150	Germany	85	77	72	83	85	Congo	37	38	35	35	35	Italy	182	146	165	186	168
	Others	648	660	642	616	612	Others	165	213	268	282	286	Others	162	128	218	186	196	Others	611	710	668	694	705
6	Italy	115	90	95	95	80	Brazil	11	35	31	30	23	Philippines	22	7	30	32	34	Côte d'Ivoire	75	85	89	91	95
7	Gabon	9	2	47	73	75	Rep. of Korea	17	26	54	30	30	Indonesia	30	18	25	30	30	Germany	86	82	64	78	80
8	Ghana	28	61	61	58	67	Philippines	0	3	0	26	49	Cameroon	21	26	38	29	30	Gabon	1	0	32	68	69
9	Indonesia	55	55	50	50	50	Belgium-Lux.	16	12	17	24	26	Germany	19	10	18	15	15	Venezuela	53	54	52	52	52
10	Venezuela	50	50	50	50	50	France	19	18	31	23	21	(Taiwan)	1	4	4	9	11	Spain	24	39	49	44	39
11	Portugal	40	45	45	35	35	U.K.	17	18	23	19	20	Japan	12	8	8	8	6	Indonesia	25	39	27	34	35
12	Spain	20	30	40	35	30	Thailand	9	12	12	17	20	Netherlands	6	7	9	8	8	Portugal	40	44	45	34	35
13	Congo	45	40	35	35	35	U.S.A.	20	15	13	16	11	Zaire	6	2	7	8	10	Rep. of Korea	17	26	54	30	30
14	Cameroon	23	28	38	30	36	Netherlands	13	13	12	14	15	Belgium-Lux.	5	5	9	6	13	Thailand	77	81	22	29	28
15	Ecuador	9	10	20	20	20	Australia	2	11	16	13	7	Ecuador	3	3	3	6	0	Netherlands	28	24	23	25	27
16	Netherlands	21	18	20	19	20	Egypt	0	8	5	12	10	Gabon	8	2	15	5	6	Belgium-Lux.	16	12	13	21	21
17	Philippines	80	65	39	19	17	Spain	5	10	10	10	10	Fiji	4	4	4	5	5	France	16	13	28	20	16
18	Thailand	71	72	14	14	10	Honduras	0	1	12	10	10	China	1	0	15	4	5	U.K.	12	14	23	19	20
19	Germany	20	15	10	10	10	Denmark	5	3	5	8	6	France	3	5	3	3	5	Egypt	5	16	12	17	15
20	Zaire	14	14	8	10	10	Malaysia	2	4	2	4	0	Bolivia	4	4	3	1	2	U.S.A.	19	14	12	15	10
21	Fiji	10	10	11	10	10	Indonesia	0	2	2	4	5	Italy	2	2	2	2	2	Ecuador	6	7	17	14	20
22	China	10	10	10	10	10	India	4	1	1	3	5	U.K.	5	4	3	2	2	Philippines	58	61	9	13	32
23	Peru	1	7	8	8	8	Russian Fed.	3	3	3	3	3	Thailand	3	3	4	2	2	Australia	1	11	16	13	7
24	Egypt	5	8	7	5	5	Venezuela	3	4	2	2	2	Denmark	1	1	1	2	2	Ghana	4	35	26	12	8
25	PNG	0	5	5	5	5	Canada	1	2	3	2	2	Portugal	2	2	2	2	1	Honduras	0	1	12	10	10
26	Bolivia	5	5	5	5	5	Ireland	1	1	1	2	2	Peru	0	5	9	2	2	Peru	1	2	0	7	7
27	Colombia	5	5	5	5	5	Nepal	0	2	2	2	2	U.S.A.	1	1	1	1	1	Denmark	4	2	4	6	4
28	India	4	4	4	4	4	Portugal	2	1	2	1	1	Spain	1	1	1	1	1	India	7	3	3	6	8
29	Greece	0	4	4	4	3	Peru	0	0	1	1	1	India	1	2	2	1	1	Colombia	6	6	5	6	6
30	Belgium-Lux.	5	5	5	3	8	Colombia	1	1	0	1	1	Canada	0	0	1	1	1	Fiji	7	6	9	5	5
31	U.K.	0	0	3	2	2	Greece	4	2	1	1	1	Greece	0	2	1	1	1	PNG	0	5	5	5	5
32	Switzerland	1	1	1	1	1	Austria	1	1	1	1	1	Australia	1	0	0	0	0	Greece	4	4	4	4	3
33	Panama	0	1	2	1	1	Finland	1	1	1	1	1							Bolivia	1	1	2	4	3
34	Liberia	2	0	0	0	0	Sweden	1	1	2	1	1							Russian Fed.	3	3	3	3	3
35							Norway	1	1	1	1	0							Zaire	8	12	1	2	0
36							Fiji	1	0	2	0	0							Ireland	1	1	1	2	2
37							Switzerland	1	1	0	0	0							Nepal	0	2	2	2	2
38							Panama	3	0	0	0	0							Cameroon	2	2	0	1	6
39							New Zealand	1	0	0	0	0							Canada	1	2	2	1	1
40																			Panama	3	1	2	1	1

Table 1-3-d. Production, Trade and Consumption of Tropical Plywood by ITTO Members (1000 m3 - 1995 ranking)

	Production					Imports					Exports					Domestic Consumption					
Rank	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996	Country	1992	1993	1994	1995	1996
1	Indonesia	10100	9874	8066	9122	8594	Japan	2882	3864	3777	4048	4377	Indonesia	9761	9627	7333	8210	8000	Japan	8358	8432	7740	7368	7683
2	Malaysia	2062	2774	3300	3563	3685	China	1424	1371	1800	2063	1777	Malaysia	1670	2421	3004	3339	3394	China	1924	1890	2393	2660	2377
3	Japan	5477	4576	3964	3324	3307	Rep. of Korea	648	822	868	1159	1200	Brazil	509	656	726	577	550	Rep. of Korea	1586	1616	1666	2019	2049
4	Brazil	1100	1100	1400	1470	1320	(Taiwan)	741	788	1065	935	925	(Taiwan)	159	110	128	159	165	(Taiwan)	1682	1278	1437	1176	1110
5	Rep. of Korea	942	795	799	861	850	U.S.A.	1053	919	742	920	843	Guyana	1	7	31	87	100	Indonesia	339	248	737	912	594
	Others	3376	2936	2983	2919	2827	Others	2000	1709	1587	1781	1709	Others	508	448	411	426	463	Others	5251	4739	4710	5206	4901
6	China	500	525	650	650	650	U.K.	634	478	485	498	433	China	0	6	57	53	50	Brazil	592	444	676	893	770
7	(Taiwan)	1100	600	500	400	350	Germany	218	193	195	232	240	Ecuador	25	25	30	50	50	U.S.A.	971	839	671	875	768
8	India	360	360	360	360	360	Belgium-Lux.	148	162	136	170	185	U.S.A.	82	80	71	45	75	U.K.	623	468	478	490	427
9	Philippines	331	273	258	256	250	Netherlands	322	238	162	168	170	Gabon	16	13	10	36	25	India	340	331	332	334	336
10	Thailand	166	260	220	207	200	France	189	180	141	156	100	Belgium-Lux.	48	40	50	30	51	Thailand	204	268	247	298	316
11	France	150	170	150	140	130	Egypt	90	125	120	120	120	Netherlands	37	36	28	30	30	France	285	306	266	271	205
12	Ecuador	91	95	100	100	100	Thailand	41	12	29	92	118	India	25	30	30	30	30	Germany	275	229	221	253	256
13	Guyana	9	17	57	96	120	Italy	53	35	49	79	80	France	54	44	25	25	25	Philippines	247	235	254	240	222
14	Spain	100	80	80	80	70	Canada	58	74	69	64	65	Cameroon	30	25	20	20	10	Malaysia	400	364	309	234	301
15	Cameroon	55	63	78	80	88	Denmark	50	40	30	50	40	Philippines	85	40	10	17	29	Belgium-Lux.	110	127	96	150	154
16	Colombia	49	55	64	65	65	Australia	28	42	42	43	40	Côte d'Ivoire	17	15	11	15	13	Netherlands	296	212	144	148	150
17	Gabon	16	13	11	55	50	Colombia	1	1	8	18	18	Italy	9	8	10	10	10	Egypt	90	132	127	125	125
18	Venezuela	40	40	46	50	13	Ireland	13	13	14	17	20	Spain	0	12	10	10	10	Italy	52	52	69	94	85
19	Portugal	65	25	35	40	40	Malaysia	8	11	13	10	10	U.K.	16	13	10	9	7	Colombia	45	51	71	79	79
20	Peru	30	36	40	40	40	Congo	15	15	15	10	10	Honduras	5	9	4	5	5	Spain	110	76	75	73	65
21	Côte d'Ivoire	39	41	41	39	45	Trin. & Tob.	9	10	8	10	10	Greece	10	8	5	5	5	Australia	56	67	64	68	64
22	Greece	45	40	35	35	30	Cameroon	0	0	0	5	4	Japan	1	8	1	4	1	Cameroon	25	38	58	65	82
23	Ghana	20	26	26	35	35	Venezuela	53	22	20	5	11	Germany	3	4	4	4	4	Canada	52	71	67	60	62
24	Australia	30	25	22	25	24	Norway	15	12	7	5	5	Canada	6	3	2	4	3	Venezuela	93	62	66	55	21
25	Germany	60	40	30	25	20	India	5	1	2	4	6	Colombia	5	5	1	4	4	Denmark	44	38	28	52	42
26	Italy	8	25	30	25	15	Portugal	1	1	6	4	3	Ghana	2	2	1	4	5	Ecuador	66	70	70	50	50
27	Bolivia	10	15	23	25	25	Sweden	13	10	7	4	3	Fiji	8	1	2	3	3	Portugal	63	25	38	43	42
28	Honduras	14	15	17	20	20	Spain	10	8	5	3	5	Denmark	6	2	3	3	3	Peru	30	30	39	38	38
29	Panama	18	35	50	14	15	Russian Fed.	2	3	3	3	3	Bolivia	5	5	7	2	2	Greece	39	34	32	32	27
30	Belgium-Lux.	10	5	10	10	20	Panama	2	0	2	2	2	Peru	0	6	1	2	2	Ghana	18	24	25	31	30
31	Netherlands	11	10	10	10	10	Finland	0	1	1	2	1	Rep. of Korea	4	1	1	1	1	Côte d'Ivoire	22	26	30	24	32
32	Zaire	12	13	8	10	10	Greece	4	2	2	2	2	Thailand	3	4	2	1	2	Bolivia	5	10	16	23	23
33	PNG	13	10	10	10	10	Philippines	1	2	6	1	1	Trin. & Tob.	0	1	1	1	0	Gabon	4	6	1	19	25
34	Egypt	0	7	7	5	5	Honduras	2	0	1	1	1	Portugal	3	1	3	1	1	Ireland	13	13	14	17	20
35	Fiji	10	6	6	5	5	Austria	2	1	1	1	1	Panama	0	0	0	1	1	Honduras	11	6	14	16	16
36	Myanmar	7	6	5	4	9	New Zealand	1	1	1	1	1	Finland	0	0	0	1	1	Panama	20	35	52	15	16
37	Congo	2	2	1	2	2	Switzerland	7	9	1	1	1	Australia	2	0	0	0	0	Congo	17	17	16	12	12
38	U.K.	5	3	3	1	1	Indonesia	0	1	4	0	0	Venezuela	0	0	0	0	3	Zaire	12	13	8	10	10
39							Brazil	1	0	2	0	0	Myanmar	0	1	1	0	1	PNG	13	10	10	10	10
40							Gabon	4	6	0	0	0	Norway	1	0	0	0	1	Guyana	8	10	26	9	20

Appendix 2

Major Trade Flows in 1994-95

Table 2-1-a. Trade of Tropical Logs, 1994 (m3)

Importers	Exporters Malaysia	PNG	Gabon	Cameroon	Myanmar	Ghana	Congo	Côte d'Ivoire	Zaire	China	Others	Total Imports
Japan	**4461000**	**1915000**	**403000**	**111000**	**31000**	**3000**	**29000**	**13000**	**1000**		**527000**	**7494000**
	4652500	*1965300*	*353196*	*117450*	*16330*	*10010*	*22592*	*10753*	*1765*			
China	**659884**	**140364**		**12059**	**22653** '	**138043**	**7231**	**5168**			**1044598**	**2030000**
	514900	*55000*	*244392*	*11000* '	*7300*	*202520*	*0* '	*13071*	*0* '			
Rep. of Korea	**622000**	**855000**	**4000**	**3000**	**3000**	**185000**	**4200** '	**9000**			**258800**	**1944000**
	632400	*781500*	*4273*	*790*	*280*	*240570*	*21*	*9000* '	*0* '			
(Taiwan)	**1571074** '	**57284** '	**38588** '		**21995** '						**111059**	**1800000**
	1574500	*47900*	*36694*			*27550*	*199*	*191*	*0* '			
Thailand	**444000**	**26000**		**18000**	**486000**			**30000**		**1000**	**528000**	**1533000**
	360300	*13500*	*24600*	*6050*	*113970*	*0* '	*58*	*34209*	*0* '			
France	**0** '		**29318** '	**150015** '	**959** '	**1507** '	**45347** '	**7398** '	**16440** '		**629016**	**880000**
	1000 '	*0* '	*477716*	*247040*	*60*	*4940*	*57072*	*70653*	*18837*			
Italy	**200**		**43100**	**321000**	**1000**	**10800**	**37400**	**34500**	**14100**		**15900**	**478000**
	1000 '	*0* '	*52514*	*281770*	*400*	*9130*	*30611*	*33183*	*11537*			
Spain			**21695** '	**161080** '	**152** '	**771** '	**7079** '	**90738** '	**858** '	**3** '	**77624**	**360000**
	0 '	*0* '	*23226*	*108750*	*2000* '	*3120*	*2984*	*104236*	*2413*			
Portugal			**49170**	**86225**		**4045**	**87317**	**25120**	**60930**		**45193**	**358000**
	3000 '	*0* '	*58143*	*158000* '	*0* '	*6830*	*74678*	*25454*	*0* '			
Philippines	**166170**	**66365**	**8124** '	**5622**	**541**	**30605**		**5622**			**66951**	**350000**
	158600	*45000*	*4448*	*0* '	*0* '	*36790*	*0* '	*7000* '	*0* '			
India											**250000**	**250000**
	255300	*14100*	*25830*	*0* '	*50460*	*5340*	*0* '	*33328*	*0* '			
Malaysia	**40**	**12510**	**5032**	**33**	**21**	**0**	**0**	**0**	**0**	**0**	**215364**	**233000**
		6000 '	*2844*	*2390*	*0* '		*0* '	*0* '	*0* '			
Germany			**18000**	**84000**	**3000**	**19000**	**33000**	**6000**	**13000**		**16000**	**192000**
	3000 '	*0* '	*16696*	*84810*	*26000* '	*15870*	*24129*	*4667*	*16645*			
Greece			**75000** '	**35000** '				**5875** '	**4996** '		**4129**	**125000**
			77805	*32650*				*5692*	*2266*			
Netherlands			**12000**	**71000**		**2000**		**6000**			**29000**	**120000**
	0 '	*0* '	*13350*	*39070*	*8000* '	*5990*	*0* '	*2428*	*557*			
Others	*404500*	*137700*	*84273*	*60230*	*377200*	*3340*	*237656*	*22135*	*57980*	*74000*		
Total Exports	*8561000*	*3066000*	*1500000*	*1150000*	*602000*	*572000*	*450000*	*376000*	*112000*	*74000*		

Table 2-1-b. Trade of Tropical Logs, 1995 (m3)

Importers / Exporters	Malaysia	PNG	Gabon	Cameroon	Myanmar	Congo	Côte d'Ivoire	Zaire	Ghana	France	Others	Total Imports
Japan	**4461000**	**1915000**		**80000**	**31000**	**14000**	**1000**	**1000**	**2000**		**30000**	**6535000**
	4068300	*1388800*	*195492*	*146200*	*11730*			*2607*				
China	**743341**	**177286**	**298664**	**10697**	**511343**				**23829**	**1**	**333839**	**2099000**
	539500	*49900*	*373000*	*24200*					*7580*			
Rep. of Korea	**646000**	**736000**	**3000**	**4000**					**27000**		**285000**	**1701000**
	683000	*656700*	*8399*	*8400*	*170*			*144*	*16290*			
(Taiwan)	**1273562** *	**60940** *	**43928** *		**18594** *						**202976**	**1600000**
	1325000 *	*60900*	*16207*	*1800*						*0*		
Thailand	**464000**	**17000**	**29000**	**36000**	**212000**		**21000**		**2000**		**555000**	**1336000**
	304200	*13700*		*17270*	*116230*		*16510*					
France	**137** W		**309209** W	**119190** W	**411** W	**27263** W	**12878** W	**15892** W	**274** W		**402746**	**888000**
			375034	*280680*			*53600*	*13153*	*440*			
Malaysia	**22**	**38901**	**6316**	**0**	**400**	**0**	**0**	**0**	**0**	**371**	**526990**	**573000**
		15900	*1502*	*1250*					*22162*			
Philippines	**216695**	**113602**	**3005**						**17630**		**189068**	**540000**
	214600	*126800*	*3202*									
Italy											**462000**	**462000**
			39125	*293180*			*19853*	*11697*	*320*	*7535* W		
Portugal			**49000**	**116000**			**24000**	**93000**	**2000**	**1000**	**128000**	**413000**
			57869	*117810*		*98000*	*16146*	*36066*	*1490*	*2603* W		
Spain			**27567** W	**108436** W	**47** W	**7079** W	**71418** W	**891** W	**11660** W	**32502** W	**50401**	**310000**
			97034	*162150*			*69234*	*579*	*12600*	*274* W		
India											**200000**	**200000**
	320400	*17500*	*4755*	*200*	*68840*		*53432*		*16680*			
Germany			**23000**	**81000**	**2000**	**22000**	**3000**	**14000**	**9000**		**16000**	**170000**
			102712	*84730*			*1991*	*9888*	*6030*	*959* W		
Greece											**120000**	**120000**
			102712	*18960*			*4569*	*3200*				
Netherlands			**16000**	**77000**			**2000**				**22000**	**117000**
				64720			*1512*	*280*	*600*			
Others	*409000*	*269800*	*322957*	*3450*	*303030*	*352000*	*74153*	*19386*	*808*	*33629*		
Total Exports	*7864000*	*2600000*	*1700000*	*1225000*	*500000*	*450000*	*311000*	*97000*	*85000*	*45000*		

Table 2-2-a. Trade of Tropical Sawnwood, 1994 (m3)

Importers	Exporters Malaysia	Brazil	Indonesia	Côte d'Ivoire	Ghana	Cameroon	Bolivia	Gabon	Honduras	Netherlands	Others	Total Imports
Thailand	**1964000**	**2000**	**2000**								**467000**	**2435000**
	1341200	*0 [Y]*		*0 [Y]*								
Japan	**537000**	**7000**	**466000**	**0**	**0**	**1000**	**0**		**0**		**246000**	**1257000**
	461400	*11000*	*436000 [*]*	*179*	*410*	*2670*			*600*			
(Taiwan)	**568714 [*]**		**62929 [*]**								**137357**	**769000**
	484000		*45000 [W]*	*40*	*7060*							
China	**244034**	**2211**	**273605**		**32**						**197118**	**717000**
	173200	*10000 [Y]*	*4000 [*]*	*30*	*1460*							
Rep. of Korea	**572000**	**9000**	**25000**		**1390 [W]**						**9610**	**617000**
	450000	*2000 [Y]*	*29429*	*0 [Y]*	*160*							
Netherlands	**219000**	**32000**	**59000**	**27000**	**28000**	**37000**					**59000**	**461000**
	279000	*47000 [Y]*	*4290*	*30757*	*39440*	*37350*			*5200*			
United Kingdom	**102017**	**97791**	**23773**	**29318**	**42146**	**24199**	**446**	**146**	**1225**		**128939**	**450000**
	86300	*63518*	*5048*	*28156*	*33390*	*15500*		*115*	*1500*			
Italy	**35400**	**48300**	**46700**	**176300**	**23000**	**27500**			**100**		**63700**	**421000**
	33500	*30718*	*35779*	*183749*	*17350*	*25000*			*500*			
Brazil											**378000**	**378000**
France	**37609 [W]**	**8008 [W]**	**1430 [W]**	**52481 [W]**	**7007 [W]**	**28028 [W]**		**143 [W]**		**715**	**208579**	**344000**
	35800	*3087*		*68463*	*14760*	*36630*		*683*	*200*			
Malaysia	**1225**	**5**	**283802**	**0**	**40**	**0**	**0**	**0**	**0**	**0**	**21928**	**307000**
			3861		*40*	*1750*						
Philippines	**171165**	**99471**	**1674**	**311**						**550**	**13829**	**287000**
	175100	*142321*		*94*								
Germany	**107000**	**6000**	**5000**	**15000**	**95000**	**7000**				**6000**	**15000**	**256000**
	32000	*3721*		*9996*	*60710*	*3380*			*1600*			
Spain	**1798 [W]**	**61163 [W]**	**752 [W]**	**100869 [W]**	**1390 [W]**	**67270 [W]**		**306 [W]**	**129 [W]**		**6324**	**240000**
	1700	*68461*		*99322*	*5650*	*62280*		*230*				
USA	**43000**	**64000**	**15000**	**0**	**1000**	**0**	**46000**	**0**	**2000**	**1000**	**50000**	**222000**
	26900	*25799*	*6000 [*]*	*2198*	*471*	*1960*			*6600*			
Others	*979900*	*895376*	*130593*	*193016*	*78099*	*33480*	*204000*	*128972*	*106800*	*92000*		
Total Exports	*4560000*	*1303000*	*700000*	*616000*	*259000*	*220000*	*204000*	*130000*	*123000*	*92000*		

Table 2-2-b. Trade of Tropical Sawnwood, 1995 (m3)

Importers	*Exporters* *Malaysia*	*Brazil*	*Indonesia*	*Côte d'Ivoire*	*Ghana*	*Cameroon*	*Bolivia*	*Honduras*	*Gabon*	*Philippines*	*Others*	**Total Imports**
Thailand	**1471000**	**74000**	**3000**							**1000**	**415000**	**1964000**
	1189700				*70*					*25441*		
Japan	**578000**	**16000**	**449000**	**0**	**1000**	**1000**	**0**	**0**		**30000**	**200000**	**1275000**
	461500		*299213* [w]	*216*	*1020*	*110*						
China	**238688**	**1135**	**273846**		**19**	**50**				**54**	**239208**	**753000**
	294200					*70*						
(Taiwan)	**432454** [*]	**12797** [*]	**57268** [*]							**44946** [*]	**81535**	**629000**
	363000				*4440*							
Rep. of Korea	**463000**		**46000**								**22000**	**531000**
	375500		*18090* [w]		*50*	*1780*				*219*		
Italy											**479000**	**479000**
	14800		*26241* [w]	*190635*	*25810*	*42510*			*44*			
Brazil											**450000**	**450000**
United Kingdom	**80724**	**90684**	**25469**	**25085**	**32049**	**21437**	**423**	**4548**	**1076**	**5680**	**141825**	**429000**
	56500		*3504* [w]	*12876*	*26510*	*19220*			*110*	*177*		
Netherlands	**177000**	**40000**	**57000**	**19000**	**11000**	**32000**					**59000**	**395000**
	254900			*20970*	*20280*	*35680*						
Malaysia	**4158**	**0**	**359749**	**0**	**31**	**0**	**0**	**0**	**0**	**1147**	**10915**	**376000**
						210						
Spain	**641** [w]	**74583** [w]	**3265** [w]	**119482** [w]	**18453** [w]	**87086** [w]		**306** [w]	**149** [w]		**53036**	**357000**
	400			*122697*	*15760*	*101130*			*115*			
France	**37752** [w]	**11869** [w]	**2574** [w]	**54197** [w]	**13871** [w]	**25311** [w]			**572** [w]		**209854**	**356000**
	21100			*68132*	*26020*	*31260*			*974*			
Philippines	**271775**	**57394**	**1759**								**19072**	**350000**
	250000											
Germany	**72000**	**6000**	**5000**	**11000**	**135000**	**6000**					**19000**	**254000**
	29100			*7061*	*63500*	*5380*						
USA	**40000**	**60000**	**12000**	**0**	**2000**	**0**	**52000**	**2000**	**0**	**6000**	**57000**	**231000**
	248000		*103604* [w]	*681*	*659*	*4310*						
Others	*592300*	*1103000*	*271350*	*204732*	*101881*	*3340*	*160000*	*120000*	*108757*	*57163*		
Total Exports	*4151000*	*1103000*	*722000*	*628000*	*286000*	*245000*	*160000*	*120000*	*110000*	*83000*		

Table 2-3-a. Trade of Tropical Veneer, 1994 (m3)

Importers	Exporters Malaysia	Brazil	Côte d'Ivoire	Cameroon	Congo	Ghana	Philippines	Indonesia	Germany	China	Others	Total Imports
(Taiwan)	**183754** [1]							**1368** [1]			**8878**	**194000**
	194200		*51*				*300*			*7856*		
China	**166563**		**23**			**438**	**5**	**9792**	**80**		**16099**	**193000**
	173300	*0* [2]	*33*			*440*						
Japan	**134000**	**7000**					**10000**	**5000**			**4000**	**160000**
	155400	*11043* [3]	*0* [2]				*15584*			*3527*		
Germany		**18000**	**30000**	**2000**	**9000**	**10000**					**3000**	**72000**
	10	*15133* [3]	*25814*			*8630*				*25*		
Italy		**800**	**25100**	**29800**	**1800**	**7200**		**800**		**100**	**6400**	**72000**
	0 [2]	*1466* [3]	*29901*			*7990*				*7*		
Rep. of Korea	**40000**	**2000**						**1000**			**11000**	**54000**
	29400	*4317* [3]	*0* [2]							*589*		
Brazil											**31000**	**31000**
France											**31000**	**31000**
	0 [1]	*693* [3]	*7570*			*3620*						
United Kingdom	**93**	**71**	**700**	**652**	**78**	**3625**	**123**	**225**	**200**	**73**	**17160**	**23000**
	300	*0* [2]	*828*			*4180*			*1441* [1]	*12*		
Belgium-Lux.		**300**	**6600**	**1000**	**500**	**1400**					**7200**	**17000**
	0 [2]	*886* [3]	*9672*			*930*	*18*		*399* [1]	*19*		
Australia	**3000**					**2000**	**3000**				**8000**	**16000**
	1400	*0* [2]	*0* [2]			*590*	*2427*	*545* [3]				
USA	**3089**	**7353**	**170**	**266**	**355**	**630**	**149**	**107**	**452**	**0**	**429**	**13000**
	6800	*53755* [3]	*10426*			*3780*	*1551*		*558*	*264*		
Netherlands				**6000**					**1000**		**5000**	**12000**
	1300	*0* [2]	*5147*			*1590*			*427* [1]	*9*		
Thailand	**9000**							**3000**			**0**	**12000**
	13000											
Honduras											**12000**	**12000**
Others	*37890*	*31708*	*26558*	*38000*	*35000*	*3250*	*10120*	*24455*	*15175*	*2692*		
Total Exports	*613000*	*119000*	*116000*	*38000*	*35000*	*35000*	*30000*	*25000*	*18000*	*15000*		

Table 2-3-b. Trade of Tropical Veneer, 1995 (m3)

Importers	Exporters Malaysia	Côte d'Ivoire	Brazil	Ghana	Congo	Philippines	Indonesia	Cameroon	Germany	(Taiwan)	Others	Total Imports
China	272711	61	28	657		11508	18273	173	486	5408	21695	331000
	159700			*560*								
(Taiwan)	135849										14151	150000
	134000			*140*								
Japan	117000		8000			0	4000				2000	131000
	149600					*39*						
Italy											93000	93000
	100	*32011*		*14910*								
Germany		38000	25000	9000	8000			1000			2000	83000
	10	*34821*		*6590*								
Brazil											30000	30000
Rep. of Korea	23000		5000				1000				1000	30000
	23300					*139*						
Philippines	25360						2		20		618	26000
	33800											
Belgium-Lux.											24000	24000
	300	*7718*		*2160*		*19*						
France											23000	23000
		8037		*3760*								
United Kingdom	142	0	120	3684	0	123	0	361		0	14570	19000
	500	*386*		*3210*			*28542*					
Thailand	13000						2000				2000	17000
	14600											
USA	308	96	6959	618	428	6647	138	357	182	0	267	16000
	9300	*15237*		*7160*		*11748*						
Netherlands					8000				1000		5000	14000
	6300	*2515*		*1120*								
Australia	4000			1000		3000	1000				4000	13000
	670			*640*		*1347*						
Others	*53820*	*23275*	*100000*	*5750*	*35000*	*18708*	*1458*	*29000*	*15000*	*9000*		
Total Exports	*586000*	*124000*	*100000*	*46000*	*35000*	*32000*	*30000*	*29000*	*15000*	*9000*		

Table 2-4-a. Trade of Tropical Plywood, 1994 (m3)

Importers	Exporters Indonesia	Malaysia	Brazil	(Taiwan)	USA	China	Belgium-Lux.	Guyana	India	Ecuador	Others	Total Imports
Japan	**3233000**	**506000**	**16000**	**17000**					**4000**	**1000**	**0**	**3777000**
	2921000 '	*532300*	*10614* w	*11263* '	*1000*	*1488*				*2171*		
China	**483748**	**481556**	**10**	**18695**	**9779**	**2367**					**803845**	**1800000**
	573000 '	*1292400*										
(Taiwan)	**907237** '	**143827** '			**300** '						**13636**	**1065000**
	756000 '	*221100* '				*792*						
Rep. of Korea	**676000**	**155000**	**6000**			**6000**		**4000**	**9000**		**12000**	**868000**
	640000 '	*168000* y	*5000* y			*2713*		*5214*				
USA	**513000**	**121000**	**82000**	**3000**	**0**	**0**	**0**	**8000**	**1000**	**4000**	**10000**	**742000**
	688000 w	*224840*	*193333* w	*20282* '	*0*	*279*		*10414*				
United Kingdom	**128752**	**79521**	**217609**	**417**	**0**	**6943**		**0**	**621**	**293**	**50844**	**485000**
	97000 '	*76100*	*166140* w			*3869*		*833*		*289*		
Germany	**127000**	**3000**	**50000**								**15000**	**195000**
	75000 y	*2200*	*36808* w									
Netherlands	**44000**	**5000**	**4000**								**109000**	**162000**
	11581 w	*9700*	*5000* y					*358*				
France											**141000**	**141000**
	71749 w	*1000* '	*9793* w									
Belgium-Lux.	**67500**	**7700**	**46700**	**100**							**14000**	**136000**
	123000 '	*4100*	*55599* w							*163*		
Egypt	**6000**		**6000**	**8000**							**100000**	**120000**
	134596 w	*40*	*3000* y									
Canada	**56000**	**1000**	**1000**		**11000**						**0**	**69000**
	40379 w		*1000* y		*15000*			*108*				
Italy	**10900**	**2000**	**13300**								**22800**	**49000**
	32725 w	*2900*	*12890* w							*0* z		
Australia	**34000**	**6000**									**2000**	**42000**
	28000 y	*2800*	*0* y									
Denmark	**5236** w	**770** w	**11088** w		**4400** '						**8506**	**30000**
		2200	*7427* w									
Others	*1140971*	*464320*	*219397*	*96455*	*55000*	*47859*	*50000*	*14073*	*30000*	*27377*		
Total Exports	*7333000*	*3004000*	*726000*	*128000*	*71000*	*57000*	*50000*	*31000*	*30000*	*30000*		

Table 2-4-b. Trade of Tropical Plywood, 1995 (m3)

Importers	Exporters Indonesia	Malaysia	Brazil	(Taiwan)	Guyana	China	Ecuador	USA	Gabon	Belgium-Lux.	Others	Total Imports
Japan	**3035000**	**969000**	**10000**								**34000**	**4048000**
	3500000 [1]	*1002500*		*26476 [2]*		*4795*						
China	**1106966**	**797647**	**44**	**31287**				**9394**		**278**	**117384**	**2063000**
	1055316 [3]	*1070800*										
Rep. of Korea	**742000**	**379000**			**9000**	**13000**					**16000**	**1159000**
	1309385 [3]	*306700*		*3223 [2]*	*5281*	*19443*						
(Taiwan)	**797579 [2]**	**126043 [2]**									**11378**	**935000**
		177000 [2]			*21*	*20000 [1]*						
USA	**678000**	**127000**	**76000**	**2000**	**16000**	**0**	**6000**	**0**	**0**	**0**	**15000**	**920000**
		148200		*12289 [2]*	*52783*	*1620*						
United Kingdom	**186232**	**72303**	**192517**	**528**	**2645**	**4608**		**0**	**0**		**39167**	**498000**
	190806 [3]	*77300*			*2017*	*4201*			*910*			
Germany	**150000**	**2000**	**70000**								**10000**	**232000**
		1600										
Belgium-Lux.											**170000**	**170000**
	405020 [3]	*4700*							*57*			
Netherlands	**47000**		**2000**						**3000**	**11000**	**105000**	**168000**
	184800 [3]	*4400*			*196*	*1*			*3298*			
France											**156000**	**156000**
	85763 [3]	*20*				*18*			*13570*			
Egypt	**54096**	**1006**		**1184**					**2500**	**4240**	**56974**	**120000**
	134180 [3]											
Thailand	**27000**	**50000**		**1000**							**14000**	**92000**
	6283 [3]	*56800*				*79*						
Italy											**79000**	**79000**
		800							*758*			
Canada	**49000**							**13000**			**2000**	**64000**
						79			*49*			
Denmark	**20636 [3]**	**9009 [3]**	**19712 [3]**								**643**	**50000**
	25040 [3]	*10400*										
Others	*1313407*	*477780*	*577000*	*117012*	*26702*	*2764*	*50000*	*45000*	*17358*	*30000*		
Total Exports	*8210000*	*3339000*	*577000*	*159000*	*87000*	*53000*	*50000*	*45000*	*36000*	*30000*		

Appendix 3

Value of Trade in Tropical Timber Products in 1994-95

Table 3-1-a. Value, Volume and Unit Value of Imports of Tropical Timber by ITTO Consumers in 1994

Country	Reported Currency	Rate	Logs			Sawnwood			Veneer			Plywood			Total
			Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000US$)
Australia	A$	0.732	942	5	188	155023	139	1115	16720	16	1045	47980	42	1142	220664
Canada	US$		208	1	208	7478	20	374	4193	3	1398	27138	69	393	39017
China	US$		364296	2030	179	168089	717	234	77207	193	400	773676	1800	430	1383268
(Taiwan)			396000 I	1800	220	246080 I	769	320	97000 I	194	500	585750 I	1065	550	1324830
Egypt			6650 I	35	190	4200 I	12	350	2500 I	5	500	60000 I	120	500	73350
EU			**624766**	**2594**	**241**	**1208553**	**2524**	**479**	**223971**	**250**	**896**	**692837**	**1234**	**561**	**2750127**
Austria			300 I	1	300	6300 I	15	420	900 I	1	900	600 I	1	600	8100
Belgium-Lux.			17885 Y	46	389	68800 I	160	430	22100 I	17	1300	95200	136	700	203985
Denmark	DKK	6.361	778	2	389	15739	24	656	12646	5	2529	40357 I	30	1345	69520
Finland	US$		19	0	380	8137	8	1017	1624	1	1624	523	1	523	10304
France			158297 Y	880	180	103200 I	344	300	31000 I	31	1000	70500 I	141	500	362997
Germany			59658 Y	192	311	102400 I	256	400	57600 I	72	800	107250 I	195	550	326908
Greece	Dra.	242.6	29000 I	125	232	14600 I	27	541	1200 I	1	1200	526	2	263	45326
Ireland			5482 Y	7	783	43450 I	79	550	1300 I	1	1300	8400 I	14	600	58632
Italy			119500 Y	478	250	210500 I	421	500	54000 I	72	750	26950 I	49	550	410950
Netherlands			32403 Y	120	270	258160 I	461	560	8400 I	12	700	86670 I	162	535	385633
Portugal	US$		105252	358	294	24867	31	802	2900	2	1450	3861	6	644	136880
Spain	US$		86500	360	240	139000	240	579	5900 I	10	590	6000 I	5	1200	237400
Sweden			1037 Y	2	519	6400 I	8	800	1400 I	2	700	3500 I	7	500	12337
U.K.			8655 Y	23	376	207000 I	450	460	23000 I	23	1000	242500 I	485	500	481155
Japan	US$		1833135	7494	245	760612	1257	605	115148	160	720	1781064	3777	472	4489959
Nepal			720 I	4	180	2400 I	8	300	1000 I	2	500	0	0	-	4120
New Zealand	NZ$	1.684	339	0	680	2000 I	2	1000	114	0	700	3086	1	3086	5539
Norway			128 Y	0	260	3500 I	5	700	1100 I	1	1100	3500 I	7	500	8228
Rep.of Korea	US$		378923	1944	195	245505	617	398	19402	54	359	404539	868	466	1048369
Russian Fed.			1900 I	10	190	3200 I	8	400	1650 I	3	550	1500 I	3	500	6750
Switzerland			4443 Y	12	370	6400 I	8	800	0	0	-	600 I	1	600	10843
U.S.A.	US$		2412	4	603	143072	222	644	20739	13	1595	400795	742	540	567018
Consumers Total			**3614862**	**15933**	**227**	**2956111**	**6308**	**469**	**580744**	**894**	**650**	**4782464**	**9729**	**492**	**11934182**
ITTO Total			**4034679**	**18344**	**220**	**3734365**	**9742**	**383**	**607484**	**959**	**633**	**4840085**	**9839**	**492**	**13216614**

Table 3-1-b. Value, Volume and Unit Value of Imports of Tropical Timber by ITTO Consumers in 1995

Country	Reported Currency	Rate	Logs			Sawnwood			Veneer			Plywood			Total Value
			Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	(1000US$)
Australia	A$	0.742	1461	2	730	150038	140	1072	16305	13	1254	46105	43	1072	213908
Canada	US$		287	1	287	7969	16	498	2878	2	1439	19957	64	312	31091
China			375721 I	2099	179	176202 I	753	234	132400 I	331	400	755076 I	2063	707	1439399
(Taiwan)			352000 I	1600	220	201280 I	629	320	75000 I	150	500	514250 I	935	550	1142530
Egypt			5700 I	30	190	4200 I	12	350	6000 I	12	500	60000 I	120	500	75900
EU			**647178**	**2577**	**251**	**1295787**	**2593**	**500**	**237747**	**281**	**846**	**857233**	**1386**	**618**	**3037945**
Austria			300 I	1	300	6300 I	15	420	900 I	1	900	600 I	1	600	8100
Belgium-Lux.			24938 I	74	337	62780 I	146	430	31200 I	24	1300	119000 I	170	700	237918
Denmark	DKK	5.602	1606	2	803	19235	27	712	13525	8	1691	101041	50	2021	135408
Finland	US$		97	1	194	7991	7	1142	1041	1	1041	869	2	434	9998
France	FF	4.99	158408	888	178	100629	356	283	20000 I	23	1000	78000 I	156	500	357037
Germany			52870 I	170	311	101600 I	254	400	66400 I	83	800	127600 I	232	550	348470
Greece			33840 I	120	282	15148 I	28	541	1200 I	1	1200	526 I	2	263	50714
Ireland	US$		1620	3	540	36545	55	664	3615	2	1808	9222	17	542	51002
Italy			115500 I	462	250	239500 I	479	500	52500 I	93	750	43450 I	79	550	450950
Netherlands	Hfl	1.606	33907	117	290	263029	395	666	10118	14	723	115679	168	689	422733
Portugal	US$		130763	413	317	37388	41	912	1705	1	1705	2550	4	638	172406
Spain	US$		86310	310	278	203065	357	569	12391	10	1239	5700 I	3	1900	307466
Sweden	SEK	7.133	1754	2	877	5237	4	1309	4153	1	4153	3996	4	999	15140
U.K.			5264 I	14	376	197340 I	429	460	19000 I	19	1000	249000 I	498	500	470604
Japan	US$		1406330	6535	215	838209	1275	657	97834	131	747	1907839	4048	471	4250212
Nepal			720 I	4	180	2400 I	8	300	1000 I	2	500	0	0	-	4120
New Zealand	NZ$	0.656	152	0	350	1046 I	2	523	175	0	500	806	1	806	2179
Norway	US$		0	0	-	3500 I	5	700	1100 I	1	1100	2500 I	5	500	7100
Rep.of Korea	US$		301423	1701	177	218007	531	411	11380	30	379	490456	1159	423	1021266
Russian Fed.			1900 I	10	190	3200 I	8	400	1650 I	3	550	1500 I	3	500	8250
Switzerland			4440 I	12	370	5600 I	7	800	0	0	-	600 I	1	600	10640
U.S.A.	US$		3181	3	1060	140620	231	609	21217	16	1326	354729	920	386	519747
Consumers Total			**3100492**	**14574**	**213**	**3048058**	**6210**	**491**	**604686**	**972**	**622**	**5011051**	**10748**	**466**	**11764287**
ITTO Total			**3663082**	**17259**	**212**	**3884636**	**9385**	**414**	**647533**	**1070**	**605**	**5091482**	**10913**	**467**	**13214333**

Table 3-1-c. Value, Volume and Unit Value of Exports of Tropical Timber by ITTO Consumers in 1994

Country	Reported Currency	Rate	Logs			Sawnwood			Veneer			Plywood			Total
			Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000US$)
Australia			0	0	-	0	0	-	0	0	-	0	0	-	0
Canada			0	0	-	1200 I	2	600	750 I	1	750	1400 I	2	700	3350
China			8880 I	74	120	7200 I	18	400	9000 I	15	600	34200 I	57	600	59280
(Taiwan)			2450 I	7	350	9600 I	20	480	2800 I	4	700	89600 I	128	700	104450
Egypt			0	0	-	0	0	-	0	0	-	0	0	-	0
EU			**41448**	**97**	**427**	**121244**	**222**	**546**	**55749**	**49**	**1138**	**112346**	**148**	**759**	**330787**
Austria			0	0	-	500 I	1	500	0	0	-	0	0	-	500
Belgium-Lux.			4000 I	10	400	27000 I	45	600	9450 I	9	1050	37500 I	50	750	77950
Denmark	US$		2538	1	2538	3342	5	668	3103	1	3103	1812	3	604	10795
Finland			0	0	-	0	0	-	0	0	-	0	0	-	0
France			23600 I	59	400	7800 I	13	600	5250 I	3	1750	20000 I	25	800	56650
Germany			6750 I	15	450	19200 I	32	600	18900 I	18	1050	3200 I	4	800	48050
Greece	Dra.	242.6	2	0	400	2000 I	5	400	456	1	456	3000 I	5	600	5458
Ireland			0	0	-	960 I	2	480	0	0	-	0	0	-	960
Italy			0	0	-	4000 I	8	500	3600 I	2	1800	8000 I	10	800	15600
Netherlands			4000 I	10	400	47840 I	92	520	8550 I	9	950	22400 I	28	800	82790
Portugal	US$		158	0	350	3702	8	463	3040	2	1520	1934	3	645	8834
Spain			0	0	-	900 I	3	300	700 I	1	700	7000 I	10	700	8600
Sweden			0	0	-	0	0	-	0	0	-	0	0	-	0
U.K.			400 I	1	400	4000 I	8	500	2700 I	3	900	7500 I	10	750	14600
Japan			0	0	-	0	0	-	6000 I	8	750	800 I	1	800	6800
Nepal			0	0	-	0	0	-	0	0	-	0	0	-	0
New Zealand			0	0	-	0	0	-	0	0	-	0	0	-	0
Norway			0	0	-	0	0	-	1200 I	1	1200	0	0	-	1200
Rep.of Korea			0	0	-	0	0	-	0	0	-	800 I	1	800	800
Russian Fed.			0	0	-	0	0	-	0	0	-	0	0	-	0
Switzerland			0	0	-	0	0	-	0	0	-	0	0	-	0
U.S.A.	US$		562	2	281	17288	37	467	2864	1	2864	53250 I	71	750	73964
Consumers Total			**53340**	**180**	**296**	**156532**	**299**	**524**	**78363**	**78**	**1005**	**292396**	**408**	**717**	**580631**
ITTO Total			**2638793**	**16687**	**158**	**3121813**	**8780**	**356**	**593507**	**1136**	**522**	**5706957**	**11633**	**491**	**12061070**

Table 3-1-d. Value, Volume and Unit Value of Exports of Tropical Timber by ITTO Consumers in 1995

Country	Reported Currency	Rate	Logs			Sawnwood			Veneer			Plywood			Total
			Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000US$)
Australia			0	0	-	0	0	-	0	0	-	0	0	-	0
Canada			0	0	-	0	0	-	750 I	1	750	2800 I	4	700	3550
China	US$		4648	22	211	5000 I	15	333	2801	4	700	39068	53	737	51517
(Taiwan)			1750 I	5	350	11040 I	23	480	6300 I	9	700	111300 I	159	700	130390
Egypt			0	0	-	0	0	-	0	0	-	0	0	-	0
EU			**39446**	**99**	**398**	**107347**	**157**	**684**	**50612**	**42**	**1205**	**106002**	**128**	**828**	**303408**
Austria			0	0	-	500 I	1	500	0	0	-	0	0	-	500
Belgium-Lux.			13600 I	34	400	13200 I	22	600	6300 I	6	1050	22500 I	30	750	55600
Denmark	DKK	5.602	178	0	1000	6114	5	1223	4112	2	2056	3338	3	1113	13743
Finland			0	0	-	700 I	1	700	0	0	-	800 I	1	800	1500
France			18000 I	45	400	6000 I	10	600	5250 I	3	1750	20000 I	25	800	49250
Germany			4500 I	10	450	14400 I	24	600	15750 I	15	1050	3200 I	4	800	37850
Greece			0	0	-	2000 I	5	400	456 I	1	456	3000 I	5	600	5456
Ireland	US$		12	0	600	5995	2	2998	0	0	-	85	0	850	6092
Italy			0	0	-	2500 I	5	500	3600 I	2	1800	10000 I	10	1000	16100
Netherlands	Dfl	1.606	2488	8	311	47713	65	734	9469	8	1184	28860	30	962	88530
Portugal	US$		178	1	178	3526	6	588	3175	2	1588	469	1	469	7348
Spain	US$		90	0	250	1200 I	4	300	700 I	1	700	7000 I	10	700	8990
Sweden			0	0	-	0	0	-	0	0	-	0	0	-	0
U.K.			400 I	1	400	3500 I	7	500	1800 I	2	900	6750 I	9	750	12450
Japan			0	0	-	0	0	-	6000 I	8	750	3200 I	4	800	9200
Nepal			0	0	-	0	0	-	0	0	-	0	0	-	0
New Zealand			0	0	-	0	0	-	0	0	-	0	0	-	0
Norway			0	0	-	0	0	-	0	0	-	0	0	-	0
Rep.of Korea			0	0	-	0	0	-	0	0	-	800 I	1	800	800
Russian Fed.			0	0	-	0	0	-	0	0	-	0	0	-	0
Switzerland			0	0	-	0	0	-	0	0	-	0	0	-	0
U.S.A.	US$		498	2	249	20745	34	610	2879	1	2879	33750 I	45	750	57872
Consumers Total			**46342**	**128**	**362**	**144132**	**230**	**627**	**69342**	**65**	**1067**	**296921**	**394**	**754**	**556738**
ITTO Total			**2343918**	**15097**	**155**	**2992891**	**8118**	**369**	**526243**	**1077**	**489**	**6201912**	**12798**	**485**	**12064964**

Table 3-2-a. Value, Volume and Unit Value of Imports of Tropical Timber by ITTO Producers in 1994

Country	Reported Currency	Rate	Logs			Sawnwood			Veneer			Plywood			Total
			Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000US$)
Africa			**0**	**0**	**-**	**1400**	**9**	**156**	**0**	**0**	**-**	**4530**	**15**	**302**	**5930**
Cameroon			0	0	-	0	0	-	0	0	-	0	0	-	0
Congo			0	0	-	0	0	-	0	0	-	4500 I	15	300	4500
Côte d'Ivoire			0	0	-	0	0	-	0	0	-	0	0	-	0
Gabon			0	0	-	200 I	1	200	0	0	-	0	0	-	200
Ghana			0	0	-	0	0	-	0	0	-	0	0	-	0
Liberia			0	0	-	0	0	-	0	0	-	0	0	-	0
Togo	US$		0	0	-	1200	8	150	0	0	-	30	0	300	1230
Zaire			0	0	-	0	0	-	0	0	-	0	0	-	0
Asia-Pacific			**416146**	**2376**	**175**	**733260**	**3033**	**242**	**13714**	**19**	**722**	**34733**	**54**	**643**	**1197853**
Fiji			0	0	-	60	0	177	898	2	386	33	0	734	991
India			45000 I	250	180	1200 I	4	300	600 I	1	600	900 I	2	450	47700
Indonesia			1500	10	150	0	0	-	1000 I	2	500	1800 I	4	450	4300
Malaysia	US$		21236	233	91	54000	307	176	3000	2	1500	9000	13	692	87236
Myanmar			0	0	-	0	0	-	0	0	-	0	0	-	0
PNG			0	0	-	0	0	-	0	0	-	0	0	-	0
Philippines	US$		56216	350	161	67000	287	233	0	0	-	3000	6	500	126216
Thailand	US$		292194	1533	191	611000	2435	251	8216	12	685	20000	29	690	931410
Latin America			**3671**	**35**	**105**	**43654**	**392**	**111**	**13924**	**46**	**303**	**17491**	**41**	**427**	**78740**
Bolivia			0	0	-	0	0	-	0	0	-	0	0	-	0
Brazil	US$		416	10	42	40000	378	106	7050	31	227	900 I	2	450	48366
Colombia	US$		628	8	79	118	0	250	158	0	400	3000 I	8	375	3904
Ecuador	US$		2	0	200	20	0	300	13	0	400	18	0	350	53
Guyana			0	0	-	0	0	-	0	0	-	0	0	-	0
Honduras			0	0	-	0	0	-	4800 I	12	400	450 I	1	450	5250
Panama	US$		1425	11	130	466	2	233	503	0	1000	523	2	262	2917
Peru			450 I	3	150	200 I	1	200	400 I	1	400	0	0	-	1050
Trinidad			750 I	3	250	600 I	2	300	0	0	-	3600 I	8	450	4950
Venezuela			0	0	-	2250 I	9	250	1000 I	2	500	9000 I	20	450	12250
Producers Total			**419817**	**2411**	**174**	**778314**	**3434**	**227**	**27638**	**65**	**425**	**56754**	**110**	**516**	**1282523**
ITTO Total			**4034679**	**18344**	**220**	**3734365**	**9742**	**384**	**607484**	**959**	**635**	**4840085**	**9839**	**530**	**13216614**

Table 3-2-b. Value, Volume and Unit Value of Imports of Tropical Timber by ITTO Producers in 1995

Country	Reported Currency	Rate	Logs			Sawnwood			Veneer			Plywood			Total
			Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000US$)
Africa			**1400**	**14**	**100**	**1956**	**8**	**200**	**0**	**0**	**-**	**3040**	**15**	**203**	**6396**
Cameroon			0	0	-	0	0	-	0	0	-	0	5	-	0
Congo			0	0	-	0	0	-	0	0	-	3000 I	10	300	3000
Côte d'Ivoire			0	0	-	0	0	-	0	0	-	0	0	-	0
Gabon			1400 I	14	100	0	0	-	0	0	-	0	0	-	1400
Ghana			0	0	-	0	0	-	0	0	-	0	0	-	0
Liberia			0	0	-	0	0	-	0	0	-	0	0	-	0
Togo	US$		0	0	-	1596	8	200	0	0	-	40	0	300	1636
Zaire			0	0	-	0	0	-	0	0	-	0	0	-	0
Asia-Pacific			**558636**	**2653**	**211**	**781200**	**2694**	**290**	**27895**	**54**	**517**	**58343**	**114**	**512**	**1426074**
Fiji			0	0	-	0	0	-	0	0	-	5138 I	7	734	5138
India	US$		36000 I	200	180	1200 I	4	300	1800 I	3	600	1800 I	4	450	40800
Indonesia	US$		600 I	4	150	0	0	-	2000 I	4	500	0	0	-	2600
Malaysia	US$		39000	573	68	75000	376	199	5000	4	1250	8620	10	862	127620
Myanmar			0	0	-	0	0	-	0	0	-	0	0	-	0
PNG			0	0	-	0	0	-	0	0	-	0	0	-	0
Philippines	US$		82036	540	152	82000	350	234	8058	26	310	1980	1	1980	174074
Thailand	US$		401000	1336	300	623000	1964	317	11037	17	649	40805	92	444	1075842
Latin America			**2554**	**18**	**142**	**53422**	**473**	**113**	**14952**	**44**	**340**	**19048**	**36**	**529**	**89975**
Bolivia			0	0	-	0	0	-	0	0	-	0	0	-	0
Brazil			420 I	10	42	47250 I	450	105	6810 I	30	227	0	0	-	54480
Colombia	US$		222	1	222	2294	10	229	2460	1	2460	11176	18	621	16151
Ecuador	US$		3	0	100	64	0	250	195	0	400	150	0	360	412
Guyana			0	0	-	0	0	-	0	0	-	0	0	-	0
Honduras			0	0	-	0	0	-	4000 I	10	400	450 I	1	450	4450
Panama	US$		1009	3	336	814	1	814	88	0	800	522	2	261	2433
Peru			150 I	1	150	200 I	1	200	400 I	1	400	0	0	-	750
Trinidad			500 I	2	250	300 I	1	300	0	0	-	4500 I	10	450	5300
Venezuela			250 I	1	250	2500 I	10	250	1000 I	2	500	2250 I	5	450	6000
Producers Total			**562590**	**2685**	**210**	**836578**	**3175**	**263**	**42847**	**98**	**437**	**80431**	**165**	**487**	**1522445**
ITTO Total			**3663082**	**17259**	**212**	**3884636**	**9385**	**414**	**647533**	**1070**	**605**	**5091482**	**10913**	**467**	**13214333**

Table 3-2-c. Value, Volume and Unit Value of Exports of Tropical Timber by ITTO Producers in 1994

Country	Reported Currency	Rate	Logs			Sawnwood			Veneer			Plywood			Total
			Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000US$)
Africa			**894753**	**4181**	**214**	**551260**	**1309**	**421**	**128760**	**246**	**523**	**14758**	**42**	**351**	**1589531**
Cameroon			323456 Y	1150	281	122554 Y	220	557	22576 Y	38	594	4913 Y	20	246	473499
Congo			78946 Y	450	175	14558 Y	25	582	23891 Y	35	683	0	0	-	117395
Côte d'Ivoire	CFA	0.002	52778	376	140	247000	616	401	42822	116	369	4946	11	450	347546
Gabon			349179 Y	1500	233	52000 I	130	400	11250 I	15	750	4500 Y	10	450	416929
Ghana	US$		66899	572	117	103500	259	400	24479	35	699	386	1	386	195264
Liberia			4000 I	20	200	3 Y	0	300	13 Y	0	600	0	0	-	4016
Togo	US$		156	1	156	0	0	-	0	0	-	0	0	-	156
Zaire	US$		19339	112	173	11645	59	197	3729	7	533	13 Y	0	400	34726
Asia-Pacific			**1679655**	**12277**	**137**	**2041351**	**5409**	**377**	**311476**	**678**	**459**	**5074412**	**10382**	**489**	**9106894**
Fiji			0	0	-	4102 Y	11	373	2717 Y	4	679	1000 I	2	500	7819
India			0	0	-	340 I	1	340	1200 I	2	600	15000 I	30	500	16540
Indonesia			8802 Y	43	205	280000 I	700	400	15000 I	25	600	3725164 Y	7333	508	4028966
Malaysia	US$		1022300	8561	119	1656500	4560	363	265500	613	433	1327500	3004	442	4271800
Myanmar	US$		169500	602	282	21540	36	598	126	0	700	431	1	431	191597
PNG	US$		478764	3066	156	1437	3	479	0	0	-	14	0	500	480215
Philippines	US$		207	4	52	6116	37	165	11898	30	397	4000	10	400	22221
Thailand	US$		82	1	82	71316	61	1169	15035	4	3759	1303	2	652	87736
Latin America			**11045**	**49**	**225**	**446670**	**1763**	**253**	**71908**	**134**	**537**	**316618**	**801**	**395**	**846241**
Bolivia			7381 Y	15	492	74145 Y	204	363	1194 Y	3	398	2232 Y	7	319	84952
Brazil	US$		25	0	200	326500	1303	251	64500	119	542	293500	726	404	684525
Colombia			0 I	0	-	539 Y	5	108	0	0	-	500 I	1	500	1039
Ecuador	US$		0 I	0	-	4100	75	55	2100 Y	3	700	8035 Y	30	268	14235
Guyana	US$		1596	22	73	4024 Y	18	224	196 Y	0	500	10678	31	344	16494
Honduras			1500 I	10	150	30750 I	123	250	44 Y	0	500	535 Y	4	134	32829
Panama			0 I	0	-	439 Y	2	220	219 Y	0	500	131 Y	0	300	789
Peru			158 Y	0	350	5465 Y	27	202	3600 I	9	400	500 I	1	500	9723
Trinidad			385 Y	2	193	266 Y	1	266	0	0	-	500 I	1	500	1151
Venezuela			0 I	0	-	442 Y	5	88	55 Y	0	600	7 Y	0	500	504
Producers Total			**2585453**	**16507**	**157**	**3039281**	**8481**	**358**	**512144**	**1058**	**484**	**5405788**	**11225**	**482**	**11542665**
ITTO Total			**2638793**	**16687**	**158**	**3121813**	**8780**	**356**	**593507**	**1136**	**522**	**5706957**	**11633**	**491**	**12061070**

Table 3-2-d. Value, Volume and Unit Value of Exports of Tropical Timber by ITTO Producers in 1995

Country	Reported Currency	Rate	Logs			Sawnwood			Veneer			Plywood			Total
			Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000 US$)	Volume (1000 m3)	Unit Value (US$/m3)	Value (1000US$)
Africa			**899522**	**3911**	**230**	**577491**	**1332**	**434**	**129462**	**247**	**524**	**52170**	**75**	**696**	**1658645**
Cameroon			344225 I	1225	281	136465 I	245	557	17226 I	29	594	4920 I	20	246	502836
Congo			78750 I	450	175	14550 I	25	582	23905 I	35	683	0	0	-	117205
Côte d'Ivoire	CFA	0.002	47506	311	153	260198	628	414	45630	124	368	3532	15	235	356866
Gabon			396100 I	1700	233	44000 I	110	400	3750 I	5	750	42372 I	36	1177	486222
Ghana	US$		7449	85	88	108500	286	379	34483	46	750	1346	4	337	151778
Liberia			8000 I	40	200	0	0	-	0	0	-	0	0	-	8000
Togo	US$		390	3	130	0	0	-	0	0	-	0	0	-	390
Zaire	US$		17102	97	176	13778	38	363	4468	8	559	0	0	-	35348
Asia-Pacific			**1399423**	**11020**	**127**	**1874191**	**5068**	**370**	**275317**	**656**	**420**	**5566937**	**11600**	**480**	**9115868**
Fiji			0	0	-	4476 I	12	373	2265 I	5	453	1500 I	3	500	8241
India			0	0	-	340 I	1	340	600 I	1	600	15000 I	30	500	15940
Indonesia			6150 I	30	205	288800 I	722	400	18000 I	30	600	4170680 I	8210	508	4483630
Malaysia	US$		909500	7864	116	1450500	4151	349	230500	586	393	1372500	3339	411	3963000
Myanmar	US$		156993	500	314	21811	44	496	84	0	500	48	0	500	178936
PNG	US$		325500	2600	125	3106	5	621	0	0	-	0	0	-	328606
Philippines	US$		0	0	-	17340	83	209	13487	32	421	5793	17	341	36620
Thailand	US$		1280	26	49	87818	50	1756	10381	2	5191	1416	1	1416	100895
Latin America			**5656**	**38**	**149**	**397077**	**1488**	**267**	**57326**	**109**	**526**	**283927**	**729**	**389**	**743986**
Bolivia			2460 I	5	492	58080 I	160	363	398 I	1	398	638 I	2	319	61576
Brazil			0	0	-	276853 I	1103	251	54200 I	100	542	233108 I	577	404	564161
Colombia			350 I	2	175	756 I	7	108	0	0	-	2000 I	4	500	3106
Ecuador	US$		0 I	0	-	21212	60	354	1928	6	321	15171	50	303	38311
Guyana	US$		1196	20	60	5626	15	375	0	0	-	30540	87	351	37362
Honduras			1500 I	10	150	30000 I	120	250	0	0	-	670 I	5	134	32170
Panama			0	0	-	220 I	1	220	0	0	-	300 I	1	300	520
Peru			0	0	-	4242 I	21	202	800 I	2	400	1000 I	2	500	6042
Trinidad			0	0	-	0	0	-	0	0	-	500 I	1	500	500
Venezuela			150 I	1	150	88 I	1	88	0	0	-	0	0	-	238
Producers Total			**2304601**	**14969**	**154**	**2848759**	**7888**	**361**	**462105**	**1012**	**457**	**5903034**	**12404**	**476**	**11518499**
ITTO Total			**2343918**	**15097**	**155**	**2992891**	**8118**	**369**	**526243**	**1077**	**489**	**6201912**	**12798**	**485**	**12064964**

Appendix 4

Secondary Processed Forest Products

Table 4-1. Major ITTO Importers of Secondary Processed Wood Products [1000 US$; (% share)]

Importer	From	1990	1991	1992	1993	1994
European Union*	**WORLD**	**11291031**	**12252259**	**13677152**	**10536258**	**11636334**
	DMEC	701570 (6)	928464 (8)	1162979 (9)	1376204 (13)	1553835 (13)
	ITTO Producers	448600 (4)	615364 (5)	777345 (6)	959916 (9)	1105726 (10)
Germany	**WORLD**	**3434495**	**4263353**	**5179087**	**4239002**	**4892099**
	DMEC	166105 (5)	243921 (6)	338331 (7)	412322 (10)	454051 (9)
	ITTO Producers	106338 (3)	162974 (4)	236287 (5)	315774 (7)	345832 (7)
France	**WORLD**	**2509944**	**2393128**	**2335876**	**1771632**	**1907043**
	DMEC	99871 (4)	121726 (5)	155922 (7)	199586 (11)	230331 (12)
	ITTO Producers	64877 (3)	76051 (3)	97409 (4)	124885 (7)	142864 (7)
United Kingdom	**WORLD**	**1640963**	**1534157**	**1553810**	**1218490**	**1321557**
	DMEC	190388 (12)	221752 (14)	261446 (17)	305490 (25)	371101 (28)
	ITTO Producers	123181 (8)	148287 (10)	172735 (11)	202435 (17)	260123 (20)
Netherlands	**WORLD**	**1372105**	**1442255**	**1612251**	**1127899**	**1307582**
	DMEC	82593 (6)	120155 (8)	141022 (9)	200501 (18)	249166 (19)
	ITTO Producers	57824 (4)	86376 (6)	97695 (6)	145006 (13)	189134 (14)
Belgium-Lux	**WORLD**	**1119761**	**1207390**	**1347657**	**995598**	**1135349**
	DMEC	25856 (2)	32795 (3)	41428 (3)	49898 (5)	63880 (6)
	ITTO Producers	17054 (2)	22596 (2)	29067 (2)	37669 (4)	48944 (4)
USA	**WORLD**	**3735228**	**3606860**	**3930283**	**4540928**	**5390064**
	DMEC	1098049 (29)	1162962 (32)	1400716 (36)	1868977 (41)	2342772 (43)
	ITTO Producers	524755 (14)	560890 (16)	694819 (18)	994773 (22)	1226405 (23)
Japan	**WORLD**	**1104201**	**1207612**	**1247508**	**1397408**	**1903257**
	DMEC	441962 (40)	562284 (47)	658113 (53)	813054 (58)	1117659 (59)
	ITTO Producers	261362 (24)	339510 (28)	411202 (33)	513330 (37)	703377 (37)
Switzerland	**WORLD**	**1339696**	**1257610**	**1213516**	**1063858**	**1249332**
	DMEC	11413 (1)	13135 (1)	13393 (1)	12859 (1)	14507 (1)
	ITTO Producers	6926 (1)	8424 (1)	9646 (1)	8851 (1)	9848 (1)
Austria**	**WORLD**	**794631**	**863602**	**945134**	**927611**	**950000**
	DMEC	18983 (2)	18393 (2)	20070 (2)	22288 (2)	24000 (3)
	ITTO Producers	6958 (1)	7818 (1)	11070 (1)	14189 (2)	16000 (2)
Canada	**WORLD**	**599622**	**695319**	**752120**	**749229**	**753247**
	DMEC	51145 (9)	60154 (9)	70167 (9)	83228 (11)	96778 (13)
	ITTO Producers	27419 (5)	30798 (4)	35259 (5)	42118 (6)	47839 (6)
ITTO Consumers***	**WORLD**	**20362954**	**21322828**	**23259660**	**20496780**	**23475614**
	DMEC	2480096 (12)	2943454 (14)	3602549 (15)	4466908 (22)	5516576 (23)
	ITTO Producers	1381475 (7)	1687560 (8)	2111745 (9)	2715777 (13)	3344484 (14)

* EU = 12 countries, as of 1994. ** 1994 data not available: estimates based on trends to 1993. *** Except Russian Federation / Former Soviet Union.

Table 4-2. Major Developing Country Exporters of Secondary Processed Wood Products [1000 US$; (% share)]

Exporter	Destination	1990	1991	1992	1993	1994
Indonesia	**WORLD**	**496307**	**548626**	**685772**	**1036199**	**1277675**
	DMEC	82363 (17)	85193 (16)	101800 (15)	159590 (15)	215520 (17)
China	**WORLD**			**803963**	**901133**	**1236911**
	DMEC			446574 (56)	300834 (33)	383974 (31)
Malaysia	**WORLD**	**198787**	**300255**	**416120**	**576131**	**792265**
	DMEC	36663 (18)	49235 (16)	68721 (17)	91759 (16)	132690 (17)
Thailand*	**WORLD**	**347029**	**406597**	**475887**	**566863**	**650000**
	DMEC	23038 (7)	15770 (4)	17974 (4)	20168 (4)	25000 (4)
Brazil	**WORLD**	**85840**	**112457**	**191102**	**335187**	**410623**
	DMEC	6302 (7)	12578 (11)	33776 (18)	57767 (17)	76219 (19)
Mexico	**WORLD**	**42265**	**65215**	**297431**	**343735**	**377309**
	DMEC	468 (1)	629 (1)	525 (0)	510 (0)	2065 (1)
Philippines	**WORLD**		**273426**	**270662**	**275592**	**323093**
	DMEC		11655 (4)	9574 (4)	18451 (7)	25971 (8)
Singapore	**WORLD**	**142301**	**145937**	**159110**	**147697**	**176301**
	DMEC	23902 (17)	23600 (16)	32010 (20)	32389 (22)	62020 (35)
Korea Rep.	**WORLD**	**155348**	**132774**	**102423**	**102631**	**148721**
	DMEC	21621 (14)	18736 (14)	17240 (17)	16718 (16)	14496 (10)
Hong Kong	**WORLD**	**118397**	**118647**	**125646**	**136335**	**146555**
	DMEC	33284 (28)	37740 (32)	37513 (30)	44352 (33)	50005 (34)
Other ITTO Producer Member Exporters						
India*	**WORLD**	**3720**	**4087**	**5866**	**8010**	**10000**
	DMEC	437 (12)	824 (20)	1220 (21)	1585 (20)	2000 (20)
Ecuador*	**WORLD**	**2933**	**3845**	**3479**	**3335**	**3500**
	DMEC	378 (13)	1277 (33)	2383 (69)	1778 (53)	2000 (57)
Venezuela*	**WORLD**	**10454**	**2313**	**2535**	**2404**	**2500**
	DMEC	7856 (75)	1877 (81)	2220 (88)	1945 (81)	2000 (80)
Fiji	**WORLD**	**400**	**693**	**380**	**480**	**486**
	DMEC	98 (24)	115 (17)	65 (17)	127 (26)	241 (49)

* 1994 data not available; estimates based on trends to 1993.

Table 4-3. Major Developing Country Importers of Secondary Processed Wood Products [(1000 US$; (% share)]

Importer	From	1990	1991	1992	1993	1994
Hong Kong*	**WORLD**	**447319**	**480681**	**546761**	**397934**	**523464**
	DMEC	358811 (80)	398020 (83)	455011 (83)	299867 (75)	379917 (73)
	ITTO Producers	45086 (10)	38266 (8)	42269 (8)	58372 (15)	73959 (14)
Mexico	**WORLD**	**69827**	**113258**	**203687**	**215514**	**293143**
	DMEC	3606 (5)	6165 (5)	10727 (5)	9673 (4)	23420 (8)
	ITTO Producers	1085 (2)	3568 (3)	4055 (2)	3686 (2)	11250 (4)
Singapore	**WORLD**	**87421**	**104767**	**118021**	**152429**	**220567**
	DMEC	47020 (54)	61263 (58)	74180 (63)	105387 (69)	146155 (66)
	ITTO Producers	31519 (36)	43576 (42)	55096 (47)	83569 (55)	117848 (53)
Korea Rep.	**WORLD**	**64317**	**85927**	**107932**	**142088**	**214073**
	DMEC	19424 (30)	43436 (51)	55986 (52)	71962 (51)	106582 (50)
	ITTO Producers	16913 (26)	24576 (29)	34499 (32)	52083 (37)	76100 (36)
China	**WORLD**			**67457**	**89321**	**122155**
	DMEC			46613 (69)	52219 (58)	66360 (54)
	ITTO Producers			19763 (29)	16290 (18)	22425 (18)
Argentina	**WORLD**			**22156**	**34224**	**59485**
	DMEC			15398 (69)	23369 (68)	38728 (65)
	ITTO Producers			11429 (51)	17290 (51)	30615 (51)
Reunion	**WORLD**	**49610**	**47755**	**52532**	**45684**	**51967**
	DMEC	3286 (7)	5323 (11)	8499 (16)	7517 (16)	10684 (21)
	ITTO Producers	1559 (3)	2917 (6)	6456 (12)	5776 (13)	8821 (17)
Martinique	**WORLD**	**33527**	**37193**	**37658**	**34533**	**34838**
	DMEC	2144 (6)	4199 (11)	5132 (14)	10172 (29)	12272 (35)
	ITTO Producers	1677 (5)	3498 (9)	4353 (12)	9448 (27)	11595 (33)
Guadeloupe	**WORLD**	**42263**	**43085**	**40964**	**35560**	**33510**
	DMEC	3281 (8)	5021 (12)	7043 (17)	10244 (29)	11700 (35)
	ITTO Producers	1683 (4)	3394 (8)	5444 (13)	8936 (25)	10919 (33)
Malaysia	**WORLD**	**13023**	**15680**	**24069**	**22334**	**24415**
	DMEC	5966 (46)	7753 (49)	10270 (43)	9133 (41)	11235 (46)
	ITTO Producers	1336 (10)	2090 (13)	2729 (11)	2614 (12)	2708 (11)

Table 4-3. Major Developing Country Importers of Secondary Processed Wood Products [(1000 US$; (% share)]

Other ITTO Producer Member Importers

Importer	From	1990	1991	1992	1993	1994
Venezuela**	**WORLD**	**1638**	**4956**	**16151**	**21611**	**24000**
	DMEC	254 (16)	1321 (27)	5321 (33)	5003 (23)	6000 (25)
	ITTO Producers	175 (11)	1036 (21)	4818 (30)	4597 (21)	5000 (21)
Thailand**	**WORLD**	**7370**	**8327**	**9910**	**12152**	**14000**
	DMEC	2411 (33)	2045 (25)	2842 (29)	3556 (29)	4000 (29)
	ITTO Producers	749 (10)	461 (6)	512 (5)	646 (5)	800 (6)
Indonesia	**WORLD**	**6501**	**7716**	**6112**	**9840**	**11025**
	DMEC	784 (12)	1378 (18)	1315 (22)	3320 (34)	2246 (20)
	ITTO Producers	144 (2)	93 (1)	124 (2)	138 (1)	261 (2)
Philippines	**WORLD**		**7186**	**2876**	**5066**	**9577**
	DMEC		1256 (17)	588 (20)	2314 (46)	3579 (37)
	ITTO Producers		104 (1)	143 (5)	576 (11)	1662 (17)
Brazil**	**WORLD**	**2139**	**2510**	**3110**	**4110**	**5000**
	DMEC	708 (33)	1018 (41)	608 (20)	1175 (29)	1200 (24)
	ITTO Producers	67 (3)	284 (11)	131 (4)	365 (9)	500 (10)
Ecuador**	**WORLD**	**72**	**305**	**673**	**2355**	**2500**
	DMEC	24 (34)	32 (11)	54 (8)	1062 (45)	1200 (48)
	ITTO Producers	0 (0)	29 (10)	31 (5)	1028 (44)	1100 (44)
Fiji	**WORLD**	**1198**	**823**	**842**	**903**	**1087**
	DMEC	429 (36)	489 (59)	399 (47)	432 (48)	398 (37)
	ITTO Producers	249 (21)	220 (27)	305 (36)	212 (23)	210 (19)
India**	**WORLD**	**1121**	**240**	**538**	**418**	**500**
	DMEC	95 (8)	23 (9)	8 (1)	25 (6)	25 (5)
	ITTO Producers	0 (0)	2 (1)	0 (0)	0 (0)	0 (0)

*Hong Kong data estimated from reports of partner countries. ** 1994 data not available; estimates based on trends to 1993.

Appendix 5

Forest Industry Structure in ITTO Producer Countries in 1994-95

Table 5-1. Forest Industry Structure in ITTO Producer Countries in 1994

	Logging		Sawmills				Veneer mills				Plywood mills				Others		Total	
	Enter-prises	Employees	Enter-prises	Employees	Installed Capacity (1000m3)	Avg. Conv. Rate	Enter-prises	Employees	Installed Capacity (1000m3)	Avg. Conv. Rate	Enter-prises	Employees	Installed Capacity (1000m3)	Avg. Conv. Rate	Enter-prises	Employees	Enter-prises	Employees
Africa	**999**	**47980**	**421**	**79648**	**2507**		**27**	**535**	**715**		**23**	**10472**	**175**		**85**	**0**	**1555**	**171635**
Cameroon	200	5450	194	10650			2	435			2	472					398	17007
Congo																		6000 [1]
Côte d'Ivoire 1)	571	12000	80		1831		18		600		8				15		692	12000
Gabon	25	15500	25	3978	96	0.40	1	100	15	0.50	3	10000	115	0.55			54	29578
Ghana 2)	200	15000	120	65000	570	0.43	6		100	0.55	10		60	0.50	70		406	80000
Liberia	2																2	2000 [1]
Togo	1	30	2	20	10	0.35											3	50
Zaire																		25000 [1]
Asia-Pacific	**2520**	**143232**	**4447**	**86025**	**46311**		**8**	**0**	**0**		**327**	**149504**	**31175**		**1149**	**52437**	**8451**	**2491198**
Fiji 3)	44	1500		1300		0.45	2				2	300					48	3100
India																		500000 [1]
Indonesia	575		2345		18975	0.50				0.70	120		11113	0.50	158			1500000 [1]
Malaysia	1815	63232	1145	63087	24800	0.50				0.65	161	55360	9480	0.70	302	16920	3423	198599
Myanmar			96	10458	878	0.49			0		3	1144	10080		10	1667	109	13269
PNG 4)	40	13500	20		250	0.25					1	700	16	0.40	651	1850	712	16050
Philippines	46	65000	121	11180	1408	0.60	6			0.50	40	92000	486	0.43	28	32000	241	200180
Thailand	0	0	720															60000 [1]
Latin America	**2575**	**107473**	**1007**	**120635**	**1294**		**702**	**1333**	**77**		**563**	**2745**	**196**		**482**	**1250**	**5329**	**823436**
Bolivia																		100000 [1]
Brazil																		400000 [1]
Colombia																		20000 [1]
Ecuador	2160		566				694				548				382		4350	40000 [1]
Guyana	350	7000	85	5000							2	715	89				437	12715
Honduras																		10000 [1]
Panama			41	160	194		3	333	23		1	30	1				45	523
Peru		100000	250	115000	1100		5	1000	54		12	2000	105		100	1250	367	219250
Trinidad	65	473	65	475													130	948
Venezuela																		20000 [1]
Total	**6094**	**298685**	**5875**	**286308**	**50112**		**737**	**1868**	**792**		**913**	**162721**	**31546**		**1716**	**53687**	**15335**	**3486269**

1) Number of employees of logging incudes those of all processing mills. 2) Number of employees of sawmills includes those of all processing mills.

3) Number of employees of plywood mills includes those of veneer mills. 4) Number of employees of logging includes those of sawmills.

Table 5-2. Forest Industry Structure in ITTO Producer Countries in 1995

	Logging		Sawmills				Veneer mills				Plywood mills				Others		Total	
	Enter-prises	Employees	Enter-prises	Employees	Installed Capacity (1000m3)	Avg. Conv. Rate	Enter-prises	Employees	Installed Capacity (1000m3)	Avg. Conv. Rate	Enter-prises	Employees	Installed Capacity (1000m3)	Avg. Conv. Rate	Enter-prises	Employees	Enter-prises	Employees
Africa	**834**	**49940**	**448**	**81296**	**2715**		**39**	**608**	**765**		**25**	**10874**	**60**		**92**	**0**	**1438**	**175718**
Cameroon	211	5950	196	11803			3	608			4	874					414	19235
Congo																		6000 [1]
Côte d'Ivoire 1)	138	14000	94		2041		19		640		8				17		276	14000
Gabon	299	15960	27	3978	96	0.40	1		15	0.50	3	10000		0.55			330	29938
Ghana 2)	180	14000	130	65500	570	0.43	16		110	0.55	10		60	0.50	75		411	79500
Liberia	5																5	2000 [1]
Togo	1	30	1	15	8	0.35											2	45
Zaire																		25000 [1]
Asia-Pacific	**2510**	**143183**	**2095**	**100792**	**904530**		**15**	**0**	**0**		**225**	**155005**	**21308**		**1011**	**53907**	**5856**	**2601887**
Fiji 3)	44	2000		1500		0.45	2				2	300					48	3800
India																		500000 [1]
Indonesia	540					0.50				0.70				0.50				1600000 [1]
Malaysia	1843	59083	1157	66329	24370	0.50				0.65	177	60861	10720	0.70	322	17890	3499	204163
Myanmar			96	10413	878306	0.49			0		3	1144	10080		10	1667	109	13224
PNG 4)	40	13500	20		250	0.25					1	700	16	0.40	651	1850	712	16050
Philippines	43	68600	102	11550	1604	0.60	3			0.50	27	92000	492	0.43	28	32500	203	204650
Thailand	0	0	720	11000			10				15						745	60000 [1]
Latin America	**512**	**108451**	**4792**	**131982**	**1885**		**13**	**2703**	**83**		**42**	**7486**	**448**		**1203**	**16793**	**6562**	**817415**
Bolivia																		100000 [1]
Brazil																		400000 [1]
Colombia	1	576	4000				5	1370	6		13	1536	101		1095	15000	5114	18482
Ecuador																		40000 [1]
Guyana	445	7400	82	5000							2	920	96				529	13320
Honduras																		10000 [1]
Panama							3	333	23		1	30	1				4	363
Peru		100000	250	115000	1100		5	1000	54		12	2000	105		100	1250	367	219250
Trinidad	66	475	66	475													132	950
Venezuela			394	11507	785						14	3000	145		8	543	416	15050
Total	**3856**	**301574**	**7335**	**314070**	**909130**		**67**	**3311**	**848**		**292**	**173365**	**21816**		**2306**	**70700**	**13856**	**3595020**

1) Number of employees of logging includes those of all processing mills. 2) Number of employees of sawmills includes those of all processing mills.

3) Number of employees of plywood mills includes those of veneer mills. 4) Number of employees of logging includes those of sawmills.

Appendix 6

Major Species Traded in 1994

Note: Many countries report trade in species groups rather than by individual species. Species reported in this manner are grouped using square brackets in the following tables.

Appendix 6.

Table 6-1-a. Major Tropical Log Species Imported by ITTO Consumers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Austria*	*Dipterocarpus spp.*	Keruing			1149
Austria*	*Gonystylus bancanus*	Ramin			1149
Austria*	*Tectona grandis*	Teak			1149
Austria*	*Aucoumea klaineana*	Okoume			381
Austria*	*Dumoria spp*	Makore			381
Austria*	*Entandrophragma congoense*	Tiama			464
Austria*	*Mansonia altissima*	Mansonia			464
Egypt	*Terminalia superba*	Limba	Afara		
Egypt	*Pterocarpus spp.*	Padouk	African Padack		
Egypt	*Afzelia africana*	Doussié	Mahogany beantree		
Egypt	*Celtis soyauxii*	Ohia	Esa		
Egypt	*Terminalia ivorensis*	Framiré	Idigbo, Emri		
Egypt	*Khaya ivorensis*	Acajou d'Afrique	African Mahogany		
Egypt	*Khaya senegalensis*	Acajou d'Afrique	Mahogany		
Egypt	*Dalbergia oliveri*	Palissandre Asie	Tamalan		
Egypt	*Hopea odorata*	Merawan	Kawang		
Egypt	*Tectona grumelis*	Teak			
France*	*Acoumea klaineana*	Okoume		210	289
Greece	*Aucoumea klaineana*	Okoumé		59	284
Greece	*Entandrophragma utile*	Sipo		0 R	447
Greece	*Terminalia superba*	Limba		0 R	229
Greece	*Entandrophragma congoense*	Tiama			
Greece	*Mansonia altissima*	Mansonia			
Greece	*Pycnanthus angolensis*	Ilomba		31	166
Greece	*Lovoa trichilioides*	Dibetou			
Greece	*Lophira alata*	Azobé			
Greece	*Entandrophragma cylindricum*	Sapelli			
Greece	*Khaya ivorensis*	Acajou d'Afrique		12	254
Greece	*Chlorophora spp.*	Iroko			
Greece	*Shorea spp.*	Dark Red Meranti			
Greece	*Shorea spp.*	Light Red Meranti		0 R	235
Greece	*Shorea spp.*	Meranti Bakau			
Netherlands	*Aucoumea klaineana*	Okoume		24	
Netherlands	*Terminalia superba*	Limba		6	
Netherlands	*Entandrophragma utile*	Sipo		4	
Netherlands	*Shorea spp.*	Meranti		1	290
Netherlands	*Triplochiton scleroxylon*	Obeche		1	
Netherlands	*Dumoria spp.*	Makore			
Netherlands	Others			81	
New Zealand	*Dipterocarpus spp.*	Keruing			
New Zealand	*Gonystylus spp.*	Ramin			
New Zealand	*Dryonalanops spp.*	Kapur			
New Zealand	*Tectona grandis*	Teak			
New Zealand	*Dactylocladus stenostachys*	Jongkong		0 R	1222
New Zealand	*Intsia spp.*	Merbau			
New Zealand	*Dyera spp.*	Jelutong			
New Zealand	*Koompassia malaccensis*	Kempas			

Table 6-1-a. Major Tropical Log Species Imported by ITTO Consumers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Portugal	*Aucoumea klaineana pierre*	Okoume		17	258
Portugal	*Entandrophragma utile*	Sipo		14	368
Portugal	*Triplochiton scleroxylon*	Obeche		1	244
Portugal	*Khaya spp.*	Acajou d'Afrique			
Portugal	*Entandrophragma cylindricum*	Sapelli		237	338
Portugal	*Chlorophora spp.*	Iroko			
Portugal	*Entandrophragma congoense*	Tiama			
Portugal	*Mansonia altissima*	Mansonia			
Portugal	*Pycnanthus angolensis*	Ilomba		20	266
Portugal	*Lovoa trichilioides*	Dibetou			
Portugal	*Lophira alata*	Azobe			
Portugal	*Virola spp.*	Baboen			
Portugal	*Swietenia spp.*	Mahogany			
Portugal	*Phoebe porosa*	Imbuia			
Portugal	*Ochroma pyramidale*	Balsa		1	313
Portugal	*Dalbergia spp.*	Palissandre du Bréssil			
Portugal	*Aniba spp.*	Bois de Rose Femelle			
Portugal	Others			123	286
Japan	*Tectona grandis*	Teak		3	1667
Japan	*Shorea spp.*	Dark Red Meranti			
Japan	*Shorea spp.*	Light Red Meranti		1425	226
Japan	*Shorea rugosa*	Meranti Bakau			
Japan	*Dipterocarpus spp.*	Keruing			
Japan	*Dryonalanops spp.*	Kapur		919	236
Japan	*Shorea spp., Parashorea spp.*	White Lauan			
Japan	*Shorea spp.*	White Meranti			
Japan	*Shorea spp.*	White Seraya		799	238
Japan	*Shorea spp.*	Yellow Meranti			
Japan	*Shorea albida*	Alan			
Japan	*Aucocmea klainena*	Okume			
Japan	*Triplochiton sclerocylon*	Obeche			
Japan	*Entandrophragma cylindeicum*	Sapelli			
Japan	*Entandrophragma utile*	Sipo		364	243
Japan	*Khaya spp.*	Acajou d'Afrique			
Japan	*Tieghemella spp.*	Makore			
Japan	*Chlorophora spp.*	Iroko			
Japan	*Gonystylus spp.*	Ramin			
Japan	*Dactylocladus stenostachys*	Jongkong			
Japan	*Intsia spp.*	Merbau		182	171
Japan	*Dyera spp.*	Jeltong			
Japan	*Koompassia malaccensis*	Kempas			
Nepal*	*Shorea robusta*	Meranti	Sal	3	200
Nepal*	*Dryobalanops spp.*	Keruing		2	200

Table 6-1-a. Major Tropical Log Species Imported by ITTO Consumers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Rep. of Korea	*Dipterocarpus spp.*	Keruing		82	230
Rep. of Korea	*Dyera spp.*	Jerutong		12	216
Rep. of Korea	*Dryobalanops spp.*	Kapur		1	221
Switzerland	*Aucoumea klaineana*	Okoumé			
Switzerland	*Triplochiton scleroxylon*	Obeche			
Switzerland	*Entandrophragma cylindricum*	Sapelli			
Switzerland	*Entandrophragma utile*	Sipo		12	
Switzerland	*Khaya spp.*	Acajou d'Afrique			
Switzerland	*Tieghemella heckelli*	Makoré			
Switzerland	*Chlorophora spp.*	Iroko			
U.S.A.	*Dipterocarpus spp.*	Keruing			
U.S.A.	*Gonystylus bancanus*	Ramin			
U.S.A.	*Dryobalanops spp.*	Kapur			
U.S.A.	*Tectona grandis*	Teak			
U.S.A.	*Dactylocladus stenostachys*	Jongkong		2	1560
U.S.A.	*Intsia bijuga*	Merbau			
U.S.A.	*Dyera spp.*	Jerutong			
U.S.A.	*Koompassia malaccensis*	Kempas			
U.S.A.	*Aucoumea klaineana*	Okoume			
U.S.A.	*Triplochiton scleroxylon*	Obeche			
U.S.A.	*Entandrophragma cylindricum*	Sapelli			
U.S.A.	*Entandrophragma utile*	Sipo		1	318
U.S.A.	*Khaya spp.*	Acajou d'Afrique			
U.S.A.	*Tieghemella heckelli*	Macore			
U.S.A.	*Chlorophora spp.*	Iroko			
U.S.A.	*Shorea spp.*	Dark Red Meranti			
U.S.A.	*Shorea spp.*	Light Red Meranti		0 R	708
U.S.A.	*Shorea spp.*	Meranti Bakau			
U.S.A.	*Parashorea spp.*	White Lauan			
U.S.A.	*Shorea spp.*	White Meranti			
U.S.A.	*Parashorea spp.*	White Seraya		0 R	687
U.S.A.	*Shorea spp.*	Yellow Meranti			
U.S.A.	*Shorea spp.*	Alan			
U.S.A.	*Entandrophragma congoense*	Tiama			
U.S.A.	*Mansonia altissima*	Mansonia			
U.S.A.	*Pycnanthus angolensis*	Ilomba			
U.S.A.	*Lovoa trichilioides*	Dibetou		0 R	463
U.S.A.	*Terminalia superba*	Limba			
U.S.A.	*Lophira alata*	Azobe			

* data from 1994

Table 6-1-b. Major Tropical Sawnwood Species Imported by ITTO Consumers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Australia	*Shorea spp.*	Meranti		49	971
Australia	*Palaquium spp.*	Nyatoh		2	857
Australia	*Gonystylus bancanus*	Ramin		2	1155
Australia	Others			52	726
Austria*	*Aucoumea klaineana*	Okoume		8	537
Austria*	*Tectona grandis*	Teak		7	934
Austria*	*Virola spp.*	Virola	Baboen		1066
Austria*	*Ochroma pyramidale*	Balsa			1066
Egypt	*Khaya ivorensis*	Acajou d'Afrique	African Mahogany	3	199
Egypt	*Entandrophragma candollei*	Kosipo		1	356
Egypt	*Terminalia ivorensis*	Fremiré	Emeri	1	225
Egypt	*Cdrela toona*	Suren	Cedrala	0 R	297
Egypt	*Chryso phyllum spp.*	Longhi	Akosa	0 R	216
Egypt	*Tectona grandis*	Teak		0 R	172
Egypt	*Shorea agami*	White Meranti			
Egypt	*Shorea arumi nata*	Meranti		9	278
Egypt	*Terminalia suprba*	Limba	Ofrum		
Greece	*Aucoumea klaineana*	Okoumé			
Greece	*Triplochiton scleroxylon*	Obeche			
Greece	*Entandrophragma cylindricum*	Sapelli			
Greece	*Entandrophragma utile*	Sipo			
Greece	*Khaya spp.*	Acajou d'Afrique			
Greece	*Tieghemella heckelli*	Makoré			
Greece	*Chlorophora spp.*	Iroko		26	412
Greece	*Entandrophragma congoense*	Tiama			
Greece	*Mansonia altissima*	Mansonia			
Greece	*Pycnanthus angolensis*	Ilomba			
Greece	*Lovoa trichilioides*	Dibétou			
Greece	*Terminalia superba*	Limba			
Greece	*Lophira alata*	Azobé			
Greece	*Shorea spp.*	Dark Red Meranti			
Greece	*Shorea spp.*	Light Red Meranti			
Greece	*Shorea spp.*	Melanti Bakau			
Greece	*Parashorea spp.*	White Lauan			
Greece	*Shorea spp.*	White Meranti			
Greece	*Parashorea spp.*	White Seraya			
Greece	*Shorea spp.*	Yellow Meranti			
Greece	*Shorea spp.*	Alan			
Greece	*Dipterocarpus spp.*	Keruing		1	1003
Greece	*Gonystylus bancanus*	Ramin			
Greece	*Dryobalanops spp.*	Kapur			
Greece	*Tectona grandis*	Teak			
Greece	*Dactylocladus stenostachys*	Jongkong			
Greece	*Intsia bijuga*	Merbau			
Greece	*Dyera spp.*	Jelutong			
Greece	*Koompassia malaccensis*	Kempas			
Greece	*Virola spp.*	Virola	Baboen		
Greece	*Swietenia spp.*	Mahogany			
Greece	*Phoebe porosa*	Imbuia		0 R	777
Greece	*Ochroma spp.*	Balsa			

Table 6-1-b. Major Tropical Sawnwood Species Imported by ITTO Consumers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Italy*	*Triplochiton scleroxylon*	Obeche		46	
Italy*	*Terminalia superba*	Limba		16	
Italy*	*Entandrophragma utile*	Sipo		2	
Italy*	*Gonystylus bancanus*	Ramin		2	
Italy*	*Aucoumea klaineana*	Okoume		0 R	
Italy*	*Tieghemella heckelli*	Makore		0 R	
Netherlands**	*Shorea spp.*	Meranti		126	
Netherlands**	*Lophira spp*	Azobe		45	
Netherlands**	Others			224	665
Portugal	*Aucoumea klaineana*	Okoume			
Portugal	*Triplochiton scleroxylon*	Obeche			
Portugal	*Entandrophragma cylindricum*	Sapelli			
Portugal	*Entandrophragma utile*	Sipo			
Portugal	*Khaya spp.*	Acajou d'Afrique			
Portugal	*Tieghemella heckelli*	Makore			
Portugal	*Chlorophora spp.*	Iroko		24	633
Portugal	*Entandrophragma congoense*	Tiama			
Portugal	*Mansonia altissima*	Mansonia			
Portugal	*Pycnanthus angolensis*	Ilomba			
Portugal	*Lovoa trichilioides*	Dibetou			
Portugal	*Terminalia superba*	Limba			
Portugal	*Lophira alata*	Azobe			
Portugal	*Virola spp.*	Virola	Baboen		
Portugal	*Swietenia spp.*	Mahogany			
Portugal	*Phoebe porosa*	Imbuia		16	691
Portugal	*Ochroma spp.*	Balsa			
Portugal	*Shorea spp.*	Dark Red Meranti			
Portugal	*Shorea spp.*	Light Red Meranti			
Portugal	*Shorea spp.*	Meranti Bakau			
Portugal	*Parashorea spp.*	White Lauan			
Portugal	*Shorea spp.*	White Meranti			
Portugal	*Parashorea spp.*	White Seraya			
Portugal	*Shorea spp.*	Yellow Meranti			
Portugal	*Shorea spp.*	Alan			
Portugal	*Dipterocarpus spp.*	Keruing		0 R	1201
Portugal	*Gonystylus bancanus*	Ramin			
Portugal	*Dryobalanops spp.*	Kapur			
Portugal	*Tectona grandis*	Teak			
Portugal	*Dactylocladus stenostachys*	Jongkong			
Portugal	*Instia spp.*	Merbau			
Portugal	*Dyera costulata*	Jelutong			
Portugal	*Koompassia malaccensis*	Kempas			
Sweden*	*Shorea spp.*	Dark Red Meranti			
Sweden*	*Shorea spp.*	Meranti Bakau			
Sweden*	*Parashorea spp.*	White Lauan			
Sweden*	*Shorea spp.*	White Meranti			
Sweden*	*Parashorea spp.*	White Seraya			
Sweden*	*Shorea spp.*	Yellow Meranti			
Sweden*	*Shorea spp.*	Alan			
Sweden*	*Dipterocarpus spp.*	Keruing			
Sweden*	*Gonystylus bancanus*	Ramin			

Table 6-1-b. Major Tropical Sawnwood Species Imported by ITTO Consumers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Sweden*	*Dryobalanops spp.*	Kapur			
Sweden*	*Tectona grandis*	Teak			
Sweden*	*Dactylocladus stenostachys*	Jongkong			
Sweden*	*Intsia bijuga*	Merbau		3	
Sweden*	*Dyera spp.*	Jerutong			
Sweden*	*Koompassia malaccensis*	Kempas			
Sweden*	*Aucoumea klaineana*	Okoume			
Sweden*	*Triplochiton scleroxylon*	Obeche			
Sweden*	*Entandrophragma cylindricum*	Sapelli			
Sweden*	*Entandrophragma utile*	Sipo			
Sweden*	*Khaya spp.*	Acajou d'Afrique			
Sweden*	*Tieghemella heckelli*	Macore			
Sweden*	*Chlorophora spp.*	Iroko		4	
Sweden*	*Entandrophragma congoense*	Tiama			
Sweden*	*Mansonia altissima*	Mansonia			
Sweden*	*Pycnanthus angolensis*	Ilomba			
Sweden*	*Lovoa trichilioides*	Dibetou			
Sweden*	*Terminalia superba*	Limba			
Sweden*	*Lophira alata*	Azobe			
Sweden*	*Virola spp.*	Virola	Baboen		
Sweden*	*Swietenia spp.*	Mahogany			
Sweden*	*Phoebe porosa*	Imbuia		1	
Sweden*	*Ochroma spp.*	Balsa			
Japan	*Dipterocarpus spp.*	Keruing		294	752
Japan	*Tectona grandis*	Teak		3	2630
Japan	*Shorea spp.*	Meranti			
Japan	*Shorea spp.*	Lauan			
Switzerland	*Aucoumea klaineana*	Okoumé			
Switzerland	*Triplochiton scleroxylon*	Obeche			
Switzerland	*Entandrophragma cylindricum*	Sapelli			
Switzerland	*Entandrophragma utile*	Sipo			
Switzerland	*Entandrophragma congoense*	Tiama			
Switzerland	*Khaya spp.*	Acajou d'Afrique			
Switzerland	*Tieghemella heckelli*	Makore		8	
Switzerland	*Chlorophora spp.*	Iroko			
Switzerland	*Mansonia altissima*	Mansonia			
Switzerland	*Pycnanthus angolensis*	Ilombo			
Switzerland	*Lovoa trichilioides*	Dibétou			
Switzerland	*Lophira alata*	Azobe			
Switzerland	*Terminalia superba*	Limba			
Switzerland	*Shorea spp.*	Alan			
Switzerland	*Parashorea spp.*	White Seraya			
Switzerland	*Gonystylus bancanus*	Ramin			
Switzerland	*Dipterocarpus spp.*	Keruing			
Switzerland	*Tectona grandis*	Teak			
Switzerland	*Dactylocladus stenostachys*	Jongkong			
Switzerland	*Dryobalanops spp.*	Kapur			
Switzerland	*Intsia bijuga*	Merbau			
Switzerland	*Dyera spp.*	Jelutong			

Table 6-1-b. Major Tropical Sawnwood Species Imported by ITTO Consumers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Switzerland	*Koompassia malaccensis*	Kempas			
Switzerland	*Shorea spp., Parashorea spp.*	Meranti (various)			
Switzerland	*Shorea spp.*	Meranti Bakau		2	
Switzerland	*Parashorea spp.*	White Lauan			
U.S.A.	*Swietenia spp.*	Mahogany		139	624
U.S.A.	*Dipterocarpus spp.*	Keruing		35	595
U.S.A.	*Ochroma spp.*	Balsa		10	330
U.S.A.	*Tectona grandis*	Teak		9	920
U.S.A.	*Shorea spp.*	Dark Red Meranti			
U.S.A.	*Shorea spp.*	Light Red Meranti			
U.S.A.	*Shorea spp.*	Meranti Bakau			
U.S.A.	*Parashorea spp.*	White Lauan			
U.S.A.	*Shorea spp.*	White Meranti			
U.S.A.	*Parashorea spp.*	White Seraya			
U.S.A.	*Shorea spp.*	Yellow Meranti			
U.S.A.	*Shorea spp.*	Alan		23	614
U.S.A.	*Gonystylus bancanus*	Ramin			
U.S.A.	*Dryobalanops spp.*	Kapur			
U.S.A.	*Dactylocladus stenostachys*	Jongkong			
U.S.A.	*Intsia bijuga*	Merbau			
U.S.A.	*Dyera spp.*	Jerutong			
U.S.A.	*Koompassia malaccensis*	Kempas			
U.S.A.	*Virola spp.*	Virola	Baboen		
U.S.A.	*Phoebe porosa*	Imbuia		16	350
U.S.A.	*Aucoumea klaineana*	Okoume			
U.S.A.	*Triplochiton scleroxylon*	Obeche			
U.S.A.	*Entandrophragma cylindricum*	Sapelli			
U.S.A.	*Entandrophragma utile*	Sipo			
U.S.A.	*Khaya spp.*	Acajou d'Afrique			
U.S.A.	*Tieghemella heckelli*	Macore			
U.S.A.	*Chlorophora spp.*	Iroko		4	337
U.S.A.	*Entandrophragma congoense*	Tiama			
U.S.A.	*Mansonia altissima*	Mansonia			
U.S.A.	*Pycnanthus angolensis*	Ilomba			
U.S.A.	*Lovoa trichilioides*	Dibetou			
U.S.A.	*Terminalia superba*	Limba			
U.S.A.	*Lophira alata*	Azobe			

* data from 1994

** includes further processed timber

Table 6-1-c. Major Tropical Veneer Species Imported by ITTO Consumers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Egypt	*Swintonia claribanda*	Merpauh	Civit	0 R	686
Egypt	*Terminalia tomentosa*	Laurel		0 R	217
Egypt	*Alstonia congensis*	Emien	Duku	0 R	137
Egypt	*Mimusops heckelii*	Makore		0 R	149
Egypt	*Entandrophragma spp.*	Sapelli			
Egypt	*Tectona grandis*	Teak			
Greece	*Shorea spp.*	Dark Red Meranti			
Greece	*Shorea spp.*	Light Red Meranti			
Greece	*Parashorea spp.*	White Lauan			
Greece	*Aucoumea klaineana*	Sipo			
Greece	*Triplochiton scleroxylon*	Limba			
Greece	*Aucoumea klaineana*	Okoumé			
Greece	*Triplochiton scleroxylon*	Obeche		1	
Greece	*Khaya spp.*	Acajou d'Afrique			
Greece	*Entandrophragma cylindricum*	Sapelli			
Greece	*Swietenia spp.*	Mahogany			
Greece	*Virola spp.*	Virola	Baboen		
Greece	*Dalbergia spp.*	Palissandre du Brésil			
Greece	*Aniba spp.*	Bois de Rose Femelle			
Portugal	*Shorea spp.*	Dark Red Meranti			
Portugal	*Shorea spp.*	Light Red Meranti			
Portugal	*Parashorea spp.*	White Lauan			
Portugal	*Entandrophragma utile*	Sipo			
Portugal	*Terminalia superba*	Limba			
Portugal	*Aucoumea klaineana*	Okoume			
Portugal	*Triplochiton scleroxylon*	Obeche		1	1498
Portugal	*Khaya spp.*	Acajou d'Afrique			
Portugal	*Entandrophragma cylindricum*	Sapelli			
Portugal	*Virola spp.*	Virola	Baboen		
Portugal	*Swietenia spp.*	Mahogany			
Portugal	*Dalbergia spp.*	Palissandre du Bresil			
Portugal	*Aniba spp.*	Bois de Rose femelle			
Portugal	*Tieghemella heckelii*	Makoré			
Portugal	*Chlorophora spp.*	Iroko			
Portugal	*Entandrophragma congoense*	Tiama			
Portugal	*Mansonia altissima*	Mansonia			
Portugal	*Pycnanthus angolensis*	Ilomba			
Portugal	*Lovoa trichilloides*	Dibétou			
Portugal	*Lophira alata*	Azobé			
Portugal	*Shorea spp.*	Meranti Bakau			
Portugal	*Shorea spp.*	White Meranti			
Portugal	*Parashorea spp.*	White Seraya			
Portugal	*Shorea spp.*	Yellow Meranti			
Portugal	*Shorea spp.*	Alan			
Portugal	*Dipterocarpus spp.*	Keruing			
Portugal	*Gonystylus bancanus*	Ramin			
Portugal	*Dryobalanops spp.*	Kapur			
Portugal	*Tectona grandis*	Teak			

Table 6-1-c. Major Tropical Veneer Species Imported by ITTO Consumers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Portugal	*Dactylocladus stenostachys*	Jongkong			
Portugal	*Intsia spp.*	Merbau			
Portugal	*Dyera costulata*	Jelutong			
Portugal	*Koompassia malaccensis*	Kempas		0 R	2716
Portugal	*Phoebe porosa*	Imbuia			
Portugal	*Ochroma spp.*	Balsa			
Japan	*Shorea spp.*	Red Meranti			
Japan	*Shorea spp.*	White Meranti			
U.S.A.	*Shorea spp.*	Dark Red Meranti			
U.S.A.	*Shorea spp.*	Light Red Meranti			
U.S.A.	*Parashorea spp.*	White Lauan			
U.S.A.	*Aucoumea klaineana*	Okoume			
U.S.A.	*Triplochiton scleroxylon*	Obeche			
U.S.A.	*Entandrophragma cylindricum*	Sapelli			
U.S.A.	*Entandrophragma utile*	Sipo		14	2000
U.S.A.	*Khaya spp.*	Acajou d'Afrique			
U.S.A.	*Terminalia superba*	Limba			
U.S.A.	*Swietenia spp.*	Mahogany			
U.S.A.	*Virola spp.*	Virola	Baboen		
U.S.A.	*Dalbergia spp.*	Palissandre du Bresil			
U.S.A.	*Aniba spp.*	Bois de Rose Femille			

Table 6-1-d. Major Tropical Plywood Species Imported by ITTO Consumers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Egypt	*Shorea agami*	White Meranti		101	469
Egypt	*Dipterocarpus spp.*	Keruing		11	517
Egypt	*Mitragyna ciliata*	Abura		5	510
Egypt	*Shorea aruminata*	Red Meranti		2	630
Egypt	*Antiaris africana*	Ako	Antiaris	0 R	209
Egypt	*Aucoumea klainena*	Okoumé	Angouma	0 R	108
Egypt	*Erythroxylum mannii*	Landa	Bimini	0 R	149
Egypt	*Triplochiton saleroxylon*	Obeche	African White Wood	0 R	260
Netherlands	*Aucoumea klaineana*	Okoume		81	
Netherlands	Others			87	687
Portugal	*Shorea spp.*	Dark Red Meranti			
Portugal	*Shorea spp.*	Light Red Meranti			
Portugal	*Parashorea spp.*	White Lauan			
Portugal	*Entandrophragma utile*	Sipo			
Portugal	*Terminalia superba*	Limba			
Portugal	*Aucoumea klaineana*	Okoume			
Portugal	*Triplochiton scleroxylon*	Obeche		1	838
Portugal	*Khaya spp.*	Acajou d'Afrique			
Portugal	*Entandrophragma cylindricum*	Sapelli			
Portugal	*Virola spp.*	Baboen			
Portugal	*Swietenia spp.*	Mahogany			
Portugal	*Dalbergia spp.*	Palissandre du Bresil			
Portugal	*Aniba spp.*	Bois de Rose femelle			
Portugal	Others			2	652
Japan	*Shorea spp.*	Red Meranti			
Japan	*Shorea spp.*	White Meranti			
U.S.A.	*Shorea spp.*	Dark Red Meranti			
U.S.A.	*Shorea spp.*	Light Red Meranti			
U.S.A.	*Parashorea spp.*	White Lauan			
U.S.A.	*Aucoumea klaineana*	Okoume			
U.S.A.	*Triplochiton scleroxylon*	Obeche			
U.S.A.	*Entandrophragma cylindricum*	Sapelli			
U.S.A.	*Entandrophragma utile*	Sipo			
U.S.A.	*Khaya spp.*	Acajou d'Afrique		25	560
U.S.A.	*Terminalia superba*	Limba			
U.S.A.	*Swietenia spp.*	Mahogany			
U.S.A.	*Virola spp.*	Virola	Baboen		
U.S.A.	*Dalbergia spp.*	Palissandre du Bresil			
U.S.A.	*Aniba spp.*	Bois de Rose femelle			
U.S.A.		Face Ply of Birch			
U.S.A.	*Cedrela spp.*	Face ply Cedro		22	474
U.S.A.*	*Swietenia spp.*	Face ply of Mahogany		4	1690
U.S.A.	*Juglans spp.*	Face ply of Sen		2	720
U.S.A.	*Kalopanaxpictus*	Face ply of Mahogany		2	499
U.S.A.*	*Cedrela spp.*	Face ply of Cedro		1	520
U.S.A.	*Juglans spp.*	Nogal, tropical	Face ply of Walnut	1	
U.S.A.*	*Kalopanaxpictus*	Face ply of Sen		1	683

*: Consisting solely of sheets of this wood

Table 6-2-a. Major Tropical Log Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Cameroon	*Triplochiton scleroxylon*	Obeche	Ayous	384	170
Cameroon	*Entandrophragma cylindriace*	Sapelli		311	251
Cameroon	*Crlorophora excelsa*	Iroko		72	220
Cameroon	*Lophira alata*	Azobe		64	148
Cameroon	*Entandrophragma utile*	Sipo		63	291
Cameroon	*Terminalia superba*	Frake		62	120
Cameroon	*Erythroplium ivorense*	Tali		61	130
Cameroon	*Destemonanthus spp.*	Movingui		42	210
Cameroon	*Baillonella toxisperma*	Moabi		40	210
Cameroon	*Pterocarpus spp.*	Padouk		29	180
Cameroon	*Lovoa trichiloides*	Dibetou	Bibolo	23	170
Cameroon	*Afrormosia elata*	Afromosia	Assamela	19	381
Cameroon	*Afzelia bijundensis*	Doussie	Apa	18	481
Cameroon	*Guarea cedrata*	Bosse Clair	Bosse	16	240
Cameroon	*Khaya ivorensis*	Acajou d'Afrique	Acajou / N'Gollon	14	220
Cameroon	*Aningenas spp.*	Aniegre		13	
Cameroon	*Guibourtia tesmanii*	Bubinga		12	381
Cameroon	*Caharium sweinfunthii*		Aiele	9	108
Cameroon	*Nauclea diderrichii*	Bilinga		8	150
Cameroon	*Sterculia oblonga*	Eyong		8	112
Cameroon	*Mansonia altisima*	Mansonia	Bete	6	220
Cameroon	*Afzelia bijundensis*	Doussie	Apa	5	261
Cameroon	*Entandrophagma cadeles*		Kossipo	5	180
Cameroon			Ekop	5	108
Cameroon	*Khaya ivorensis*		N'Gollon	5	220
Cameroon	*Daniella ogea*	Faro		4	116
Cameroon		Lotofa	Nkanang	4	
Cameroon	*Entandrophagma angolensis*	Tiama		4	170
Cameroon			Angongui	3	1096
Cameroon	*Nesogondonia paparenifera*		Kotibe	3	
Cameroon	*Mitrogynu cilata*	Abura	Bahia	2	86
Cameroon	*Terminalia ivorensis*	Framire		2	
Cameroon	*Gumbeya africana*	Longui		2	
Congo*	*Entandrophragma cylindriace*	Sapelli		73	
Congo*	*Aucoumea klaineana*	Okoume		53	
Congo*	*Mitrogynu cilata*	Abura	Bahia	22	
Congo*	*Entandrophragma candellei*	Sipo		11	
Congo*	*Terminalia superba*	Limba		10	
Congo*	*Chlorophora excelsa*	Iroko		10	
Côte d'Ivoire	*Ceiba pentandra*	Fuma	Fromager	57	107
Côte d'Ivoire	*Tectona grandis*	Teak		46	78
Côte d'Ivoire	*Antiaris africana*	Ako		45	97
Côte d'Ivoire	*Tarrietia utilis*	Niangon		41	311
Côte d'Ivoire	*Nauclea spp.*	Bilinga	Badi	23	129
Côte d'Ivoire	*Pycnanthus angolensis*	Ilomba		13	131
Côte d'Ivoire	*Albizia ferruginea*	Iatanza	Yatanza	12	138
Côte d'Ivoire	*Terminalia ivorensis*	Framire		9	246
Côte d'Ivoire	*Triplochiton scleroxylon*	Obeche	Samba (Ayous)	7	95
Côte d'Ivoire	*Terminalia superba*	Limba	Frake	7	104
Côte d'Ivoire	*Piptadeniastrum afri.*	Dabema		6	105

Table 6-2-a. Major Tropical Log Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Côte d'Ivoire	*Pterygota macrocarpa*	Koto		5	67
Côte d'Ivoire	*Aningeria spp.*	Aniegre		4	266
Côte d'Ivoire	*Hallea ciliata*	Abura	Bahia	4	254
Côte d'Ivoire	*Nesogordonia pap.*	Kotibé		4	206
Côte d'Ivoire	*Brachystegia cynamet*	Naga		4	148
Côte d'Ivoire	*Gymnostemon zaïzou*		Zaïzou	3	81
Gabon	*Aucoumea klaineana*	Okoume		4685	205
Gabon	*Guibourtia tessmannii*	Bubinga		2678	477
Gabon	*Mitragyana cialiata*	Abura	Bahia	1971	100
Gabon	*Tieghemelia africana*	Makore	Douka	1130	52
Gabon	*Dacryodes igaganga*	Igaganga		811	85
Gabon	*Baillonella toxisperma*	Moabi		494	919
Gabon	*Khaya ivorensis*	Acajou d'Afrique		457	36
Gabon	*Guibourtia densiflora*	Niangon		396	336
Gabon	*Dacryodes buettneri*	Ozigo		358	191
Gabon	*Entandrophragma angolense*	Tiama		169	22
Gabon	*Lophira alata*	Azobe		145	45
Gabon	*Distemonanthus benthamianus*	Movingui		94	134
Gabon	*Entandrophragma cylindricum*	Sapelli		20	37
Gabon	*Canarium schweinfurthii*	Aiele		14	96
Gabon	*Milicia excelsa (chlorophora)*	Iroko		13	95
Gabon	*Testulea gabonensis*	Izombe	Isombe	5	22
Gabon	*Fagara heitzii*	Olon		1	16
Gabon	*Pycnanthus angolensis*	Ilomba		1	13
Ghana	*Terminalia superba*	Limba	Afara/Ofram	18	81
Ghana	*Antiaris africana*	Ako	Antiaris/Chenchen	13	57
Ghana	*Ceiba pentandra*	Fuma	Ceiba/Fronager	11	102
Ghana	*Lophira alata*	Azobe	Ekki/Kaku	8	97
Ghana	*Piptadeniastrum africanum*	Dabema	Dahema/Dahoma	7	102
Ghana	*Nauclea diderrichii*	Bilinga	Opepe/Kussia	6	120
Ghana	*Pycnanthus angolensis*	Ilomba	Ilomba/Otie	4	114
Ghana	*Celtis mildbraedii*	Ohia	Celtis/Esa	3	392
Ghana	*Amphimas pterocarpoides*	Lati	Yaya	1	89
Ghana	*Daniellia ogea*	Faro	Ogea/Shedua	1	52
Ghana	*Pterygota macrocarpa*	Koto	Kyere	1	165
Ghana	*Canarium schweinfurthii*	Aiele	African Canarium	1	49
Ghana	*Rhodognaphalon brevicuspe*	Kondroti	Bombax	0 R	128
Ghana	*Cynometra ananta*	Apome	Ananta	0 R	97
Ghana	*Guarea cedrata*	Bosse Clair	Bosse/Guarea	0 R	227
Ghana	*Combretodendron africanum*	Essia		0 R	59
Ghana	Others			7	
Liberia	*Herietia utilis*	Niangon		4	250
Liberia	*Tatraberlina tubmania*	Ekaba	Sikon	4	95
Liberia	*Brachystegia*	Naga		0 R	95
Liberia	*Terminalia ivorensis*	Framire		0 R	175
Liberia	*Didelotia spp.*	Gombe	Did.	0 R	95
Liberia	*Daniellia ogea*	Faro		0 R	90
Liberia	*Lovoa trich.*	Dibetou	Lovoa	0 R	160
Togo	*Tectona grandis*	Teak	Teck	3	130

Table 6-2-a. Major Tropical Log Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Zaire	*Entandrophragma utile*	Sipo		18	231
Zaire	*Entandrophragma cylindricum*	Sapelli		16	178
Zaire	*Gossweilerodendron balsamiferum*	Tola		14	118
Zaire	*Khaya anthotheca*	Acajou d'Afrique		9	199
Zaire	*Entandrophragma angolense*	Tiama		8	130
Zaire	*Chlorophora excelsa*	Iroko		8	141
Zaire	*Pericopsis elata*	Afrormosia		5	264
Zaire	*Gurea cedrata*	Bosse Clair	Bosse	4	115
Zaire	*Milletia laurentii*	Palis. du Congo	Wenge	4	250
Zaire	*Terminalia superba*	Limba		3	151
Zaire	*Gambeya africana*	Longhi		2	200
Zaire	*Newtoia glandulifera*	Singa Kali		1	135
Zaire	*Entandrophragma candollei*	Kosipo		1	120
Zaire	*Guibourtia arnoldiana*	Mutenye		1	139
Zaire	*Teighemella africana*	Mukore	Douka	0 R	137
Zaire	*Anigeria robusta*	Aniengre		0 R	131
Zaire	*Lovoa trichilioides*	Dibetou		0 R	137
Zaire	*Nauclea diderichii*	Bilinga		0 R	95
Zaire	*Baillonella toxisperma*	Moabi		0 R	83
Zaire	*Pterocarpus soyauxii*	Padouk		0 R	140
Zaire	*Hallea stipulosa*	Abura		0 R	93
Zaire	*Antrocaryon nannanii*	Onzabili	Mungongo	0 R	103
Malaysia	*Shorea spp.*	Meranti		1761	260
Malaysia	*Dryobalanops spp.*	Kapur		931	132
Malaysia	*Dipterocarpus spp.*	Keruing		578	127
Malaysia	*Dactylocladus spp.*	Jongkong		187	77
Malaysia	*Shorea albida*	Alan	Alan Bunga	111	90
Malaysia	*Eucalyptus deglupta*	Eucalyptus		71	35
Malaysia	*Albizia falcataria*	Batai		24	40
Malaysia	*Gmelina arborea*	Gmelina		14	38
Malaysia	*Acacia manquim*	Acacia		10	26
Myanmar	*Tectona grandis*	Teak		175	756
Myanmar	*Xylia dolabriformis*	Pyinkado		49	265
Myanmar	*Dipterocarpus spp.*	Keruing	Guljan	43	133
Myanmar	*Pterocarpus macrocarpus*	Padauk		37	429
Myanmar	*Adira cordifolia*	Haldu	Hnaw	0 R	205
Myanmar	*Terminalia tomentosa*	Laurel, Indian	Taukkyan	0 R	142
Myanmar	Others			7	83
PNG	*Homalium foetidum*	Malas		326	1115
PNG	*Colophyllum spp.*	Bintangor	Calophyllum	231	156
PNG	*Planchonella torricellensis*	Planchonella Red	Taun	195	155
PNG	*Terminalia spp.*	Terminalia		102	135
PNG	*Dillenia spp.*	Simpoh	Dillenia	68	114

Table 6-2-a. Major Tropical Log Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
PNG	*Palaquium spp.*	Nyatoh	Pencil Cedar	67	165
PNG	*Anisoptera spp.*	Mersawa		62	196
PNG	*Canarium indicum*		Canarium Red	47	137
PNG	*Endospermum spp.*	Sesendok	Basswood	44	121
PNG	*Burkella spp.*		Burkella	41	135
PNG	*Instia bilinga/palembanica*	Merbau	Kwila	35	219
PNG	*Octomeles sumatrana*	Benuang	Erima	35	125
PNG	*Canarium oreosum*	Dhup white	Canarium Grey	30	136
PNG	*Elmerrilha papuana*	Wau	Elmerillia	15	119
PNG	*Dracontomelon dao*	Salimuli	Walnut	13	133
PNG	*Aglaia cucullato*		Amoora	9	120
PNG	*Planchonella kaernbachiana*	Planchonella White		8	159
PNG	*Antiaris toxicaria*	Ako	Antiaris	6	119
Thailand	*Eucalyptus spp.*	Eucalyptus	Eucalyptus	26	49
Thailand	*Hevea brasiliensis*		Para-rubber wood	0 R	108
Brazil	*Paulownia spp.*		Quiri	1	142
Colombia*	*Aucoumea klaineana*	Okoume			
Colombia*	*Daniellia ogea*	Faro			
Ecuador	*Eucalyptus globulus*	Eucalyptus	Eucalipto	21	108
Guyana	*Mora excelsa*	Mora		1	115
Guyana	*Peltogyne pubescens*	Amarante	Purpleheart	0 R	165
Guyana	*Carapa gulanensis*	Andiroba	Crabwood	0 R	125
Guyana	*Ocotea rodiaei*	Greenheart		0 R	459
Guyana	Others			13	83
Honduras*	*Pinus caribaea*	Pitchpine	Pino Caribe	262	57
Honduras*	*Swietenia humills*	Mahogany	Caoba del Paclfico	3	57
Honduras*	*Pinus maximinol*		Pino Lloron		
Honduras*	*Pinus oocaroa*	Pitch Pine	Pino Ocote		
Honduras*	*Pinus tecumumanll*		Pino Rojo		
Honduras*	*Swietenia macrophylla*	Mahogany	Caoba del Atlantico		
Honduras*	*Cedrela odorata*	Cedro			
Trin. and Tob.	*Pinus Caribaea*	Pitchpine	Caribbean Pine	0 R	
Trin. and Tob.	*Cedrella odorata*	Cedro	Cedar	0 R	
Trin. and Tob.	*Swietenia macrophylla*	Mahogany		0 R	
Trin. and Tob.	*Tabebuia rosea*	Apamaate		0 R	
Trin. and Tob.	*Tectona grandis*	Teak			

*: data from 1994

Table 6-2-b. Major Tropical Sawnwood Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Cameroon	*Chlorophora excelsa*	Iroko	Abang	25	430
Cameroon	*Entandrophragma cylindriace*	Sapelli	Assi Sapelli	20	500
Cameroon	*Terminalia superba*	Limba	Frake	15	283
Cameroon	*Entandrophragma candellei*	Sipo	Asseng-Assie	13	565
Cameroon	*Baillonella toxisperma*	Moabi	Adjap	11	600
Cameroon	*Khaya ivorensis*	Acajou d'Afrique	N'gollon	10	485
Cameroon	*Afzelia bipindensis*	Doussie	Mbanga Lingue	4	900
Congo*	*Staudtia stipitata*	Niove		3	
Congo*	*Hallea ciliata*	Abura	Bahia	1	
Congo*	*Guibourtia arnoldiana*	Mutenye	Benzi	0 R	
Congo*	*Chlorophora excelsa*	Iroko		0 R	
Congo*	*Afzelia bipindensis*	Doussie		0 R	
Congo*	*Gossweilerodendron balsamiferum*	Tola	Agba	0 R	
Gabon	*Tieghemella africana*	Makore	Douka	51	25
Gabon	*Baillonella toxisperma*	Moabi		45	57
Gabon	*Aucoumea klaineana pierre*	Okoume		12	47
Gabon		Others		2	24
Gabon	*Khaya ivorensis*	Acajou d'Afrique		0 R	15
Gabon	*Afzelia bipindensis*	Doussie		0 R	2
Ghana**	*Triplochiton scleroxylon*	Obeche	Wawa	167	279
Ghana**	*Chlorophora excelsa*	Iroko	Odum	37	588
Ghana**	*Khaya ivorensis*	Acajou d'Afrique	African Mahogany	15	515
Ghana**	*Pterygota macrocarpa*	Koto	Kyere	9	440
Ghana**	*Herietia utilis*	Niangon	Nyankom	5	653
Ghana**	*Terminalia ivorensis*	Framire	Emeri	5	410
Ghana**	*Afzelia africana*	Doussie	Afzelia/Papao	4	675
Ghana**	*Entandrophragma angolense*	Tiama	Edinam	4	472
Ghana**	*Entandrophragma cylindricum*	Sapelli	Sapele	3	592
Ghana**	*Terminalia superba*	Limba	Afara/Ofram	3	281
Ghana**	*Entandrophragma utile*	Sipo	Nyankom/Niangon	3	675
Ghana**	*Tieghemelia heckelli*	Makore	Baku	3	515
Ghana**	*Piptadenia africana*	Kotibe	Danta	2	437
Ghana**	*Nauclea diderrichii*	Bilinga	Opepe/Kussia	1	344
Ghana**	*Guarea cedrata*	Bosse Clair	Guarea	1	454
Ghana**	*Piptadeniastrum africanum*	Dabema	Dahoma	1	306
Ghana***	*Khaya ivorensis*	Acajou d'Afrique	African Mahogany		736
Ghana***	*Terminalia ivorensis*	Framire	Emeri		476
Ghana***	*Chlorophora excelsa*	Iroko	Odum		701
Ghana***	*Pterygota macrocarpa*	Koto	Kyere		586
Ghana***	*Terminalia superba*	Limba	Afara/Ofram		333
Ghana***	*Triplochiton scleroxylon*	Obeche	Wawa		332
Ghana***	*Entandrophragma cylindricum*	Sapelli	Sapele		729
Ghana***	*Entandrophragma utile*	Sipo	Nyankom/Niangon		972
Ghana	Others			20	
Togo	*Khaya spp.*	Acajou d'Afrique			
Togo	*Antiaris africana*	Ako	Antiaris		
Togo	*Ceiba pentendra*	Fuma	Fromager		
Togo	*Chlorophora excelsa*	Iroko			
Togo	*Terminalia superba*	Limba	Frake		
Togo	*Triplochyton spp.*	Obeche	Samba		
Togo	*Eucalyptus spp.*	Eucalyptus			

Table 6-2-b. Major Tropical Sawnwood Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Zaire	*Entandrophragma cylinidricum*	Sapelli		10	408
Zaire	*Khaya anthotheca*	Acajou d'Afrique		10	328
Zaire	*Gossweilerodendron balsamiferum*	Tola		6	231
Zaire	*Entandrophragma utile*	Sipo		3	442
Zaire	*Chlorophora excelsa*	Iroko		2	335
Zaire	*Entandrophragma angolense*	Tiama		1	245
Zaire	*Milletia laurentii*	Palis. du Congo	Wenge	1	520
Zaire	*Terminalia superba*	Limba		1	296
Zaire	*Gurea cedrata*	Bosse Clair	Bosse	0 R	326
Zaire	*Newtonia glandulifera*		Singa Kali	0 R	227
Zaire	*Entandrophragma candollei*	Kosipo		0 R	234
Zaire	*Erythrophleum suaveolens*	Tali		0 R	227
Zaire	*Lovoa trichilioides*	Dibetou		0 R	261
Zaire	*Guibourtia arnoldiana*		Mutenye	0 R	149
Zaire	*Pterocarpus soyauxii*	Padouk		0 R	328
Zaire	*Albizia ferruginea*	Latanza	Kasakasa	0 R	227
Zaire	*Teighemella africana*	Makore	Douka	0 R	261
Zaire	*Baillonella toxisperma*	Moabi		0 R	227
Zaire	*Gambeya africana*	Longhi		0 R	250
Zaire	*Piptadenistrum africanum*	Dabema		0 R	170
Fiji	*Agathis vitiensis*		Dakua makadre	5	445
Fiji	*Endospermum macrophyllum*		Kauvula	2	349
Fiji	*Myristica spp.*		Kaudamu	1	332
Fiji	*Decussocarpus vitiensis*		Dakua salusalu	1	449
Fiji	*Calophyllum spp.*		Damanu	1	336
Fiji	*Intsia bijuga*	Merbau	Vesi	1	413
Fiji	*Palaquium fidjiense*		Bauvudi	1	380
Fiji	*Swietenia macrophylla*	Mahogany	Fiji Mahogany	0 R	409
Fiji	*Dacrydium spp.*	Sempilor	Yaka	0 R	493
Fiji	*Gmelina vitiensis*		Rosawa	0 R	419
Fiji	*Gonystylus punctatus*		Mavota	0 R	342
Malaysia (Penins.)	*Dipterocarpus spp.*	Keruing		135	273
Malaysia (Penins.)	*Shorea spp.*	Dark Red Meranti		125	708
Malaysia (Penins.)	*Shorea spp.*	Dark Red Meranti	(PHND)	116	705
Malaysia (Penins.)	*Shorea spp.*	Red Meranti		56	387
Malaysia (Penins.)	*Shorea spp.*	Yellow Meranti		48	227
Malaysia (Penins.)	*Intsia bijuga*	Merbau		42	466
Malaysia (Penins.)			Redwood	41	177
Malaysia (Penins.)	*Koompassia excelsa*	Tualang		37	208
Malaysia (Penins.)	*Hevea brasiliensis*		Rubberwood	33	304
Malaysia (Penins.)	*Koompassia malaccensis*	Kempas		30	328
Malaysia (Penins.)	*Dryobalanops spp.*	Kapur		24	232
Malaysia (Penins.)	*Anosoptera spp.*	Mersawa		24	582
Malaysia (Penins.)	*Syzygium spp.*	Kelat		22	110
Malaysia (Penins.)	*Calophyllum spp.*	Bintangor		16	167
Malaysia (Penins.)	*Durio spp.*	Durian		16	248
Malaysia (Penins.)	*Heritiera simplicifolia*	Mengkulang		13	396
Malaysia (Penins.)	*Hopea spp.*	Merawan		12	150
Malaysia (Penins.)	*Shorea spp.*	Meranti Bakau		11	305
Malaysia (Penins.)	*Scorodocarpus borneensis*	Kulim		9	121
Malaysia (Penins.)	*Pseudosindora palustris*	Sepetir		8	496

Table 6-2-b. Major Tropical Sawnwood Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Malaysia (Penins.)	*Shorea spp.*	Light Red Meranti	Melantai	8	123
Malaysia (Penins.)	*Listea spp.*	Medang		8	123
Malaysia (Penins.)	*Shorea spp.*	Light Red Meranti		7	658
Malaysia (Penins.)			Kekatong	6	127
Malaysia (Penins.)	*Dyera costulata*	Jelutong		5	710
Malaysia (Penins.)	*Mesua ferrea*	Penaga		5	114
Malaysia (Penins.)	*Heritiera simplicifolia*	Mengkulang	Kembang Semangkok	5	500
Malaysia (Penins.)	*Parashorea spp.*	Hvy White Seraya	Gerutu	5	233
Malaysia (Penins.)	*Vatica spp.*	Resak		5	156
Malaysia (Penins.)	*Artocarpus integra*	Keledang		4	142
Malaysia (Penins.)	*Dialium platysepalum*	Keranji		4	172
Malaysia (Penins.)	*Palaquium spp.*	Nyatoh		4	371
Malaysia (Penins.)	*Toona sureni*	Suren	Surian	3	255
Malaysia (Penins.)	*Pometia pinnata*	Kasai		3	144
Malaysia (Penins.)	*Pentace spp.*	Thitka	Melunak	3	303
Malaysia (Penins.)	*Gonystylus bancanus*	Ramin		3	669
Malaysia (Penins.)	*Mezzettia spp.*	Mempisang		2	597
Malaysia (Penins.)	*Shorea spp.*	White Meranti		2	930
Malaysia (Penins.)	*Shorea spp.*	Balau		2	346
Malaysia (Penins.)			Kasah	2	669
Malaysia (Penins.)	*Lophopetalum spp.*	Perupok		2	607
Malaysia (Penins.)	*Switonia floribunda*	Merpauh		2	362
Malaysia (Penins.)			Acacia	2	176
Malaysia (Penins.)	*Madhuca utilis*	Bitis		2	108
Malaysia (Penins.)	*Cratoxylon arborescens*	Geronggang		2	305
Malaysia (Penins.)	*Alstonia spp.*	Pulai		2	312
Malaysia (Penins.)	*Shorea spp.*	Red Balau		2	262
Malaysia (Penins.)	*Myristica spp.*	Penarahan		1	465
Malaysia (Penins.)	*Agathis spp.*	Agathis	Damar Minyak	1	963
Malaysia (Penins.)	*Hopea spp.*	Merawan	Cengal	1	225
Malaysia (Penins.)	*Tetramerista glabra*	Punah		1	233
Malaysia (Penins.)			Perah	1	92
Malaysia (Penins.)			Berangan	1	107
Malaysia (Penins.)	*Endospermum medullosum*	Sesendok	Sesenduk	1	499
Malaysia (Penins.)	*Melanorrhoea spp.*	Rengas		0 R	156
Malaysia (Penins.)	*Canarium spp.*	White Dhup	Kedondong	0 R	638
Malaysia (Penins.)			Bekak	0 R	591
Malaysia (Penins.)	*Kokkona littoralis*	Mata Ulat		0 R	157
Malaysia (Penins.)	*Campnosperma spp.*	Terentang		0 R	313
Malaysia (Penins.)	*Hopea ferrea*	Giam		0 R	352
Malaysia (Penins.)	*Shorea spp.*	Meranti		0 R	96
Malaysia (Penins.)	*Dillenia spp.*	Simpoh		0 R	152
Malaysia (Penins.)			Pelong	0 R	100
Malaysia (Penins.)			Kekabu	0 R	526
Malaysia (Penins.)	Others			423	120
Malaysia (Sarawak)	*Koompassia malaccensis*	Kempas		0 R	304
Malaysia (Sabah)	*Koompassia malaccensis*	Kempas		0 R	304
Malaysia (Sabah)	*Koompassia excelsa*	Tualang		0 R	253
Malaysia (Sabah)	*Pentace spp.*	Thitka	Melunak/Takalis	0 R	461
Malaysia (Sabah)	*Palaquium spp.*	Nyatoh		0 R	707
Myanmar	*Tectona grandis*	Teak		28	763
Myanmar	*Dipterocarpus spp.*	Keruing	Guljan	7	237
Myanmar	*Pterocarpus macrocarpus*	Padauk		1	237

Table 6-2-b. Major Tropical Sawnwood Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
PNG	*Buchanania spp.*		Satinwood Pink	44	118
PNG	*Mastisciodendron spp.*		Garo Garo	28	106
PNG	*Pterocymloium beccarii*	Amberoi		25	109
PNG	*Syzygium spp.*	Kelat	Gum Water	24	108
PNG	*Garcinia latissima*		Kandis	21	100
PNG	*Celtis mymauii*		Celtis Light	20	108
PNG	*Celtis philippinesis*		Celtis Hard	19	108
PNG	*Caupnosperma brevipatale*		Campnos Perma	18	112
PNG	*Litsea spp.*	Medung	Litsea	13	110
PNG	*Dysoxylum spp.*	Dysox		13	109
PNG	*Heritiera spp.*	Heritiera		12	110
PNG	*Hopea iniana*		Hopea Heacy	12	114
PNG	*Cryptocanja spp.*	Medang	Cryptocarya	12	109
PNG	*Neonauclea spp.*		Hardwood Yellow	9	101
PNG	*Albizia procera*	Kokko	Albizia Brown	8	103
PNG	*Alstonia scholaris*	Pulai	Cheesewood White	8	102
PNG	*Anthorephalus thinensis*		Labula	8	122
PNG	*Ficus spp.*	Fig		8	99
Philippines	*Paraserianthes falcataria*	Falcata		44	123
Philippines	*Pentacme Contorta*	White Lauan	Lauan	1	620
Philippines			Tamir	0 R	375
Philippines	*Shorea spp.*	Red Meranti			
Philippines	*Dryobalanops spp.*	Kapur			
Thailand	*Hevea brasiliensis*		Para-rubber wood	25	1193
Thailand	*Tectona grandis*	Teak		6	2676
Thailand	*Pterocarpus macrocarpus*	Padauk	Pra-du	5	1761
Thailand	*Dipterocarpus spp.*	Keruing	Yang	0 R	490
Thailand	*Shorea spp.*	Dark Red Meranti			
Thailand	*Shorea spp.*	Light Red Meranti			
Thailand	*Shorea spp.*	Meranti Bakau			
Thailand	*Parashorea spp.*	White Lauan			
Thailand	*Shorea spp.*	White Meranti			
Thailand	*Parashorea spp.*	White Seraya			
Thailand	*Shorea spp.*	Yellow Meranti			
Thailand	*Shorea spp.*	Alan		0 R	73
Thailand	*Dipterocarpus spp.*	Keruing			
Thailand	*Gonystylus bancanus*	Ramin			
Thailand	*Dryobalanops spp.*	Kapur			
Thailand	*Dactylocladus stenostachys*	Jong Kong			
Thailand	*Intsia bijuga*	Merbau			
Thailand	*Dyera spp.*	Jerutong			
Thailand	*Koompassia malaccensis*	Kempas			
Thailand	Others			4	
Brazil	*Pinus spp.*	Pitch Pine	Pinus	230	
Brazil	*Hymenaea courbali*	Courbaril	Jatoba	101	
Brazil	*Swietenia macrophylla*	Mahogany	Mogno	98	
Brazil	*Dinizia excelsa*	Angelim pedra	Angelim Vermelho	40	
Brazil	*Cedrella spp.*	Cedro		32	
Brazil	*Bagassa guianensis*	Bagasse	Tatajuba	29	
Brazil	*Araucaria augustifolia*	Pin de Parana	Pinho	29	
Brazil	*Tabebuia spp.*	Ipe		19	
Brazil	*Cedrelinga catenaeformis*	Tornillo	Cedrorana	13	
Brazil	*Carapa guianensis*	Andiroba		12	
Brazil	*Virola surinamensis*	Virola		8	

Table 6-2-b. Major Tropical Sawnwood Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Colombia*	*Carniana pyriformis*	Abarco			
Colombia*	*Carapa guianensis*	Andiroba	Guino		
Colombia*	*Prioria copaifera*	Cativo			
Colombia*	*Cadrela spp.*	Cedro			
Colombia*	*Bombacopsis ruinatum*	Saqui-Saqui	Ceiba Tolua		
Colombia*	*Samanea spp.*		Campan		
Ecuador	*Ochroma lagopus*	Balsa		21	214
Ecuador	*Platymicium pinnatum*	Trebol	Caoba	8	754
Ecuador	*Tectona gradis*	Teak	Teca	7	718
Ecuador	*Cedrela odorata*	Cedro		6	584
Ecuador	*Brosimum utile*	Sande		2	183
Ecuador	*Pouteria spp.*		Colorado	1	59
Ecuador	*Tabebuia chrysantha*		Guayacan	0 R	468
Ecuador	*Virola spp.*	Virola		0 R	393
Ecuador	*Ocotea nicaraguensis*		Calade	0 R	314
Ecuador	*Humiriastrum procerum*		Chanul	0 R	261
Ecuador	*Guadua angustifolia*		Bambuco	0 R	96
Ecuador			Marfil	0 R	549
Guyana	*Ocotea rodiaei*	Greenheart		8	395
Guyana	*Peltogyne Pubescens*	Amarante	Purpleheart	3	364
Guyana	Others			2	328
Guyana	*Mora excelsa*	Mora		1	315
Guyana	*Hymenaea courbali*	Courbaril	Locust	0 R	462
Guyana	*Carapa guianensis*	Andiroba	Crabwood	0 R	316
Guyana	*Goupia glabra*	Goupi	Kakukalli	0 R	336
Guyana	*Ocotea puberula*	Canelo	Silverballi	0 R	427
Guyana	*Eperus Fulcata*	Walaba	Wallaba	0 R	252
Guyana	*Loxopterygium sagotii*		Hububalli	0 R	392
Guyana	*Swartzia leiocalycina*	Ferreol	Wamara	0 R	584
Guyana	*Aspidosperma Album*	Araracanga	Shibadan	0 R	313
Guyana	*Humiria Balsamifera*		Tauroniro	0 R	291
Honduras*	*Pinus caribaea*	Pino Caribe		120	71
Honduras*	*Swietenia humills*	Mahogany	Caoba del Pacilico	3	71
Honduras*	*Swietenia macrophylla*	Mahogany	Caoba del Atlantico		
Honduras*	*Cedrela odorata*	Cedro			
Honduras*	*Pinus maximinol*	Pino Lloron			
Honduras*	*Pinus oocaroa*	Pino Ocote			
Honduras*	*Pinus tecumumanll*	Pino Rojo			
Peru	*Cedrela odorata*	Cedro			
Peru	*Amburana cearensis*	Cerejeira	Ishpingo		
Peru	*Copaifera spp.*	Copaiba			
Peru	*Swietenia macrophylla*	Mahogany	Caoba		
Peru	*Cedrelinga catenaeformis*	Tornillo			
Peru	*Virola spp.*	Ucuuba vermelha	Cumala		
Peru	*Ormosia spp.*		Huayruro		
Peru	*Calyophyllun spruceanum*		Capirona		
Peru	*Paramachaerium ormosioides*		Aguano Masha		
Peru	*Coumarouma spp.*	Cumara	Shihuahuaco		
Peru	*Aniba spp.*		Moena		

*: data from 1994

*: Price for Air dried, volume is for both Air and Kiln dried.

**: Kiln dried.

Table 6-2-c. Major Tropical Veneer Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Cameroon	*Entandrophragma cylindriace*	Sapelli		29	795
Cameroon	*Entandrophragma candellei*	Sipo		28	800
Cameroon	*Triplochiton scleroxylon*	Obeche	Ayous	15	692
Cameroon	*Terminalia superba*	Limba	Frake	10	700
Congo*	*Aucoumea klaineana*	Okoume		24	
Côte d'Ivoire**	*Aningeria spp.*	Aniégré		8	968
Côte d'Ivoire**	*Pterygota macro.*	Koto		2	963
Côte d'Ivoire**	*Entandrophragma cyl.*	Sapelli	Aboudikrou	1	947
Côte d'Ivoire**	*Khaya ivorensis*	Acajou d'Afrique	Acajou	1	789
Côte d'Ivoire**	*Mansonia altissima*	Mansonia	Bété	0 R	1563
Côte d'Ivoire**	*Entandrophragma Can.*	Kosipo		0 R	655
Côte d'Ivoire**	*Tieghemella heckeli*	Makore		0 R	861
Côte d'Ivoire**	*Guibourtia ehie*	Ovangkol	Amazakoué	0 R	974
Côte d'Ivoire**	*Pycnanthus angolensis*	Ilomba		0 R	495
Côte d'Ivoire**	*Terminalia superba*	Limba	Fraké	0 R	885
Côte d'Ivoire**	*Lovoa trichilioides*	Dibetou	Dibetou	0 R	754
Côte d'Ivoire**	*Copaifera salikdunda*	Etimoé		0 R	1313
Côte d'Ivoire**	*Chlorophora excelsa*	Iroko		0 R	1063
Côte d'Ivoire**	*Ceiba pentandra*	Fuma	Fromager	0 R	688
Côte d'Ivoire**	*Hallea ciliata*	Abura	Bahia	0 R	197
Côte d'Ivoire**	*Antiaris africana*	Ako		0 R	563
Côte d'Ivoire**	*Alstonia boonei*	Emien		0 R	976
Côte d'Ivoire**	*Piptadeniastrum africana*	Dabema		0 R	896
Côte d'Ivoire***	*Ceiba pentandra*	Fuma	Fromanger	73	282
Côte d'Ivoire***	*Pycnanthus angolensis*	Ilomba		17	311
Côte d'Ivoire***	*Triplochiton scl.*	Ayous	Samba	8	318
Côte d'Ivoire***	*Rhodognaphalon brevicuspe*	Kondrotii		3	330
Côte d'Ivoire***	*Pterygota macrocarpa*	Koto		2	406
Côte d'Ivoire***	*Eribroma oblonga*	Eyong	Bi	2	313
Côte d'Ivoire***	*Antiaris africana*	Ako		2	266
Côte d'Ivoire***	*Hallea ciliata*	Abura	Bahia	1	314
Côte d'Ivoire***	*Aningeria Spp.*	Aniegre		1	805
Côte d'Ivoire***	*Terminalia superba*	Limba	Fraké	1	326
Côte d'Ivoire***	*Daniella thurifera*	Faro		0 R	136
Côte d'Ivoire***	*Nauclea diderichii*	Bilinga	Badi	0 R	310
Côte d'Ivoire***	*Gymnestemon zaïzou*		Zaïzou	0 R	470
Côte d'Ivoire***	*Khaya ivorensis*	Acajou d'Afrique	Acajou	0 R	395
Côte d'Ivoire***	*Canarium schweinfunthii*		Aiélé	0 R	333
Côte d'Ivoire***	*Entandrophragma cyl.*	Sapelli	Aboudikrou	0 R	496
Côte d'Ivoire***	*Entandrophragma utile*	Sipo		0 R	372
Côte d'Ivoire***	*Tarrietia utilis*	Niangon		0 R	286
Gabon	*Aucoumea klaineana pierre*	Okoume		2	263
Ghana**	*Aningeria altissima*	Longhi	Aningeria/Asanfona	19	1033
Ghana**	*Ceiba pentandra*	Fuma	Ceiba/Fromager	8	538
Ghana**	*Antiaris africana*	Ako	Antiaris/Chenchen	3	958
Ghana**	*Pterygota macrocarpa*	Koto		3	901
Ghana**	*Pycnanthus angolensis*	Ilomba	Otie	3	1380
Ghana**	*Chrysophyllum spp.*	Longhi	Akasa	2	993
Ghana**	*Khaya ivorensis/Anthotheca*	Acajou d'Afrique		2	780
Ghana**	*Daniellia ogea*	Faro	Ogea/Shedua	1	1260
Ghana**	*Tieghemelia heckelli*	Makore	Baku	1	918

Table 6-2-c. Major Tropical Veneer Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Ghana**	*Entandrophragma cylindricum*	Sapelli		1	978
Ghana**	*Triplochiton scleroxylon*	Obeche	Wawa	1	764
Ghana**	*Terminalia superba*	Limba	Afara/Ofram	1	871
Ghana**	*Entandrophragma angolense*	Tiama	Edinam	1	732
Ghana**	*Entandrophragma candolei*	Kosipo	Omu/Candollei	0 R	914
Ghana***	*Ceiba pentandra*	Fuma	Ceiba/Fromager		337
Ghana***	*Aningeria altissima*	Longhi	Aningeria/Asanfona		486
Ghana***	*Daniellia ogea*	Faro	Ogea/Shedua		402
Ghana***	*Khaya ivorensis/Anthotheca*	Acajou d'Afrique			591
Ghana***	*Pycnanthus angolensis*	Ilomba	Otie		401
Ghana***	*Pterygota macrocarpa*	Koto	Koto		510
Ghana***	*Triplochiton scleroxylon*	Obeche	Wawa		389
Ghana***	*Antiaris africana*	Ako	Antiaris/Chenchen		374
Ghana***	*Terminalia superba*	Limba	Afara/Ofram		388
Ghana****	*Aningeria altissima*	Longhi	Aningeria/Asanfona		899
Ghana****	*Tieghemelia heckelli*	Makore	Baku		3453
Ghana****	*Khaya ivorensis/Anthotheca*	Acajou d'Afrique			1252
Ghana****	*Entandrophragma cylindricum*	Sapelli	Sapele		845
Ghana****	*Pterygota macrocarpa*	Koto	Koto		1247
Ghana****	*Entandrophragma angolense*	Tiama	Edinam		1365
Ghana****	*Entandrophragma candolei*	Kosipo	Omu/Candollei		1072
Ghana*****	*Triplochiton scleroxylon*	Obeche	Wawa		1452
Ghana	Others			1	
Zaire	*Entandrophragma cylindricum*	Sapelli		6	596
Zaire	*Khaya anthotheca*	Acajou d'Afrique		0 R	518
Zaire	*Terminalia superba*	Limba		0 R	596
Zaire	*Entandrophragma candollei*	Kosipo		0 R	379
Zaire	*Chlorophora excelsa*	Iroko		0 R	372
Zaire	*Milletia laurentii*	Wenge		0 R	1157
Zaire	*Gambeya africana*	Longhi		0 R	388
Zaire	*Entandrophragma utile*	Sipo		0 R	665
Zaire	*Lovoa trichilioides*	Dibetou		0 R	406
Zaire	*Gossweilerodendron balsamiferu*	Tola		0 R	393
Zaire	*Gurea cedrata*	Bosse Clair	Bosse	0 R	411
Fiji	*Myristica spp.*	Penaraban	Kaudamu	2	575
Fiji	*Agathis vitiensis*		Dakua makadre	1	1039
Fiji	*Endospermum macrophyllum*		Kauvula	1	542
Fiji	*Calophyllum spp.*		Damanu	0 R	449
Malaysia	*Shorea spp.*	Dark Red Meranti			
Malaysia	*Anosoptera spp.*	Mersawa		587	392
Malaysia	*Dipterocarpus spp.*	Keruing			
Myanmar	*Tectona grandis*	Teak		0 R	643
Myanmar	*Dipterocarpus spp.*	Keruing	Guljan	0 R	643

Table 6-2-c. Major Tropical Veneer Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
PNG	*Flindersia achottiana*		Silkwood	11	110
PNG	*Horsfieldia spp.*	Horsfieldia	Nutmeg	9	102
PNG	*Maranthes corymbosm*		Plum Busu	9	96
PNG	*Maniltoa spp.*		Maniltoa	7	102
PNG	*Planchonia spp.*		Planchonia	6	103
PNG	*Pterygota horsfieldii*		Oak White Tulip	6	100
PNG	*Chisotheton spp.*		Kiso	5	101
Philippines	*Pentacme contorta*	Lauan		21	399
Thailand	*Shorea spp.*	Dark Red Meranti			
Thailand	*Shorea spp.*	Light Red Meranti			
Thailand	*Parashorea spp.*	White Lauan			
Thailand	*Aucoumea klaineana*	Okoume			
Thailand	*Triplochiton scleroxylon*	Obeche			
Thailand	*Entandrophragma cylindricum*	Sapelli			
Thailand	*Entandrophragma utile*	Sipo			
Thailand	*Khaya spp.*	Acajou d'Afrique			
Thailand	*Terminalia superba*	Limba			
Thailand	*Swietenia spp.*	Mahogany			
Thailand	*Virola spp.*	Baboen			
Thailand	*Dalbergia spp.*	Palissandre du Bresil			
Thailand	*Aniba spp.*	Bois de Rose Femelle		0 *	666
Colombia*	*Protium heptaphylum*		Amezalar		
Colombia*	*Erysma uncinatum*	Jaboty	Cedrillo		
Ecuador	*Brosimum utile*	Sande	Sande	2	731
Ecuador	*Ochroma lagopus*	Balsa		2	890
Ecuador	*Hieronyma spp.*	Pilon	Mascarey	1	295
Honduras*	*Pinus caribaea*	Pino Caribe		9	57
Honduras*	*Swietenia humills*	Mahogany	Caoba del Paclfico	4	57
Honduras*	*Pinus maximinol*	Pino Lloron			
Honduras*	*Pinus oocaroa*	Pino Ocote			
Honduras*	*Pinus tecumumanll*	Pino Rojo			
Honduras*	*Swietenia macrophylla*	Mahogany	Caoba del Atlantico		
Honduras*	*Cedrela odorata*	Cedro			
Peru*	*Chorisia integrifolia*		Lupuna		
Peru*	*Swietenia macrophylla*	Mahogany	Caoba		
Peru*	*Cunuria spruceana*	Cerejeira	Ishpingo		
Peru*	*Ficus spp.*		Matapalo		

*: data from 1994
**: Price for Sliced Veneer
***: Rotary Peeled Veneer
****: Jointed Veneer
*****: Reconstituted Veneer

Table 6-2-d. Major Tropical Plywood Species Exported by ITTO Producers, 1995

Country	Latin Name	Pilot Name	Local Name	Volume 1000 m3	Avg. Price $/m3
Cameroon	*Entandrophragma candellei*	Sipo			1005
Cameroon	*Entandrophragma cylindriace*	Sapelli		19	1005
Cameroon	*Triplochiton scleroxylon*	Obeche	Ayous		1005
Cameroon	*Terminalia superba*	Limba	Frake		1005
Cameroon	*Pycnanthus angolensis*	Ilomba		15	1005
Côte d'Ivoire	*Ceiba pentandra*	Fuma	Fromager	13	388
Côte d'Ivoire	*Pycnanthus angolensis*	Ilomba		2	467
Côte d'Ivoire	*Eribroma oblonga*	Eyong	Bi	0 R	553
Côte d'Ivoire	*Rhodognaphalon brevicuspe*	Kondroti		0 R	510
Côte d'Ivoire	*Entandrophragma cyl.*	Sapelli	Aboudikro	0 R	472
Côte d'Ivoire	*Entandrophragma candelleii*	Kosipo		0 R	666
Gabon	*Aucoumea klaineana pierre*	Okoume		15	1719
Ghana	*Ceiba pentandra*	Fuma	Ceiba/Fromager	3	380
Ghana	*Khaya ivorensis*	Acajou d'Afrique		0 R	477
Ghana	*Triplochiton scleroxylon*	Obeche	Wawa	0 R	402
Ghana	*Pterygota macrocarpa*	Koto	Kyere	0 R	368
Ghana	*Entandrophragma spp.*		Mixed Red Wood	0 R	334
Ghana	*Pychanthus angolensis*	Ilomba	Otie	0 R	362
Ghana	*Entandrophragma cylindricum*	Sapelli		0 R	242
Ghana	*Antrocaryon micraster*	Onzabili	Aprokuma	0 R	400
Fiji	*Agathis vitiensis*	Penanahan	Dakua makadre	1	750
Fiji	*Canarium spp.*		Kaunicina	1	891
Fiji	*Myristica spp.*		Kaudamu	0 R	537
Fiji	*Palaquium spp.*		Bauvudi	0 R	899
Fiji	*Calophyllum spp.*		Damanu	0 R	564
Fiji	*Endospermum macrophyllum*		Kauvula	0 R	542
Fiji	*Dacrydium spp.*	Sempilor	Yaka	0 R	1309
Malaysia	*Shorea spp.*	Dark Red Meranti			
Malaysia	*Dipterocarpus spp.*	Keruing		404	423
Malaysia	*Anosoptera spp.*	Mersawa			
Myanmar	*Tectona grandis*	Teak		0 R	260
Myanmar	*Dipterocarpus spp.*	Keruing	Guljan	0 R	260
PNG	*Araucaria spp.*	Klinkii Pine			
PNG	*Araucaria spp.*	Hoop Pine			
Philippines	*Pentacme contorta*	Lauan		0 R	334
Colombia*	*Dialianthera spp.*	Virola	Cuangare		
Ecuador	*Brosimum utile*	Sande		33	301
Ecuador	*Eucalyptus globulus*	Eucalipto		2	267
Ecuador	*Virola spp.*	Virola		1	385
Honduras*	*Swietenia humills*	Mahogany	Caoba del Pacifico	4	149
Honduras*	*Swietenia macrophylla*	Mahogany	Caoba del Atlantico		
Honduras*	*Cedrela odorata*	Cedro			
Peru	*Chorisia spp.*	Lupuna			
Peru	*Copaifera spp.*	Copaiba			
Peru	*Hura Crepitans*	Assacu	Catahua		

*: data from 1994

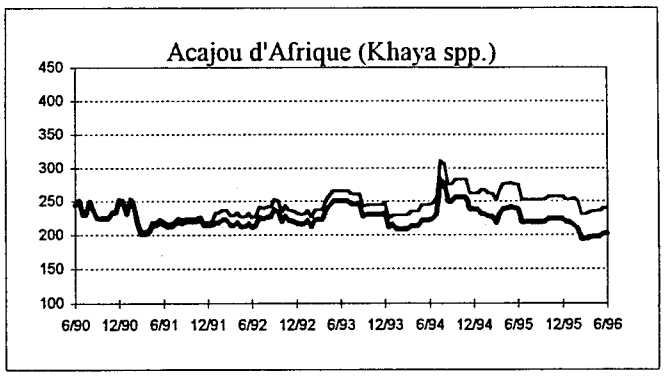
Appendix 7

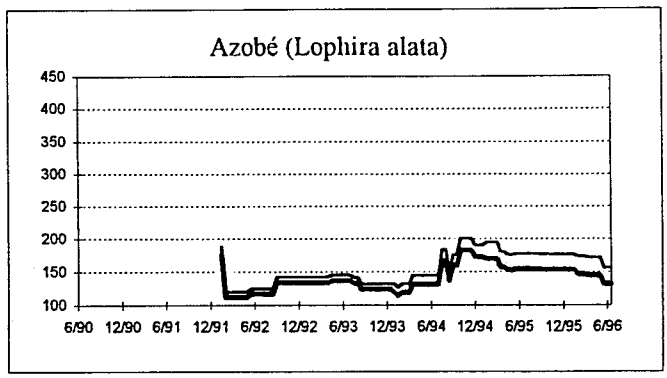
Prices of Tropical Timber Products, 1990-96

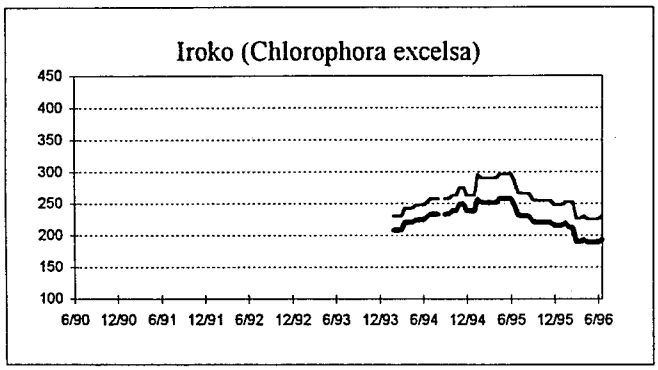
Appendix 7.

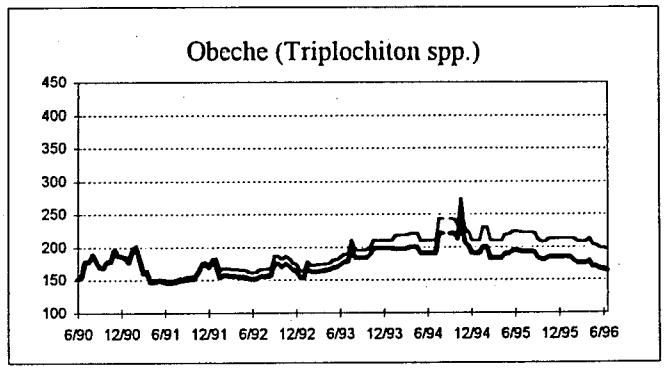
7.1 Price of African Logs, 1990-1996

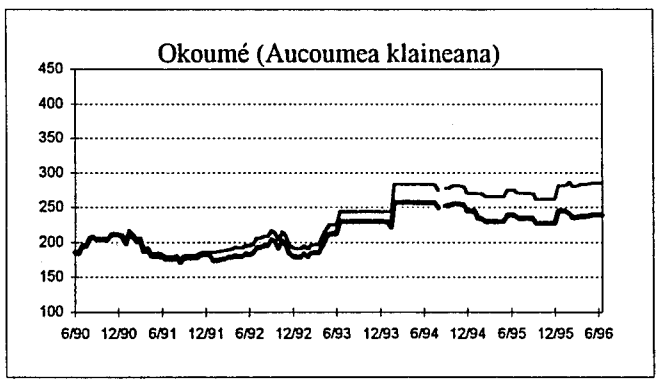
Bold lines show prices in constant 1990 US$ per cubic meter (deflated by the G-5 MUV Index used by the World Bank for deriving real commodity prices). Normal lines show nominal price trends.
Grades for all species shown are Loyal et Marchand/Fair Average Quality or equivalent.

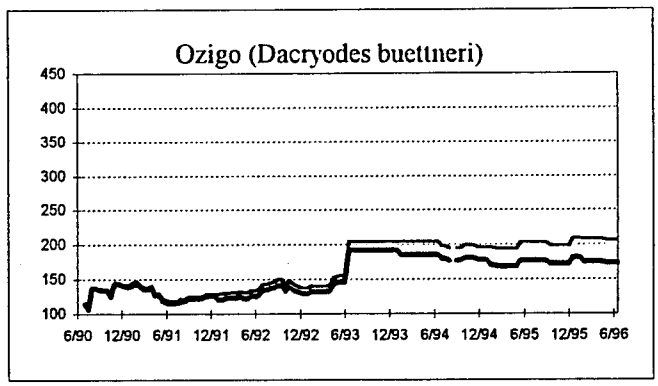


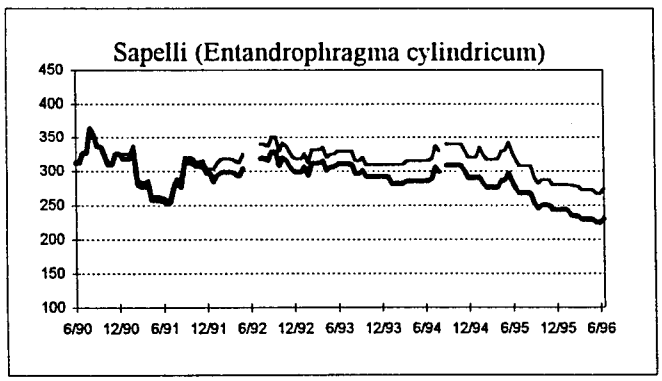


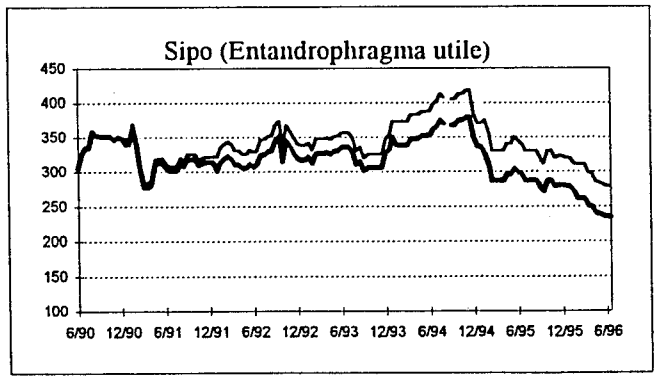






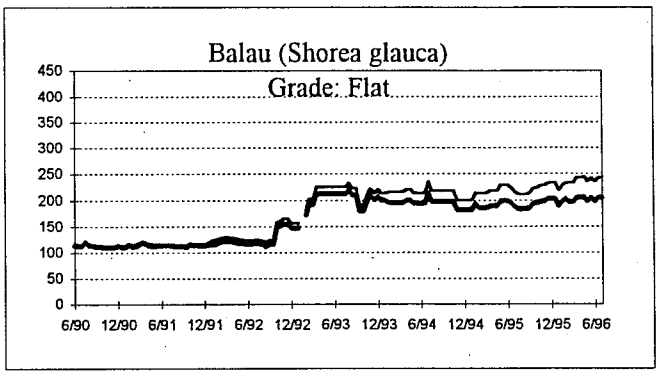


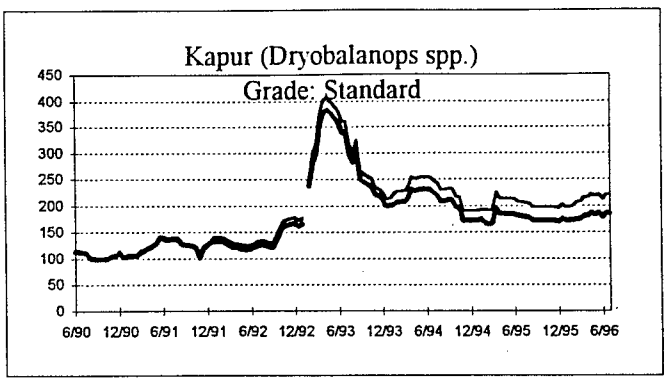


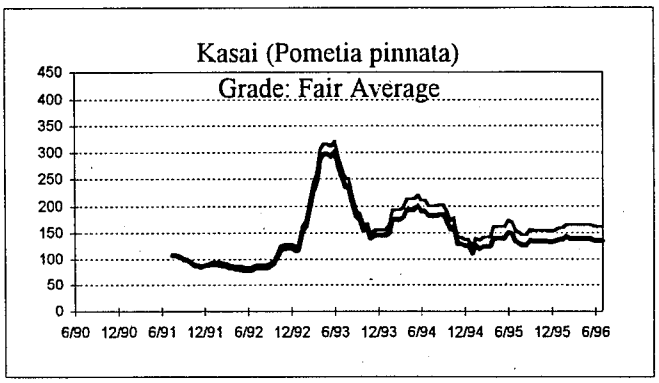


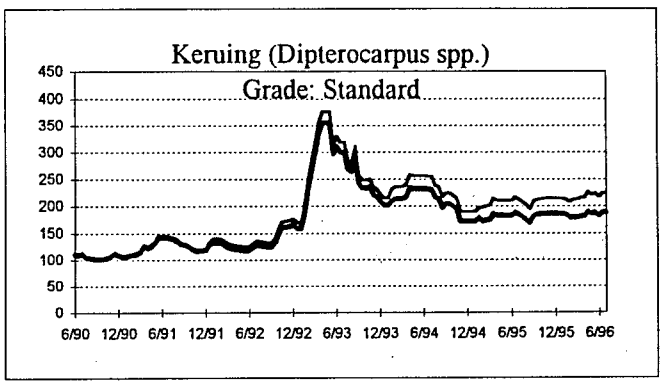
7.2 Price of Asian Logs, 1990-1996

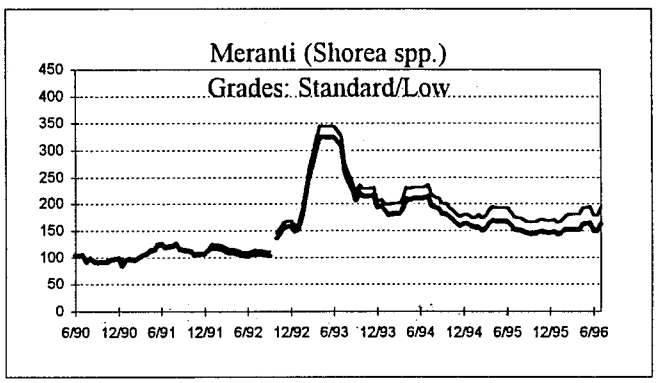
Bold lines show prices in constant 1990 US$ per cubic meter (deflated by the G-5 MUV Index used by the World Bank for deriving real commodity prices). Normal lines show nominal price trends.

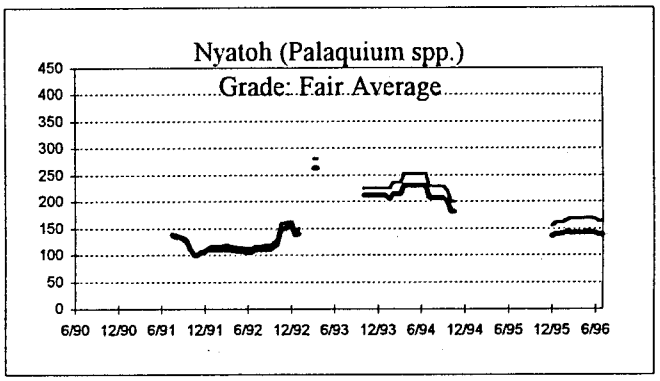


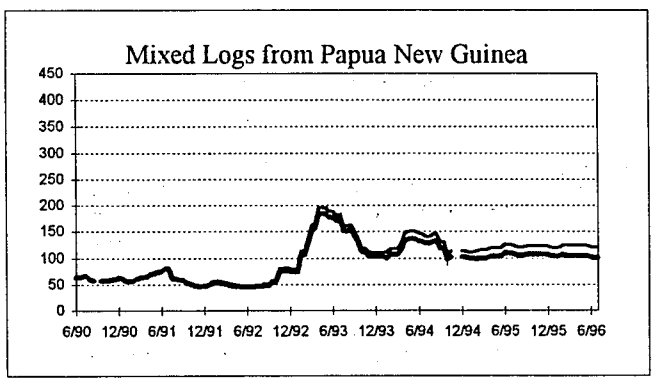


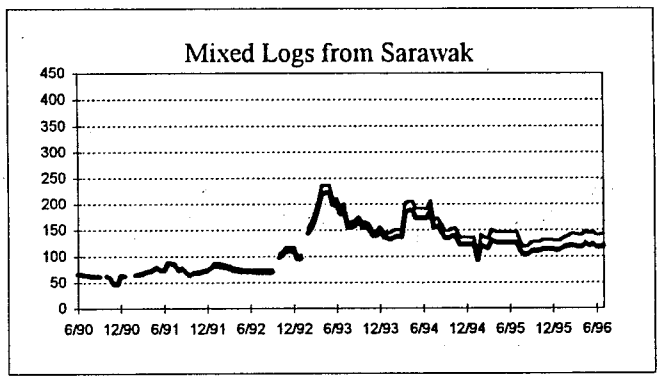






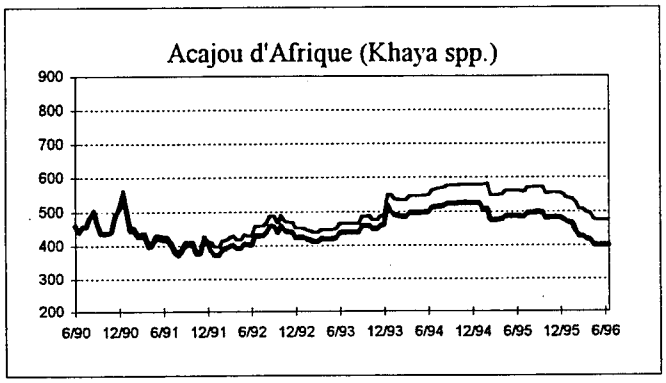


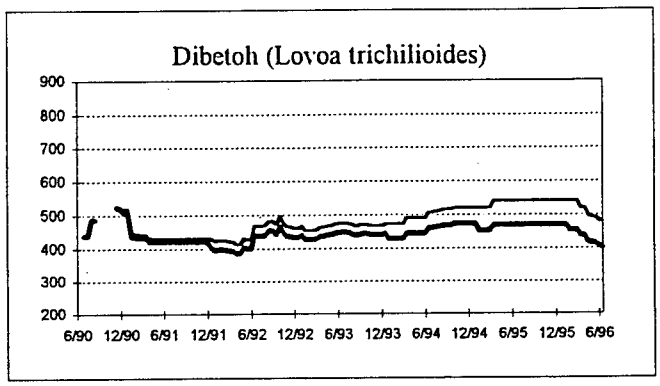


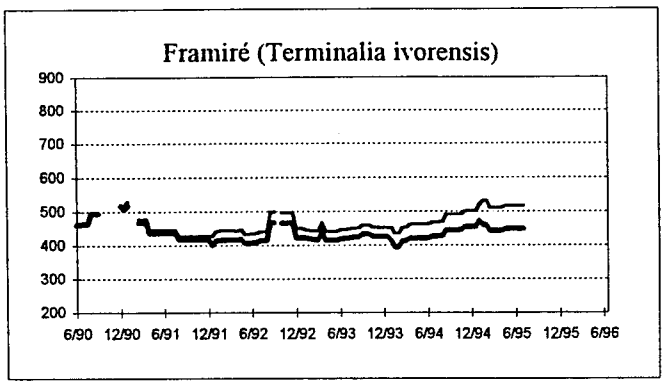


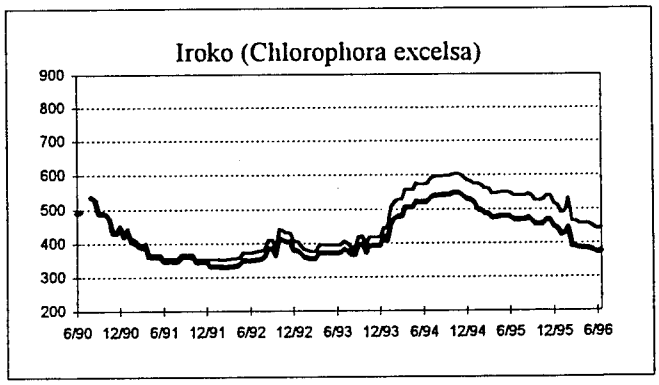
7.3 Price of African Sawnwood, 1990-1996

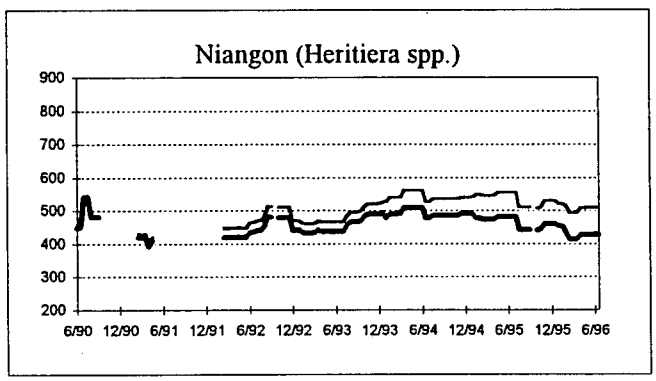
Bold lines show prices in constant 1990 US$ per cubic meter (deflated by the G-5 MUV Index used by the World Bank for deriving real commodity prices). Normal lines show nominal price trends.
Grades for all species shown are Loyal et Marchand/First and Seconds or equivalent.

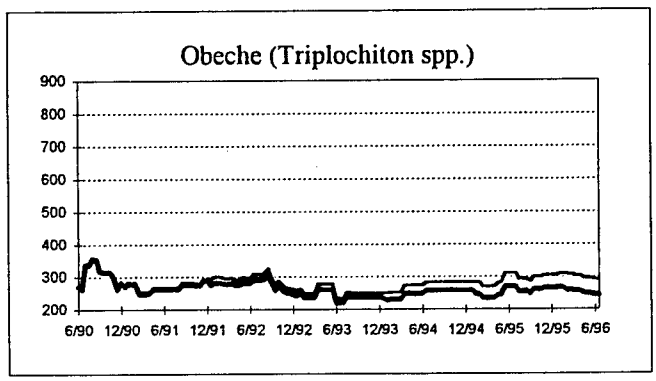


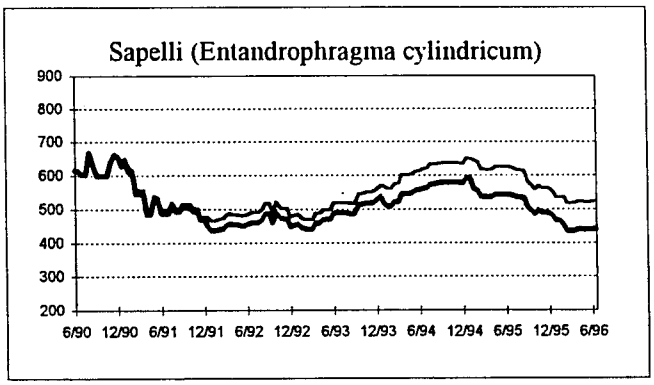


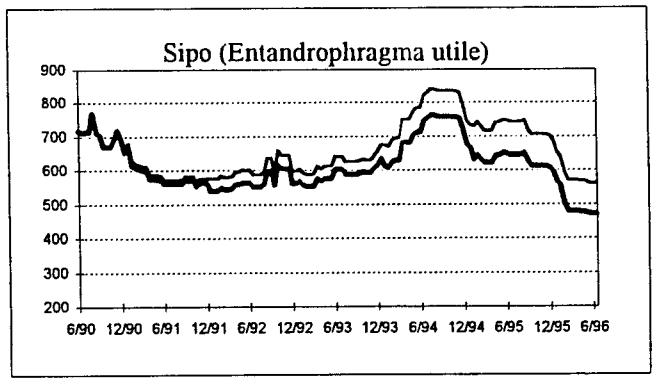






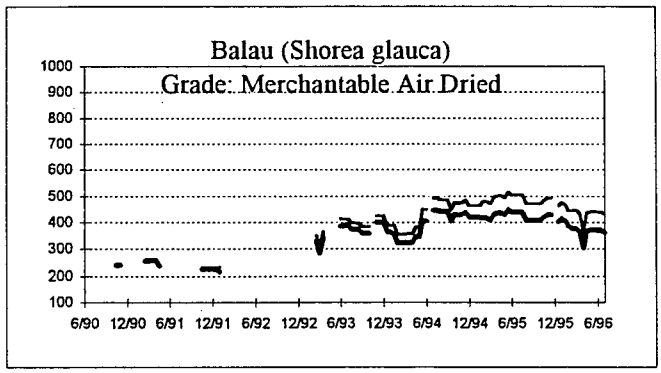


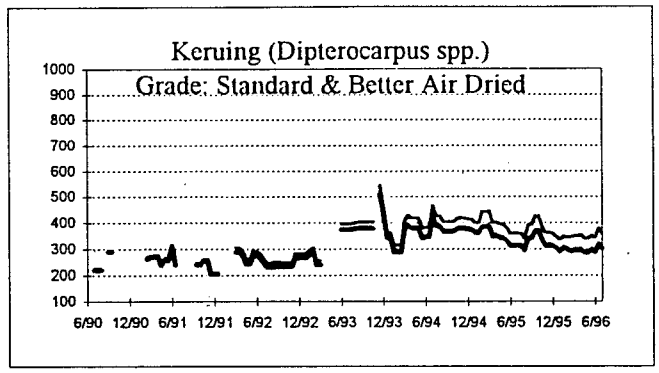


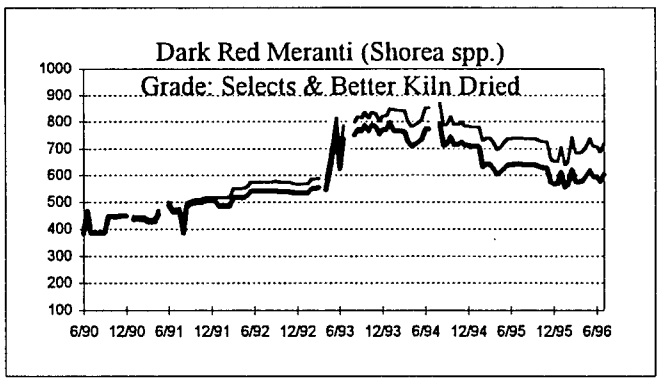


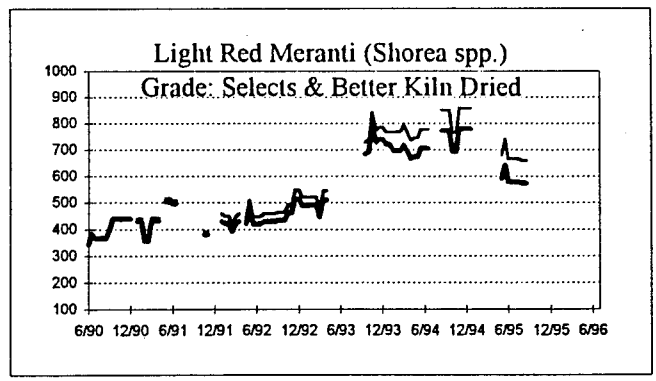
7.4 Price of Asian Sawnwood, 1990-1996

Bold lines show prices in constant 1990 US$ per cubic meter (deflated by the G-5 MUV Index used by the World Bank for deriving real commodity prices). Normal lines show nominal price trends.



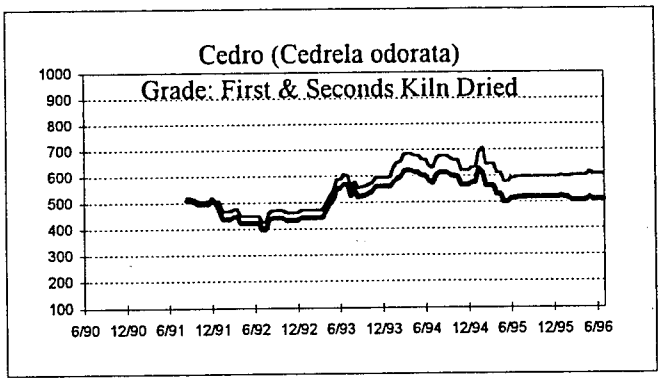


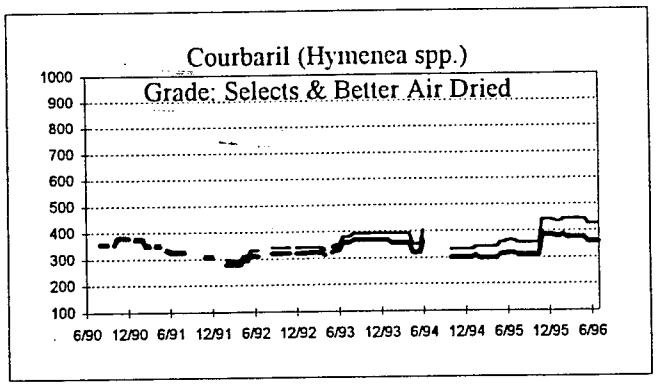


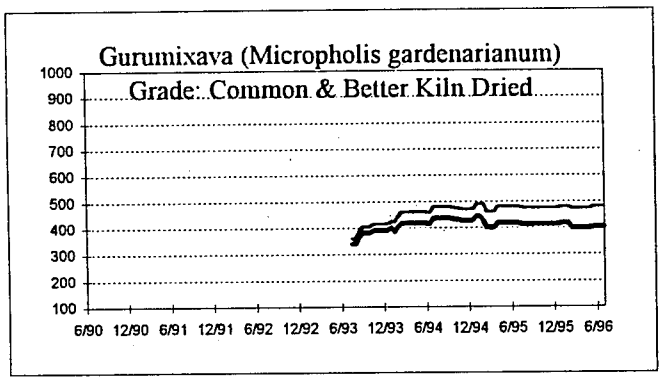


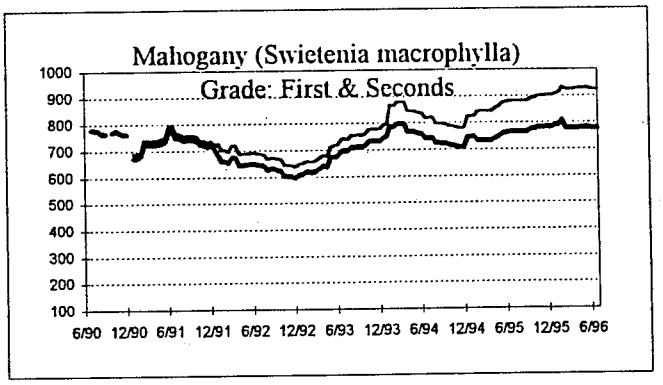
7.5 Price of Latin American Sawnwood, 1990-1996

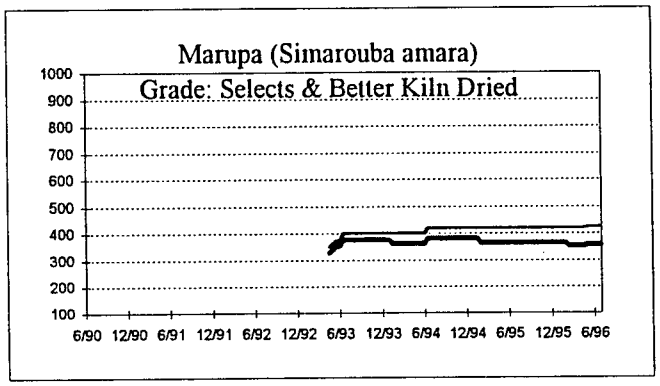
Bold lines show prices in constant 1990 US$ per cubic meter (deflated by the G-5 MUV Index used by the World Bank for deriving real commodity prices). Normal lines show nominal price trends.

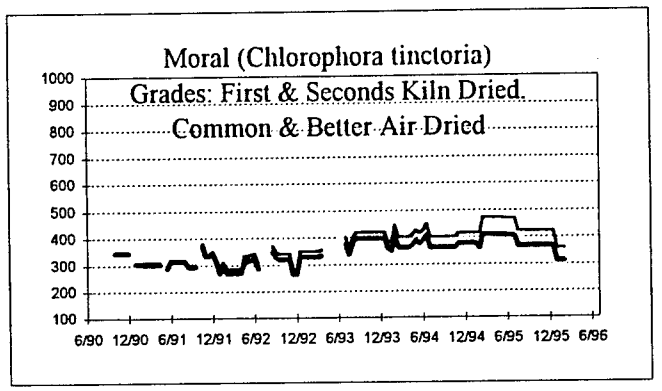


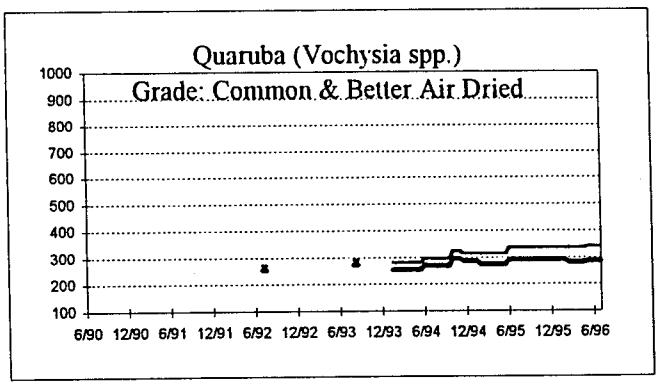


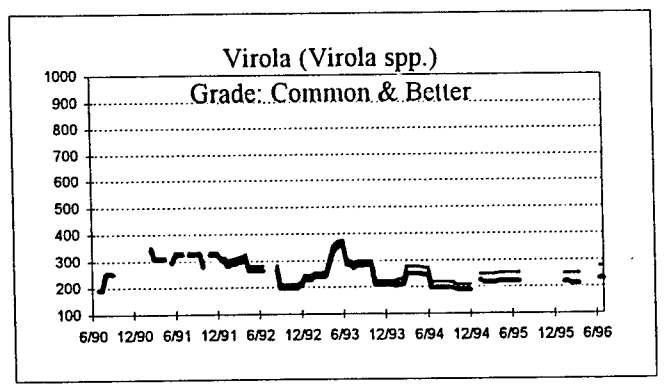






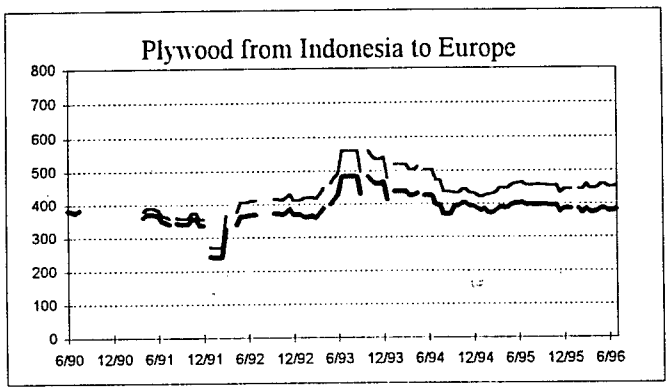


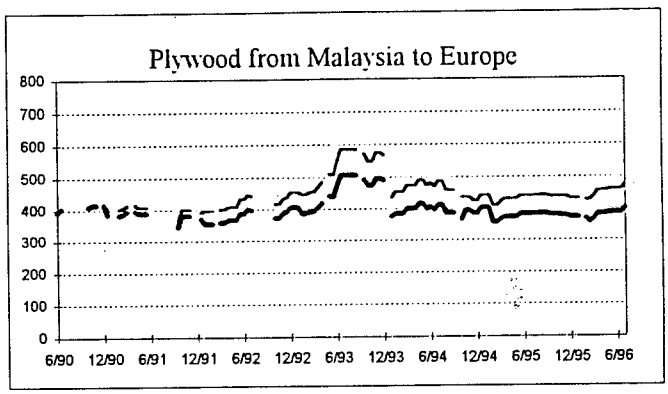


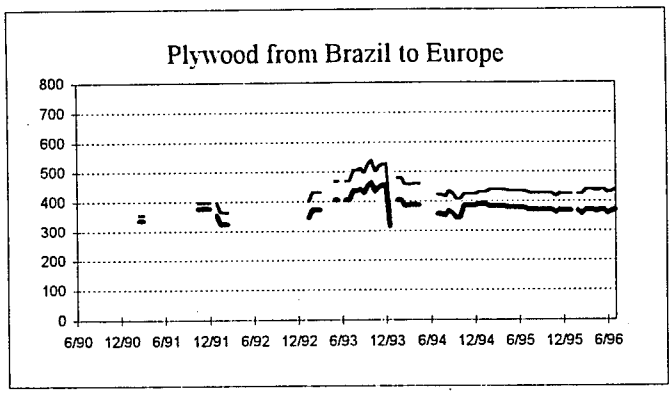


7.6 Price of Plywood, 1990-1996

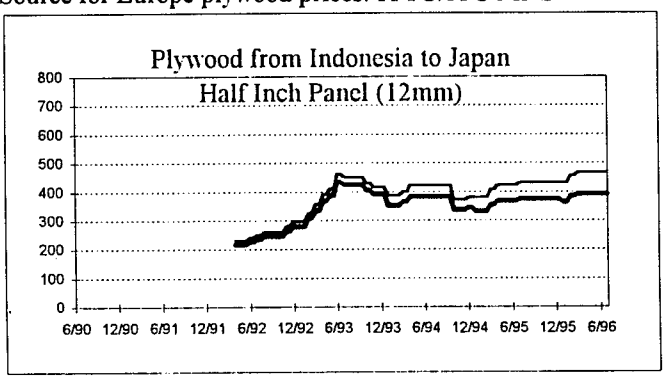
Bold lines show prices in constant 1990 US$ per cubic meter (deflated by the G-5 MUV Index used by the World Bank for deriving real commodity prices). Normal lines show nominal price trends. All prices are C&F.
Grades for all species shown are B/BB Moisture Resistant, 9mm thickness unless otherwise indicated.

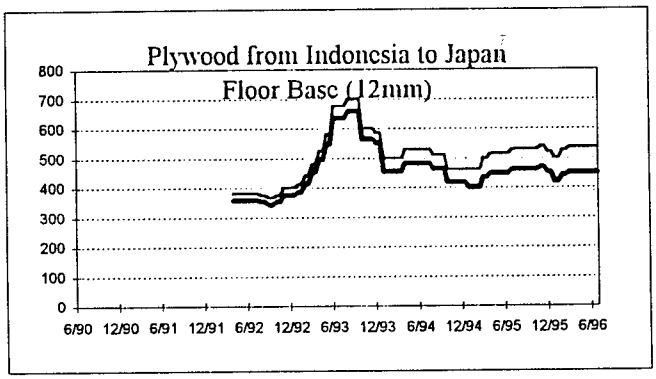


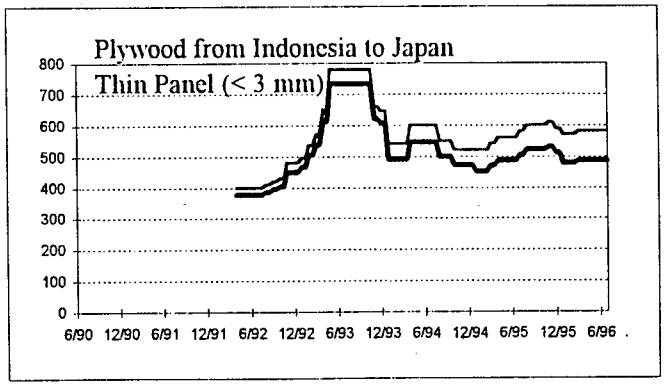




Source for Europe plywood prices: ITTO/ITC MNS







Source for Japan plywood prices: Japan Lumber Reports