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## FOREWORD

The International Tropical Timber Agreement states in Article 28, paragraph 2 that "the Council shall annually review and assess the world tropical timber situation and exchange views on the outlook for, and other issues closely relevant to the world tropical timber economy, including ecological and environmental aspects". The ITTA further states that the review shall be carried out in the light of information supplied by Member countries on the performance of the forest and forest industries sector, statistical data and indicators provided by Members on areas listed in Annex C of the Agreement and of information available from organizations of the United Nations family, intergovernmental, governmental and non-governmental organizations. "The result of the review shall be included in the reports of the Council's deliberations".

This document has been compiled as a basis for the Council's review and assessment of the tropical timber situation as required by Article 28, paragraph 2 of the ITTA. It draws its content from a large number of sources. It incorporates information made available by organizations of the United Nations system, especially FAO. A large portion of the data on production and trade have been provided by ITTO's Member countries through the reporting system which was initiated in August 1988 with the Forecasting Enquiry for the Annual Review.

In the consultative market review process adopted by decision of ITTC(IV), the Council's assessment of the tropical timber market situation and prospects are now to be based largely on two primary and complementary sources of information provided by Members: the responses to the August, 1988 Forecasting Enquiry for the Annual Review, and the individual Country Market Statements called for by decision of ITTC(V).

Furthermore, it is in the nature of this process as adapted from the Timber Committee of the United Nations Economic Commission for Europe, that the Council's collective view of the market outlook will emerge in discussion among trading partners, and in particular that the quantitative forecasts made in advance by each country individually are liable to revision in the light of these discussions.

Because they include information useful for current market decisions, the quantitative market forecasts compiled by the Secretariat from the Enquiry responses are to be introduced in the Secretariat's statement opening the Market Discussions.

Almost all consuming Members have provided fully detailed market forecasts through 1989, and the majority of producing Members have also submitted responses.

Pending release at the Market Discussions of this new body of forecast data, certain salient points about tropical timber market developments just prior to the period 1987-1989 covered by the Enquiry data are illustrated in the tables and figures presented and discussed in this report.

Data which are relevant for appreciating the statements made in the various sections of the draft are presented in tables in the text or in graphs. More detailed statistics are contained in the Appendix tables which are included as a basic body of reference information.

At the time of preparing this draft, the Secretariat is still receiving statistical market forecast responses from Members, the market section of this draft document is therefore intended primarily to provide a background of quantitative information on the development in the tropical timber trade prior to the current 1987-89 review and forecast period, and refrains from interpretation which would anticipate conclusions by the Members themselves.

## 1. OVERVIEW

The production of tropical hardwood timber is expected to continue the trend of slight growth, observed during the second half of the 80's, also in 1989 and 1990. However, larger shares of sawlogs and veneer logs will be processed by industries in the log producing countries. Domestic downstream production is expected to increase at a higher pace in the Asia/Pacific region, than in other tropical regions. This is a result of the rapid economic development in the timber producing countries there, as well as policies and programs designed to assist the timber-processing industries to take full advantage of potential benefits from value-added production and reduce dependence on the relatively unstable commodity markets. Manufacturing more value-added products is also recognized as a key to making the industry capable of meeting the costs of maintaining the resources and achieving sustained raw material supply.

The share of tropical sawlogs and veneer logs processed in industries in producing countries decreased to 81% in 1987, from 83% in 1986 (Table 1). Latin America/Caribbean producers continued to process locally almost their entire production. Asia/Pacific, in spite of slight increase in the share of roundwood production exported in log form, substantially expanded local processing for export, with local industries using 33% of total regional log supply, in 1987 compared to 22% in 1986. The share of African log supply going for export remained unchanged, but as in Asia/Pacific, the regions increased the share of supply processed locally for export, which reached 13% in 1987, compared to 11% in 1986.

Mounting environmental awareness is now the most important factor affecting tropical timber industries and trade in both producing and consuming countries. Several of the world's environmental nongovernmental organizations have initiated well-organized campaigns to persuade Governments to regulate and strictly control the international tropical timber trade. The campaigns launched by these conservation NGOs is gaining adherers in the trade and among the consumers, particularly in Europe where some timber companies are phasing out their stocks of tropical timber in favour of softwood and

TABLE 1 SUPPLY OF TROPICAL SAW AND VENEER LOGS AND COMPOSITION OF EXPORTS  
(m<sup>3</sup>)

	1986				1987			
	AFRICA	ASIA/ PACIFIC	LATIN AMERICA/ CARIBBEAN	TOTAL	AFRICA	ASIA/ PACIFIC	LATIN AMERICA/ CARIBBEAN	TOTAL
TOTAL SUPPLY (m <sup>3</sup> )	16 369 600	86 058 000	44 400 600	146 828 200	15 757 949	89 224 304	44 595 600	149 577 853
PERCENTAGE EXPORTED AS LOGS	23	25	0.04	17	23	28	0.07	19
PERCENTAGE EXPORTED IN PROCESSED FORM <sup>1</sup>	11	26	4.3	18	13	33	5.3	23

1 Includes only wood exported as sawwood, veneer and plywood

temperate hardwood products. Several other companies are urging their suppliers to obtain material only from forests which the authorities certify are under sustained yield management timber production.

A conference on "The Future of the Tropical Rain Forest", held by the Oxford Forestry Institute on the 27th and 28th of June 1988, supported a resolution urging that "national governments and bilateral and multilateral agencies introduce guidelines and/or legislation that would ensure that all tropical hardwood timber entering the export trade be derived from forest resources that are operated under a sustained-yield harvesting/management system, the terms and conditions of which will be drawn up by government forest services in consultation with non-governmental organizations and conservation groups."

This resolution was supported by all participants of the conference, including the British Timber Trade Federation (TTF), which stipulated that such a move be imposed at an international level and coordinated by the International Tropical Timber Organization (ITTO).

The timber using industries will most certainly experience substantially increasing raw material costs in the future, as they are compelled to obtain more of their supply from sustainably managed forests and pay the cost of that management, and as the availability of timber from land clearing operations become less abundant.

Producing countries are intensifying their efforts to conserve the resource basis and introduce or expand management of hardwood resources with a view to protecting the environment and guaranteeing long term supply and survival of the hardwood based industry. Noteworthy developments in this area are:

- Several producing countries (Philippines, Ghana, Indonesia) have increased or are in the process of increasing royalties and fees so that they more closely reflect the real forest rent;



- Ghana's commitment to a US\$ 54.8 million forest resource management project, launched in October 1988, to be completed in 1996, and implemented with assistance from the World Bank, United Kingdom and Denmark;
- The Government of the Philippines has announced an export ban for sawnwood to take effect on 1st July 1989 as means of encouraging value-added industries; the ban is expected to affect exports of nearly 500 000 m<sup>3</sup> of Philippine lumber, mostly white lauan;
- Brazil launched a major environmental program to improve forest protection and promote sustainable management;
- The Indonesian Government is considering reducing the annual allowable cut and encouraging the private sector to engage in reforestation. The Government has also imposed a modified system of export duty on lumber that will increase the revenue from the forest sector;
- The Government of Thailand imposed a nationwide logging ban in November 1988 after investigations had established links between the severe flooding and landslides and uncontrolled timber harvesting.

## 2. PRODUCTION

### 2.1 Logs

World supply of tropical hardwood sawlogs and veneer logs reached 149.6 million m<sup>3</sup> in 1987, an increase of 1.9 percent over the previous year. (Table 2). In contrast, the world supply of sawlogs and veneer logs of coniferous and temperate hardwoods rose to 729.6 million m<sup>3</sup> (5.4% over 1986) and 137.1 (0.73% over 1986).

TABLE 2: PRODUCTION OF TROPICAL HARDWOOD VENEER AND SAW LOGS  
(m<sup>3</sup>)

	1980	1985	1986	1987
<b>AFRICA</b>	17 463 000	16 662 400	16 369 600	15 757 949
<b>ASIA/PACIFIC</b>	83 621 008	80 602 008	86 058 000	89 224 304
<b>LATIN AMERICA/CARIBBEAN</b>	28 040 900	28 789 600	44 400 600	44 595 600
<b>TOTAL FOR 3 REGIONS</b>	129 124 908	126 054 008	146 828 200	149 577 853

Source: FAO AGROSTAT Database

Tropical hardwood producing countries increased their share of total world production of hardwood logs by 0.3 percentage points between 1986 and 1987, as shown in Table 3. The total increase is due to higher production in the Asian/Pacific region, while Africa and Latin America/Caribbean decreased their contributions to total production.

TABLE 3: PERCENT SHARE OF TROPICAL TIMBER PRODUCING REGIONS IN  
WORLD PRODUCTION OF HARDWOOD VENEER AND SAW LOGS

	1980	1985	1986	1987
<b>AFRICA</b>	6.4	6.51	5.8	5.5
<b>ASIA/PACIFIC</b>	31.78	31.47	30.4	31.1
<b>LATIN AMERICA/CARIBBEAN</b>	10.66	11.24	15.7	15.6
<b>TOTAL FOR 3 REGIONS</b>	48.84	49.22	51.9	52.2

Source: FAO AGROSTAT Database  
ITTO Forecasting Enquiry Database

Favorable overall economic conditions and new housing construction at near-peak level in several developed countries fueled demand for timber products and affected production of temperate logs as well as of tropical logs. Tropical logs failed to increase significantly their share of the total production because of the limited supply of logs from concessions in Indonesia (where production decreased by 8%) and in some African countries, and because of stagnant or declining domestic consumption in the Latin American/Caribbean producing countries, which do not export logs. Malaysia was the only large tropical hardwood log producer to increase substantially output in 1987; its production rose

by 17% to approximately 35 million m<sup>3</sup> in response to robust demand by Asian/Pacific importing countries, particularly Japan, Republic of Korea and the Province of Taiwan. Output from the States of Sabah and Sarawak grew by 25 and 9% respectively, reaching 12.3 and 12.5 million m<sup>3</sup>. Peninsular Malaysia's output increased 20% to 10.3 million m<sup>3</sup>.

Preliminary data available for selected ITTO producing countries (see Appendix, Table 9) indicate that production of tropical hardwood sawlogs and veneer logs may have declined by as much as 5% in 1988 from the 1987 level, reaching approximately the same level as in 1986. This reduction in production is the result partly of lower outputs from Malaysia and Indonesia, reflecting lower demands in the Asian/Pacific importing markets, and partly of poor logging conditions following heavy rain in the dry season in important producing areas in the region.

In the Latin America/Caribbean region, production of tropical hardwood logs remained nearly unchanged in 1987 compared to the previous year's, at around 31 million m<sup>3</sup>. The industry continued to be affected by adverse economic conditions, and consequent stagnant internal demand, in major producing countries. Preliminary data available for several ITTO Producing Members in the region indicate only slight growth in 1988 over 1987 production volumes (see Appendix, Table 9).

Production of tropical hardwood logs in Africa decreased to 15.8 million m<sup>3</sup> in 1987, the lowest level since 1976. Production in Africa is expected to stagnate or even decline further because the more accessible forests have been logged, and, more importantly, because of the adoption of measures to better control logging concessionaires and enforce appropriate forest management which often result in reduced harvested volume.

Nigeria, the largest African producer, accounts alone for about 35% of Africa's production. ITTO Member countries in the region accounted for 49.5% (7.8 million m<sup>3</sup>) of total regional production in 1987, down from 51.2% (8.6 million m<sup>3</sup>) in 1986. Production fell because of a decline of over 1 million m<sup>3</sup> in the supply from Côte d'Ivoire, which was only partially offset by higher production in Ghana

and Liberia (respectively 307 000 and 270 000 m<sup>3</sup> more than in 1986). Among ITTO Members in the region, Cameroon has now the largest production; around 2 million m<sup>3</sup> per year. Available data for Cameroon, Côte d'Ivoire and Ghana indicate that production in 1988 remained at approximately the same level as in 1987.

## 2.2 Sawnwood

World production of hardwood sawnwood reached 125.6 million m<sup>3</sup> in 1987. Tropical sawnwood hardwood manufactured in log producing countries accounted for 46% of total world sawn hardwood output, 0.2 percentage points more than in 1986. Table 4 shows that the production of tropical sawn hardwood in the three producing regions increased from 55.9 million m<sup>3</sup> in 1986 to 58.1 million m<sup>3</sup> in 1987. It is estimated that in 1987 an additional volume of 6.1 million m<sup>3</sup> of tropical sawnwood was produced in log importing countries, mainly in Asia - China, Hong Kong, Japan, Republic of Korea and Singapore - but also in Western Europe -France, Federal Republic of Germany, Greece, Italy and Spain. Production in these countries is declining because of decreasing availability of high quality tropical logs for import. In most of these consumer countries, the lower availability of locally produced tropical sawnwood is partially offset by higher imports of tropical sawnwood, mainly from the Asia/Pacific region, and by an increasing shift of demand towards locally produced and imported temperate timbers. Appendix, Table 9 shows production of individual ITTO Producing Members for 1986 and 1987.

TABLE 4: PRODUCTION OF TROPICAL HARDWOOD SAWNWOOD  
(m<sup>3</sup>)

	1980	1985	1986	1987
<b>PRODUCING REGIONS</b>	42 569 400	50 098 550	55 948 506	58 082 738
<b>AFRICA</b>	5 075 900	5 434 750	5 529 950	5 718 738
<b>ASIA/PACIFIC</b>	24 883 100	30 635 000	30 943 000	3 289 500
<b>LATIN AMERICA/CARIBBEAN</b>	12 610 400	14 008 800	19 475 556	19 469 000
<b>MAJOR LOG IMPORTING COUNTRIES</b>				6 146 000
<b>EUROPE</b>			836 000	780 000 <sup>1</sup>
<b>JAPAN</b>				2 024 000 <sup>1</sup>
<b>REPUBLIC OF KOREA</b>				1 039 000 <sup>1</sup>
<b>THAILAND</b>				135 000 <sup>1</sup>
<b>CHINA</b>				2 130 000 <sup>1</sup>
<b>HONG KONG</b>				305 000 <sup>1</sup>
<b>INDIA/PAKISTAN</b>				513 000 <sup>1</sup>
<b>OTHERS</b>				1 000 000 <sup>1</sup>

<sup>1</sup> ITTO's Secretariat estimates

Sources: - FAO Agrostat Database  
 - Study of the Trade and Markets for Tropical Hardwoods in Europe - ECE/FAO/ITTO  
 - ITTO Forecasting Enquiry Database

Production of tropical sawnwood in the Asia/Pacific region rose 6.3% in 1987 over the 1986 level, mainly due to strong demand in the Asian/Pacific markets. Almost the entire regional expansion was achieved in Indonesia and Malaysia, where outputs were increased by 800 000 m<sup>3</sup> (11% over 1986) and 829 000 m<sup>3</sup> (15.0% over 1986) respectively.

Indonesia is effecting a restructuring of the sawmilling industry, allowing only companies with both forest concessions and sawmills to export, and encouraging smaller units to merge into large groups. This restructuring is part of an effort to increase the annual exports of sawnwood from around \$ 400 million (1987) to around \$ 1 billion.

Production of machined lumber in the Asia/Pacific region is also expected to continue to rise. Moulding capacity is increasing fast in Indonesia and Malaysia, with many new planning and moulding mills coming on stream in both countries. The increased capacity for further processing in the region is likely to decrease availability of rough sawn timber for export, particularly of ramin which will increasingly be machined locally.

Hardwood sawnwood production in the Latin American/Caribbean region totaled 19.5 million m<sup>3</sup> in 1987, approximately the same volume as in 1986. In spite of growing demands by export markets, the region failed to increase its output. Overall domestic consumption remained nearly unchanged because construction and furniture markets have been constrained by the very modest, and in some cases even negative, economic growth. The region's production in 1988 is expected to be of the same order as in 1987, and major producing countries in the region, such as Brazil and Peru, report production outputs very similar to those of 1987 (see Appendix, Table 9).

The production of tropical sawnwood in Africa rose to 5.7 million m<sup>3</sup> in 1987, which is 2.9% higher than in 1986. This total production figure is a rough estimate only, as detailed production data for 1987 are still not available and the higher production indicated for 1987 is questionable as it is the result of an as yet unconfirmed jump in Liberia's output, from 91 000 to 311 000 m<sup>3</sup>. African production data for 1988 were, when this draft was prepared, available for Cameroon, Côte d'Ivoire and Ghana only, and indicate a drop in output of over 200 000 m<sup>3</sup>, or 15% of the production reported for 1987.

Rubberwood is contributing considerably to the supply of tropical sawnwood. In Thailand the annual supply of rubberwood logs is estimated at 3 million m<sup>3</sup>, and in Malaysia the supply of sawn rubberwood logs is estimated as 1.5 to 2.0 million m<sup>3</sup> annually. In Malaysia rubberwood is utilized especially for furniture, but export of rubberwood sawnwood is rapidly increasing, and reached some 238 700 m<sup>3</sup> in 1987.

### 2.3 Veneer

Total world production of veneer<sup>1/</sup> sheets of coniferous and - hardwood species reached 5.1 million m<sup>3</sup> in 1987, approximately 7% more than in 1986. Tropical timber producing countries reported a total veneer production for 1987 of nearly 1.5 million m<sup>3</sup>, or approximately

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<sup>1/</sup> Available statistics on veneer production most often do not distinguish hardwood veneer from softwood veneer nor sliced veneer from peeled veneer.

4% higher than the production achieved in 1986. As shown in Table 5, the Asia/Pacific region accounts for 45% of all veneer manufactured in tropical timber producing countries, and nearly all of the tropical veneer production expansion in 1987 took place in Malaysia where the output rose from 515 000 m<sup>3</sup> to 558 000 m<sup>3</sup>.

TABLE 5: WORLD PRODUCTION OF VENEER SHEETS  
(m<sup>3</sup>)

	1980	1985	1986	1987
<b>TROPICAL TIMBER PRODUCING REGIONS</b>	1 424 604	1 589 604	1 461 004	1 517 004
<b>AFRICA</b>	424 100	451 400	463 700	465 500
<b>ASIA/PACIFIC</b>	650 504	782 904	636 904	679 904
<b>LATIN AMERICA/CARIBBEAN</b>	350 000	355 300	360 400	371 600
<b>WORLD</b>	4 438 004	4 836 304	4 792 054	5 134 054

Source: FAO AGROSTAT Database

Brazil in Latin America/Caribbean and Côte d'Ivoire in Africa contributed 63 and 36% respectively to total veneer production of their regions in 1987. A large proportion of the veneer production in these two countries was, as in Malaysia, directed towards export markets.

A large volume of tropical veneer is produced also in log importing countries, particularly in Europe, where in 1986 about 485 000 m<sup>3</sup> of tropical logs were sliced into 255 000 m<sup>3</sup> of veneer. The declining availability of tropical logs for import into Europe and the size of the veneer market there would indicate excellent opportunities for the tropical timber producing countries to expand their veneer production for export to that market. However, the tropical veneer consumption in Europe has fallen by 37% since 1986, which may be the result of a shift towards veneer of temperate species, either imported directly or sliced from domestic or imported temperate hardwood logs.

In contrast to the large volume of tropical sliced veneer produced in Europe, the production of sliced veneer from tropical timber in Japan is rather modest. It was 29 500 m<sup>3</sup> in 1987, 15% more than in 1986.

## 2.4 Plywood

Total world production of tropical plywood was 20.7 million m<sup>3</sup> in 1987. The contribution of tropical timber producing countries to world plywood output rose from 9.9 million m<sup>3</sup> in 1986 to 11.3 million m<sup>3</sup> in 1987. Most of the production increase is accounted for by higher outputs in Indonesia and Malaysia. Plywood production from imported hardwood logs in Japan, Republic of Korea, Singapore and Province of Taiwan, which, up to 1987, had followed a declining trend, rose by an estimated 6.1% in that year over 1986 outputs. Production of tropical plywood in the various regions is shown in Table 6.

In spite of apparent increase in consumption of plywood in Japan, the local plywood factories are not expanding capacity; some of the larger mills are actually implementing programs of voluntary production reduction. The Japanese apparent consumption of tropical plywood in 1988 was 400 000 m<sup>3</sup> higher than in 1987 which may be accounted for by increase in stock. The increase in demand was met by imported tropical plywood, while the production of the local plywood industry remained at nearly the same level as in 1987.

The production of tropical plywood in producing countries of the Asia/Pacific region amounted to 8.8 million m<sup>3</sup> in 1987, or 42.5% of total world output. Indonesia, the world leading producer, increased its output from 5.7 million m<sup>3</sup> in 1986 to 6.1 million m<sup>3</sup> in 1987, and preliminary estimates indicate a production of 6.8 million m<sup>3</sup> in 1988.



TABLE 6: WORLD PRODUCTION OF TROPICAL PLYWOOD  
(m<sup>3</sup>)

	1980	1985	1986	1987
<b>PRODUCING REGIONS</b>	4 284 391	8 176 623	9 915 930	11 341 936
<b>AFRICA</b>	368 791	441 823	478 323	476 286
<b>ASIA/PACIFIC</b>	2 517 200	6 307 000	7 524 000	8 788 000
<b>LATIN AMERICA/CARIBBEAN</b>	1 398 400	1 428 800	1 913 607	2 077 560
<b>JAPAN</b>			6 550 310	7 047 971
<b>REPUBLIC OF KOREA</b>			892 364	1 000 877
<b>PROVINCE OF TAIWAN</b>			222 008	228 085
<b>EUROPE</b>			1 135 999 <sup>1</sup>	1 060 000 <sup>2</sup>
<b>TOTAL</b>			18 716 812	20 678 869

<sup>1</sup> Includes also plywood with some degree of non-tropical veneer.

<sup>2</sup> ITTO's Secretariat estimate; includes also plywood with some degree of non-tropical veneer.

- Sources: - FAO AGROSTAT Database  
 - ITTO's Secretariat estimates based on data of Japanese Plywood Industries Association  
 - ITTO's Secretariat estimates based on data of Korean Plywood Industries Association  
 - ITTO's Secretariat estimates based on data of Inspectorate General of Customs, Taiwan, Province of China  
 - ITTO Forecasting Enquiry Database

Indonesia's relatively modest domestic requirements - only 1.55 million m<sup>3</sup> in 1988 - coupled with a need to tailor plywood exports to limits consistent with price stability on the world market, will most probably slow down further expansion of the country's plywood manufacturing capacity. Indonesia is, according to reports, already planning to limit its plywood export to traditional markets to a total of 3.3 million m<sup>3</sup> in 1989, of which 800 000 m<sup>3</sup> will go to the United States, 400 000 to Western Europe, 400 000 m<sup>3</sup> to Middle Eastern countries, 600 000 m<sup>3</sup> to China, 300 000 m<sup>3</sup> to the Province of Taiwan, 300 000 m<sup>3</sup> to Hong Kong and 150 000 m<sup>3</sup> to Singapore. In the total is included an additional volume of 350 000 m<sup>3</sup> of blockboard which will be exported to these markets.

The growth of the Indonesian plywood industry in the last couple of years has been strongly linked to the development of its export to Japan. Indonesia plywood exports increased from 4.6 million m<sup>3</sup> in 1986 to 5.7 million m<sup>3</sup> in 1987 and to 6.1 million in 1988. Japan has received most of this expanded export and has increased its imports

from 0.52 to 1.37 million m<sup>3</sup> in 1987 and to 1.82 million m<sup>3</sup> in 1988. The growth of the import to Japan has been fueled by a high level of housing starts, which averaged over 1.6 million units in the last couple of years. Japan is expected to further increase its plywood imports from Indonesia to 2.4 - 2.5 million m<sup>3</sup> in 1989.

Plywood production in Malaysia can be expected to continue to expand in the near future. The Government has established an Industrial Adjustment Fund to promote downstream processing and the older plywood mills can obtain support from this Fund to modernize and diversify their manufacturing. On the other hand, there are fears that future growth may slow down because of shortage of white timber for face veneer. The Malaysian Plywood Manufacturer's Association has called for a ban of export of white meranti and mersawa and for a move towards a total ban on all log exports. In 1987 Malaysian veneer and plywood exports increased by 61% in volume and 72% in value compared to 1986. Malaysia is second only to Indonesia in tropical plywood exports, and volumes to be traded in 1989 are expected to reach new records, benefitting from expanding demand in the traditional markets of the United Kingdom and Singapore, as well as from emerging markets in China and Hong Kong.

Several new plywood plants are being built in Sabah and Sarawak. In the latter, 7 plants under construction and 7 in the planning stage are expected to increase plywood supply by 300 000 m<sup>3</sup> annually.

The Latin American/Caribbean plywood industry set a new production record in 1987 of approximately 2.1 million m<sup>3</sup>. The production expansion was mainly due to increased outputs in the Brazilian plywood industry where production grew from under 1 million m<sup>3</sup> in 1985 to 1.4 m<sup>3</sup> in 1986 and to an all time high of 1.5 million m<sup>3</sup> in 1987 in response to external demand. About 40 of the approximately 200 Brazilian plywood mills are located in the Amazon region. These plants, now accounting for about 30% of the national production, are increasingly diversifying their raw material sources, particularly utilizing a wider range of species from upland forest areas.

Preliminary reports for 1988 indicate that the Brazilian plywood industry may have reduced production by 25% in that year compared to 1987, as a result of a decline in construction and lower demand by furniture industries. The sharpest fall in domestic demand apparently originated in the furniture industries, which recorded a decline in output by 25% compared to the 1987 level. Brazilian plywood exports, on the other hand, is estimated to have reached US\$ 120 million in 1988, or 33% higher than in 1987, which partially offsets the drop in revenues from domestic sales.

The African plywood industries maintained a stable annual output of slightly under 500 000 m<sup>3</sup> in 1986 and 1987. Approximately 45% of this volume were contributed by ITTO Producing Members in the region. There is no reason to expect any significant growth in plywood production in Africa in the near future, although some countries might show slight increases, like Côte d'Ivoire which increased output from 44 000 m<sup>3</sup> in 1987 to 53 000 m<sup>3</sup> in 1988.

### 3. TROPICAL TIMBER MARKET REVIEW

#### 3.1 Timber Market Development

##### 3.1.1 Cyclical Development in Trade Flows

By the end of 1987 the recovery in export demand from the early-80's cyclical trough was complete, and on both value and volume bases the aggregates of hardwood logs and sawn hardwood, veneer and plywood had set new highs. As illustrated in Figure 1 and recorded in Table 10, the 1987 total value of net exports of these commodities from the 76 tropical-timber producing countries reached \$ 6 286 million in 1987, up from only \$ 3 983 million in 1985, increasing at an annual rate of 25.0%.

In overall terms the very strong showing of the Asia/Pacific producers led the way in this recovery, their earnings alone amounting to \$ 5 284 million in 1987, up from \$ 3 185 million in 1985. In relative terms, however, from their much smaller export base the gains made by the Latin American producers as a group were fairly impressive. Their 1987 incomes of \$ 324.2 million rose at a 19.2% rate from the \$ 228.0 million of 1985.

The African producers, continuing to feel resource constraints, nevertheless were able to make sales of \$ 678.3 million, an increase rate of 9.04% over 1985's net export value of \$570.5 million. It is to be recognized, however, that these regional aggregates of all tropical timber producing countries, ITTO Members and non-members alike, include a number of countries which are in fact net importers of the timber products covered by the ITTA.

In Figure 2 and Table 11, the corresponding relevant import market providing opportunities for tropical timber products, is narrowly defined in terms of products to include only hardwood logs and sawn hardwood, together with veneer and plywood. This market definition is perhaps too narrow in view of the ease of substitution, particularly between utility-grade coniferous and tropical hardwood products. The species composition of demand is examined below.

Even by this more narrow definition of comparable products, however, the increase in import demand of the main consuming countries (including in addition to ITTO Members, Portugal, New Zealand and Singapore) was still more rapid in value terms than the producers' export gains discussed above. These countries together bought \$ 8 119 million in hardwood logs and sawnwood, plywood and veneer in 1987, gaining at an annual rate of 28.5% over their 1985 purchases of \$ 4 916 million.

The overall value is somewhat reduced on the net-trade basis by the presence of three countries in the consumers' aggregate which are in fact significant net exporters even of this narrowly-defined product group. The weight of Singapore as a re-exporter is felt particularly in the Asia/Pacific region, nevertheless the very strong growth of demand in this region reached \$ 4 250 million in 1987, up 36.8% per year from the depressed level of \$ 2 271 million in 1985. In 1987 importers of basic tropical timber products to the United States recorded their best year up to then in the decade, that year's \$ 245.8 million value flow representing a 28.6% annualized increase over 1985's \$ 148.6 million. Only slightly off the very robust performances in other regions, Europe's 22.4% annualized growth over

Figure 1

Tropical Producers Net Timber Exports  
(Hardwood Logs & Sawn, Veneer, Plywood)

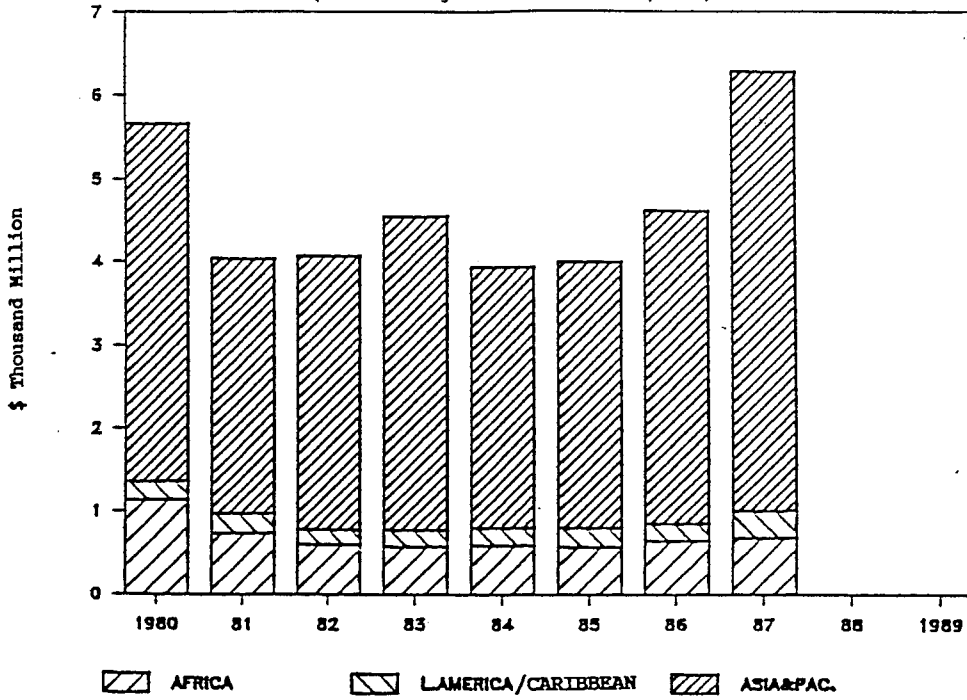
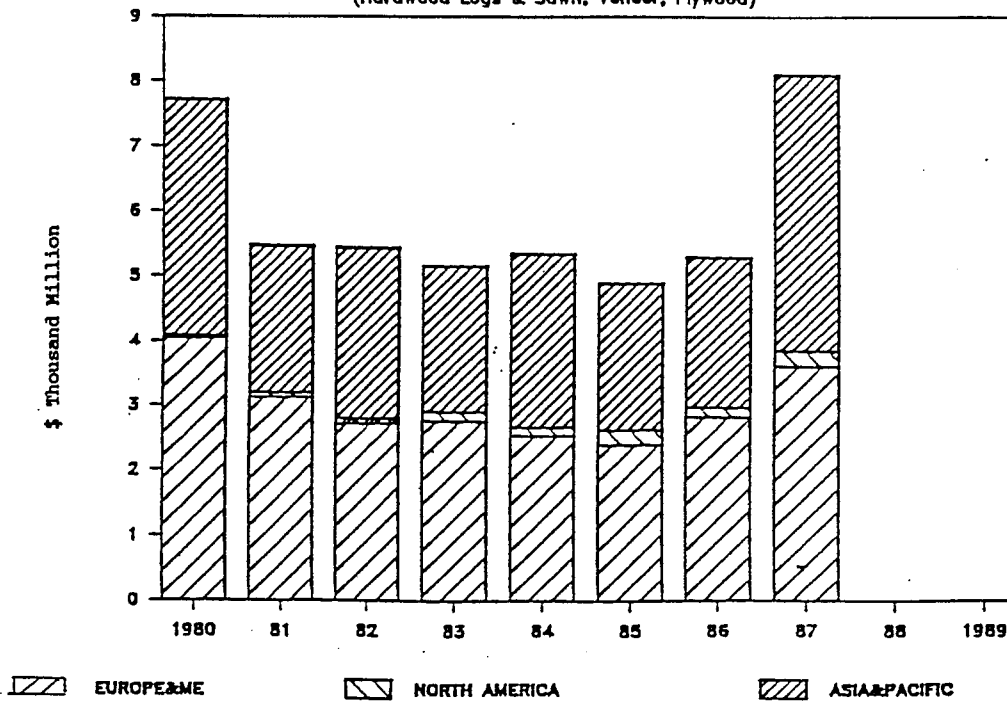


Figure 2

Main Consumers Net Timber Imports  
(Hardwood Logs & Sawn, Veneer, Plywood)



the same two-year period brought its imports to \$ 3 623 million, up from \$ 2 418 million.

### 3.1.2 Home Demand

The international shipments of both rough and processed tropical wood to satisfy consuming-country demands are so much the focus of policy discussion, there is a possibility of losing sight of the relatively greater importance in volume terms, of other sources of demand for tropical forest products. Above all, in the tropical producing countries themselves the gathering of fuelwood continues to account for 83.3% of the total volume of recorded removals of nonconiferous tropical roundwood, as portrayed in Figure 3, and this in itself does not even take into account the large amounts of wood which are burnt in clearing land.

Pulpwood is still relatively little in demand in most of the producing countries, but domestic utilization of timber for sawnwood, veneer, and plywood amounted to 8.7% of the total. This was greater by half than the 5.6% accounted for by export to ITTO and other "consuming" countries in 1987; and more than two times as great as the exports going to ITTO consuming Members.

Although higher-value products tend to be exported, and their role in foreign-exchange earnings justifies the attention paid to development of overseas markets, a complete picture of tropical timber markets must include an examination of demand developments in the producing countries themselves.

In fact as is shown in Figure 4, during the period between 1981 and 1985 when volume imports of tropical timber products by ITTO consumers fell by an average annual rate of 0.9%, from 37.315 million m<sup>3</sup> roundwood equivalent to 35.919 million, volume sales in the domestic markets of the producing countries themselves continued to grow at a steady rate of 4.4% annually, even taking account of the minor retrenchment between 1984 and 1985.

Figure 3  
Sources of Demand for Tropical Hardwood

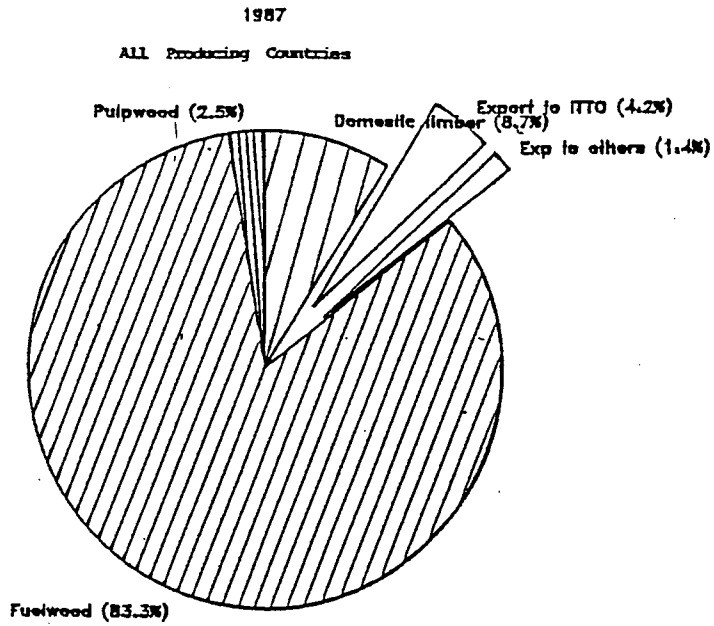
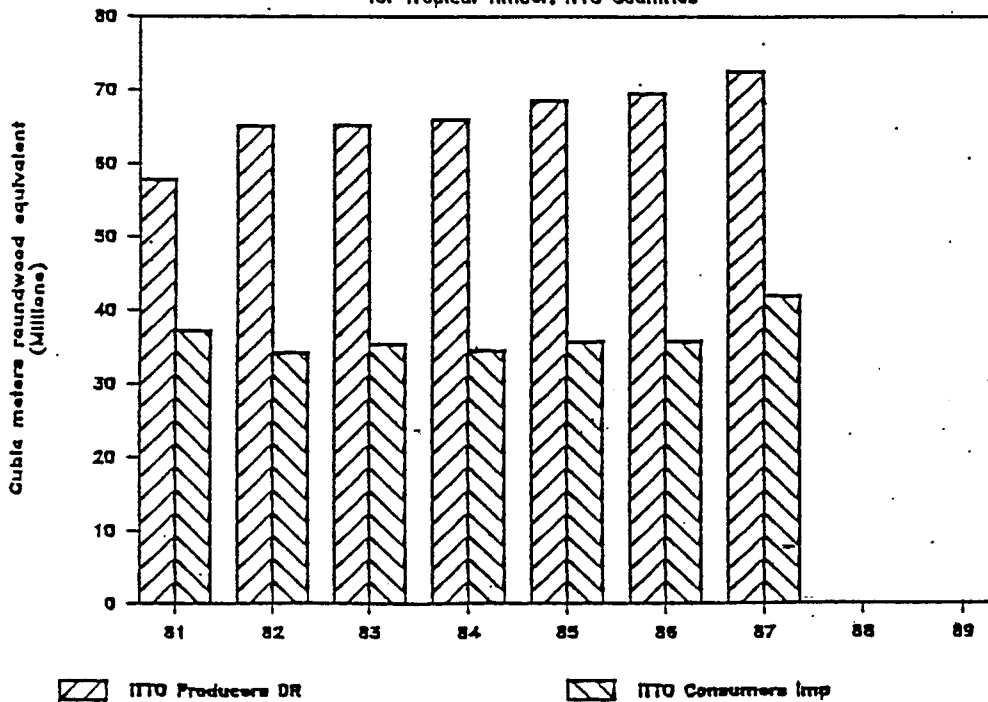


Figure 4  
Domestic Requirements vs Import Demand  
for Tropical Timber, ITTO Countries



### 3.1.3 Producers' Domestic Demand

The strength of the aggregate producers' domestic markets throughout the period of cyclical downturn in export outlets warrants closer examination on a product-by-product basis, as illustrated in Figures 5, 6 and 7 derived from Tables 12, 13 and 14.

Interpretation of developments in domestic requirements for raw materials and intermediate products is in general complicated by the changes in the fraction of the sector's final product which is sold abroad. This is particularly true for sawlogs and veneer logs, and to a lesser degree also for sawnwood and plywood, since some of these materials are incorporated in further-processed products such as furniture.

For this reason it could be expected that the growth in producers' domestic demands for logs, and to some extent also sawnwood and plywood, would be dampened during the downward phase of the export demand cycle. Because of this it is all the more impressive to see the steadiness of growth in domestic requirements for both hardwood logs and sawnwood, which was maintained throughout the 1980-1987 period in all three of the producing regions.

The same pattern can be observed for plywood only for the Asia/Pacific producing countries. In both Africa and Latin America/Caribbean, the development of apparent domestic demand for plywood rather closely follows the export demand cycle as to the timing of peaks and troughs, only the amplitude being weaker. Two alternative explanations for this linkage are plausible, having rather different implications for the development potential of African and Latin American producers' domestic plywood markets. On the one hand, it might be that in some of the countries of these regions, a relatively higher fraction of plywood may be used in further processing of products for export. In such cases domestic plywood use tracking the export demand cycle would be a sign of the industry's health, in spite of the dampening effect of down phases, because of the higher value-added products sold abroad.



Figure 5

### Saw & Veneer Logs Domestic Requirements

ITTO Producers, Hardwood

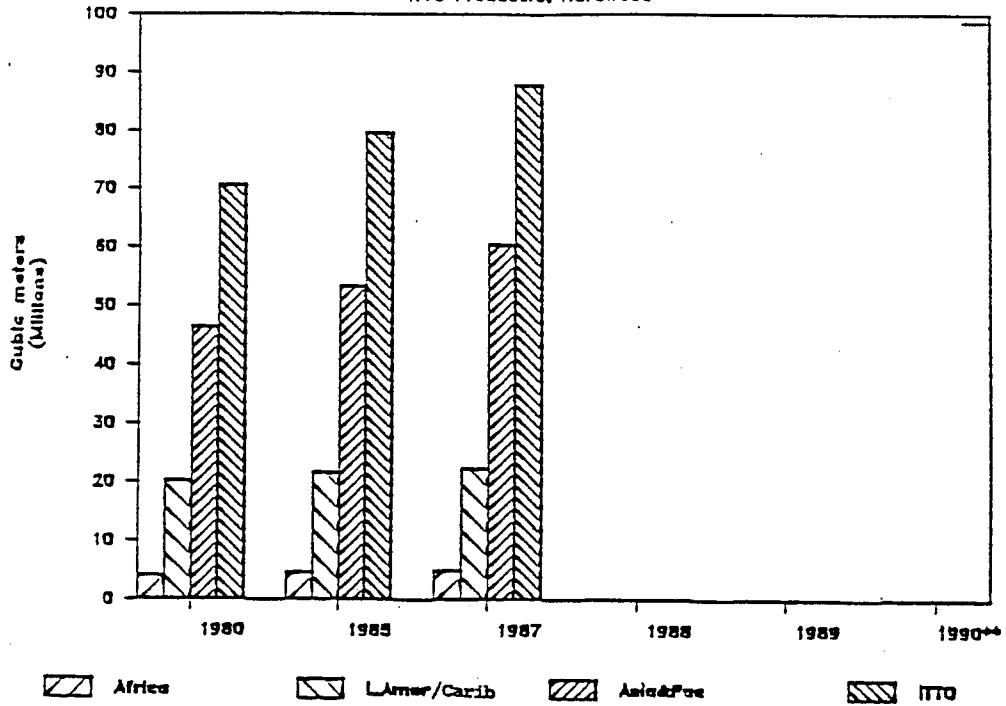


Figure 6

### Sawnwood Domestic Requirements

ITTO Producers, Hardwood

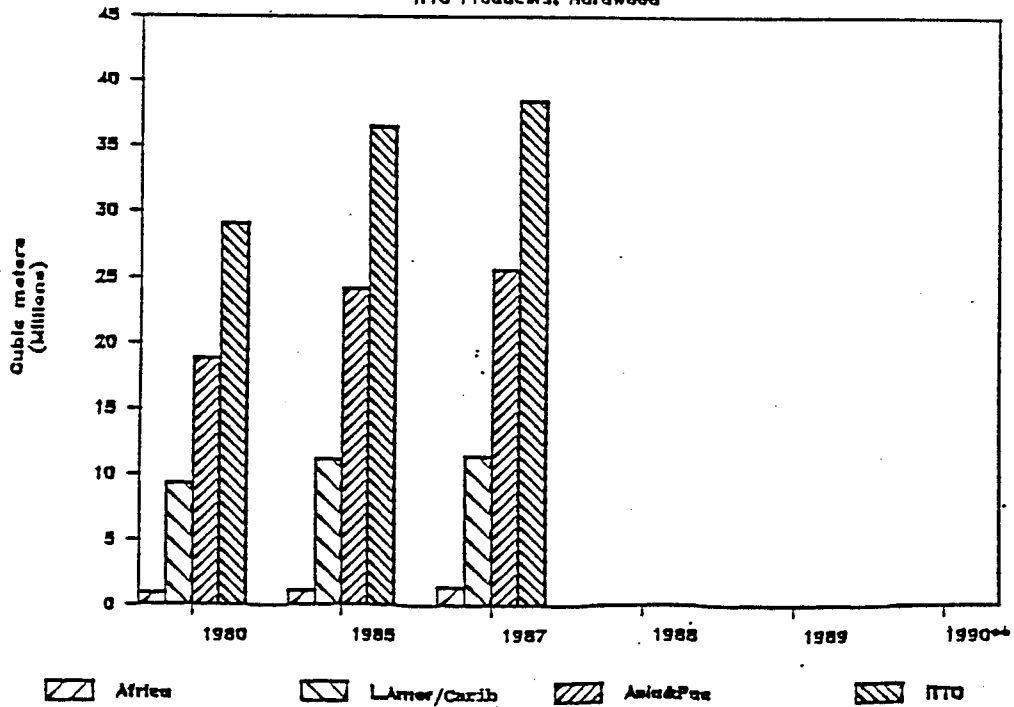


Figure 7

Plywood Domestic Requirements

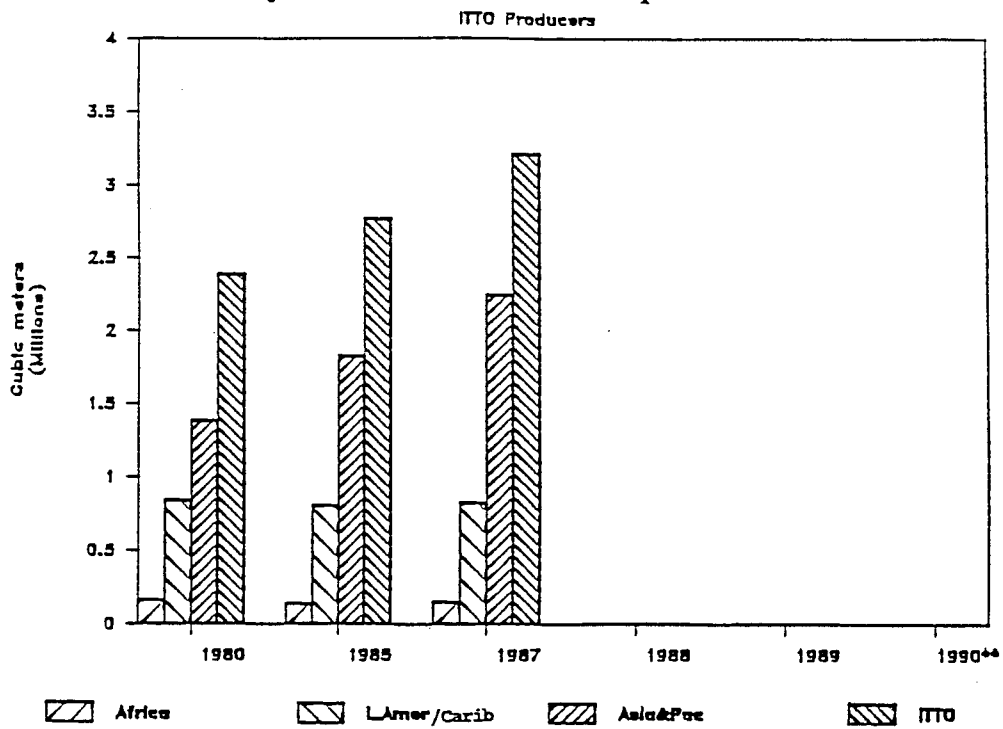
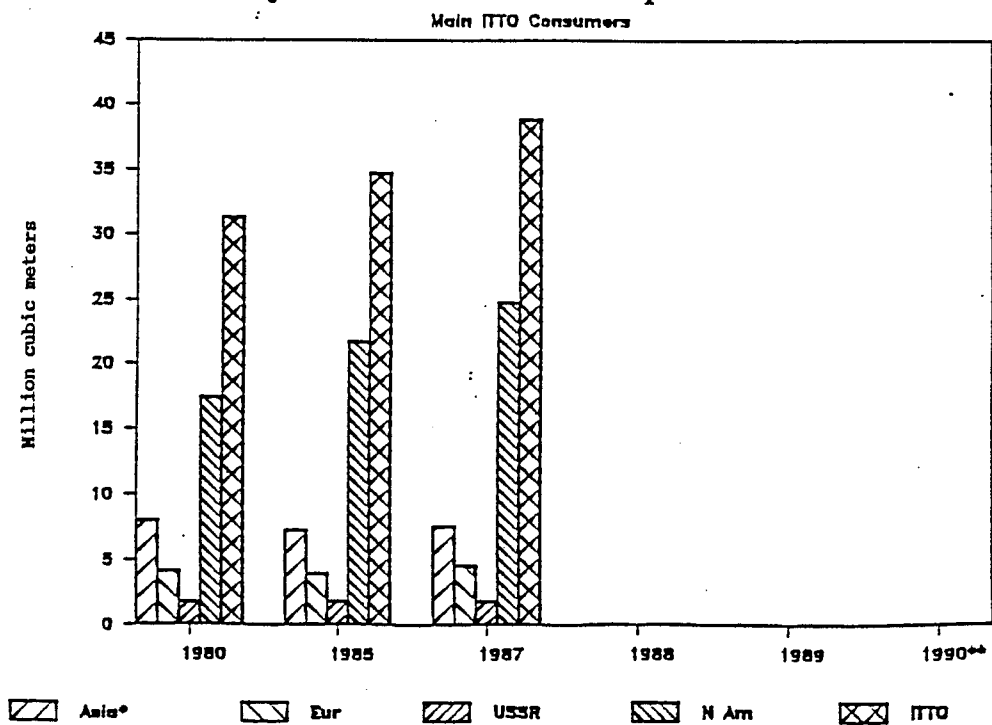


Figure 8

Plywood Domestic Requirements



Alternatively, in other cases it may be that domestic consumption of plywood is geared to the greater availability of low-cost grading culls from the export production lines during periods of peak overseas demand, indicating a higher proportion of domestic usage for low-value utility purposes.

In any case at least up until 1987, the volumes of plywood consumed domestically remained smaller by an order of magnitude than those of sawnwood, in all three of the tropical timber producing regions, and for all ITTO producing countries together remained less than 3.5 million m<sup>3</sup> in 1987.

#### 3.1.4 Consumers Demand

The consuming countries' plywood market is more than ten times larger than the domestic demand of the producers themselves, as seen in Figure 8 and the corresponding details in Table 15. Further penetration of this market is accordingly closely associated with the prospects for finding continued profitable outlet for the current rapid growth in producers' capacities.

From 1980 through 1987 the growth in demand for plywood from all sources, both temperate and tropical and including coniferous as well as hardwood laminates, in the ITTO consuming countries as a group appears to have been steady and rapid, but the aggregate performance is almost wholly accounted for by the growth in the North American market alone.

The European market suffered no important setback and finished modestly higher from its smaller starting base, nearing 5 million m<sup>3</sup> in 1987. The development in the Soviet Union followed much the same pattern. Demand in Japan fell slightly from 1980 to 1985, recovering by 1987 just to its level at the start of the decade, about 8 million cubic meters. In the Soviet Union and in Japan, plywood remains relatively little utilized as a construction material.

With respect to tropical logs, the sharp declines seen in Figure 9 and Table 16 during the 1980-1985 period of market weakness, have not recovered during the rising market since then, largely because of producers' export substitution policies in favor of processed timber. The main importing countries' consumption of tropical roundwood has remained virtually constant since then, particularly in Europe, in Asia/Pacific and for the aggregate of all countries which were reporting prior to ITTO's August 1988 Enquiry.

It is noteworthy that in spite of this virtual stagnation in consumption of tropical timber as roundwood, there has not been an appreciable further loss in the relative market share of tropical hardwood logs versus temperate hardwood and coniferous logs since 1985, as illustrated in Figure 10 and recorded in Table 17 for the aggregate of all the countries tabulated prior to 1989.

After the tropical timber share in total demand for logs fell from 3.9% in 1980 to 2.7% in 1985, it has further weakened only marginally to 2.4% in 1987. Coniferous logs have also recently undergone a barely perceptible loss of market share, only from 84.9 to 84.8% between 1985 and 1987, but this after having risen from 82.0% in 1980 to 84.9% in 1985. Temperate hardwood logs recovered slightly, from 12.4 to 12.9% from 1985 to 1987, after having fallen from a 14.1% market share in 1980.

For comparing developments in sawn hardwood, Figures 11 and 12 are presented, also based on Tables 16 and 17 respectively. The market share of temperate sawn hardwood in the consuming countries' domestic requirements has remained exactly constant at 13.03% from 1985 to 1987 after falling from 15.8% in 1980.

The small relative loss by coniferous sawnwood from 85.8% in 1985 to 85.3% in 1987, after a rise from 83.0% in 1980, has been just matched by an increase in tropical sawn hardwood's market share from 1.22% in 1985 to 1.62% in 1980, continuing an increase from 1.17% in 1980.

Figure 9

Saw & Veneer Logs Domestic Requirements

Main ITTO Consumers, Tropical Hardwood

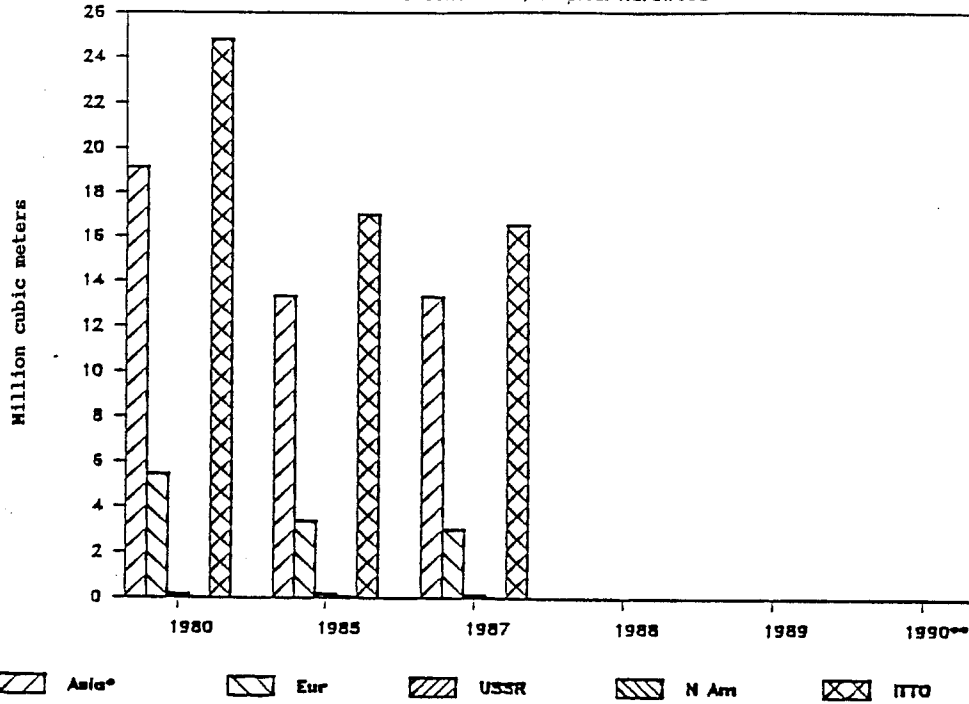


Figure 10

Log Consumption by Species Groups

Main ITTO Consuming Countries

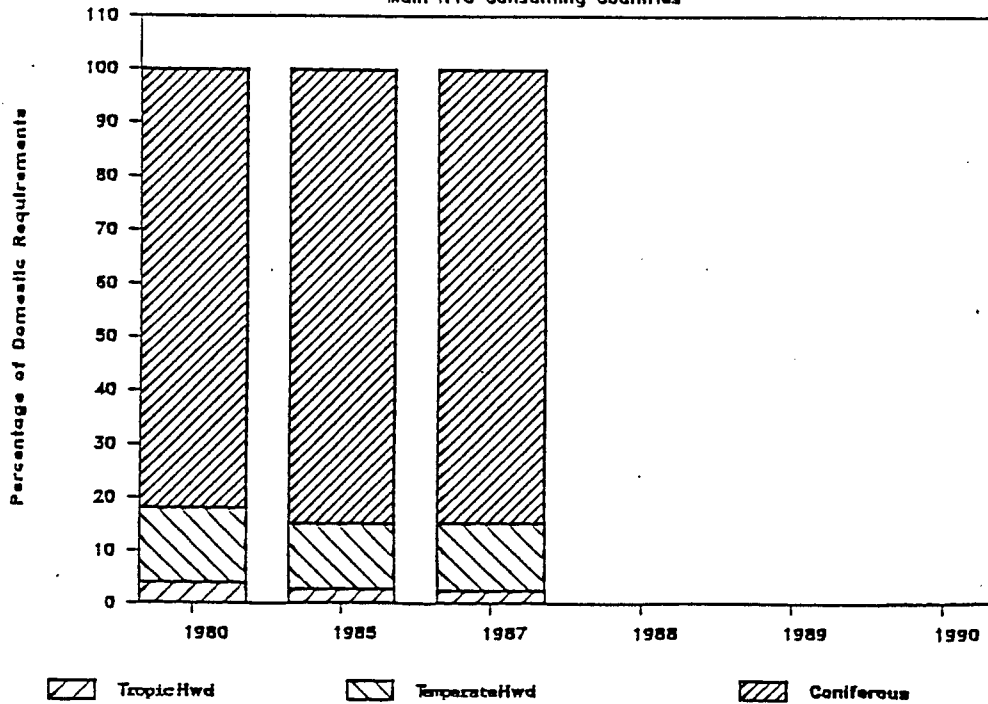


Figure 11

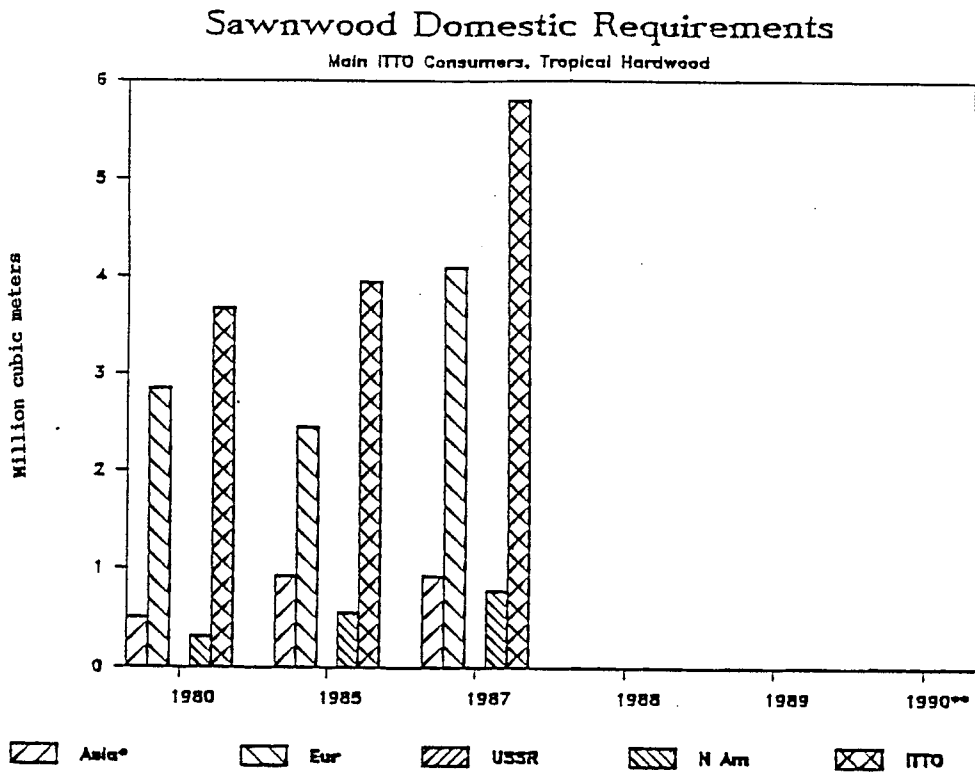
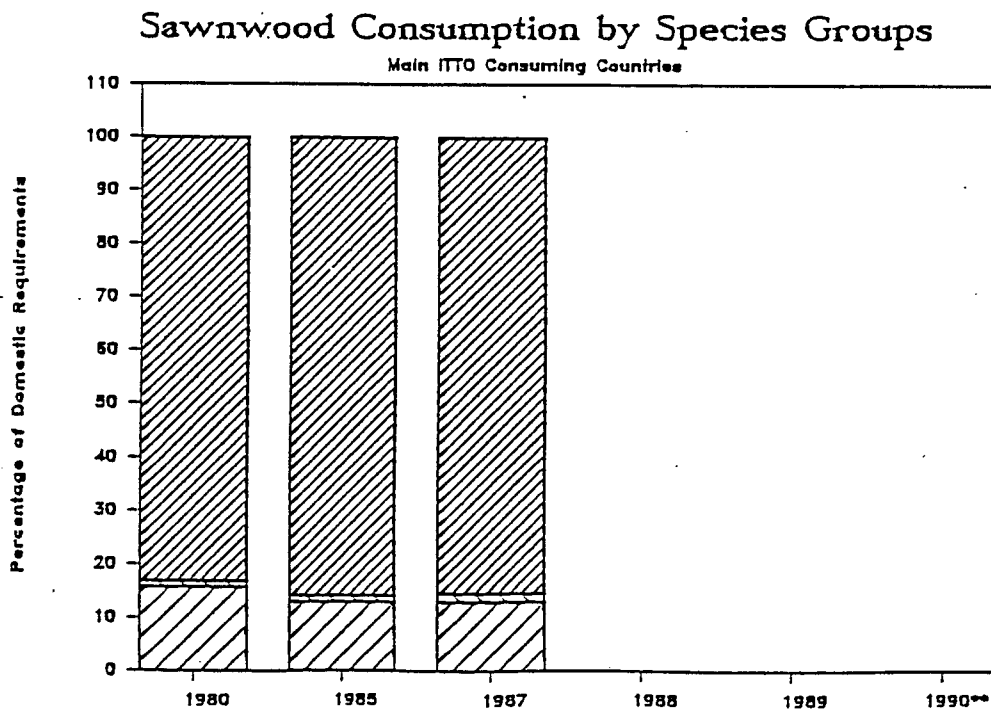


Figure 12



For some consuming countries, particularly those with large populations relative to their own domestic forest resource base, the tropical timber shares, both in sawnwood and in log consumption, have for some time been much larger than the all-reporting-country aggregate shares discussed above. In the case of sawlogs and veneer logs, six of the reporting countries still depended on tropical hardwoods for more than 5% of their domestic requirements in 1987: Japan at 26.4%, Greece at 20.5%, the Netherlands at 12.9% and Italy at 10.0%; Spain 8.9% and Portugal at 8.1%.

In terms of absolute volumes, the total tropical-log imports of these important consuming countries remained at almost 16.5 million m<sup>3</sup> in 1987, which represented a sharp drop from the 25.8 million m<sup>3</sup> of 1980.

Similarly, in the sawnwood market there were eight countries in 1987 with more than 5% tropical-timber shares of their domestic markets though the list differs: the Netherlands 19.7%, Belgium and Luxembourg 10.8%, Greece 9.7%, France 8.9%, Ireland 8.1%, Spain 6.8%, and the United Kingdom 6.6%.

### 3.2 Prices and Market Shares

#### 3.2.1 Movements in International Prices

Along with the trade volume fluctuations discussed above, international trade prices for tropical timber and closely-competing products also display pronounced cyclical tendencies. The statistics compiled in Tables 18- 25, and portrayed in Figures 13 - 20 are export unit values calculated from trade volume and value data for each product over the 76 tropical timber producing countries.

The amplitudes of their cyclical movements suggest that they would be reasonable indicators for annualized volume-weighted average prices of these broad product groups over the same set of countries in aggregate, although the individual-country unit value series display greater volatility and would have to be interpreted with more caution.

Figure 13

### Tropical Log Export Unit Values

Exports from ITTO Producing Countries

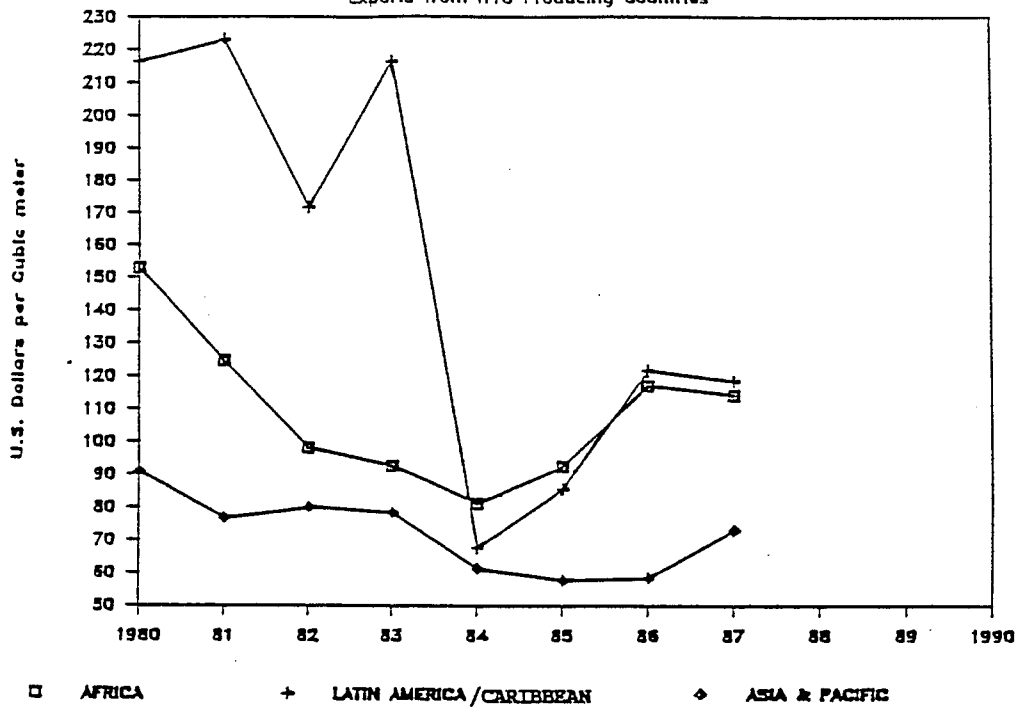
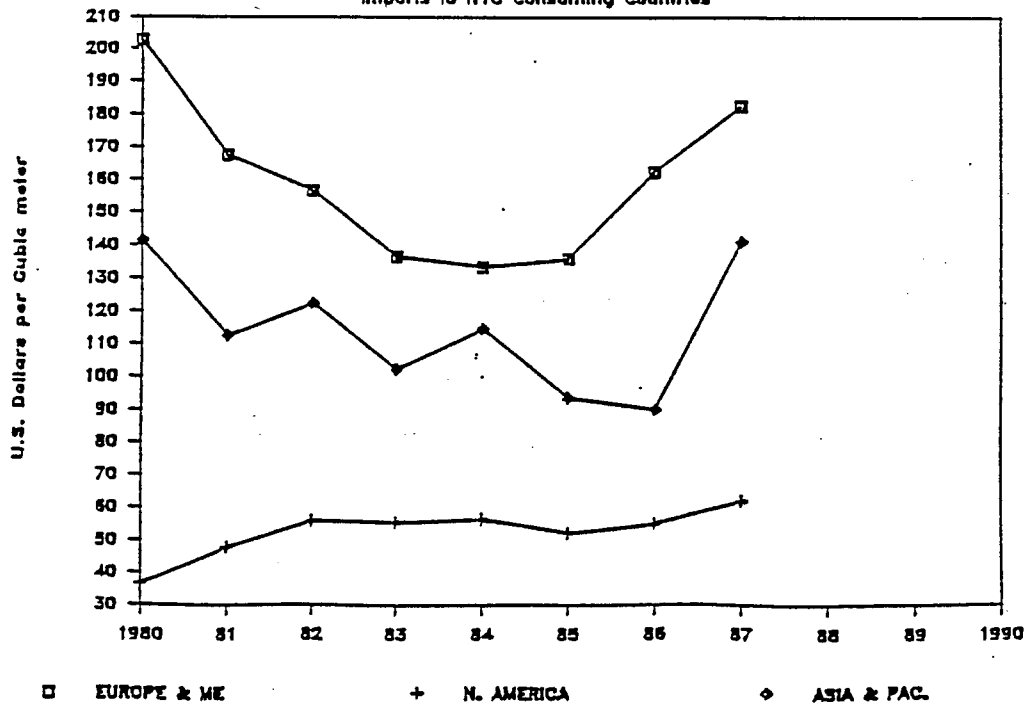


Figure 14

### Hardwood Log Import Unit Values

Imports to ITTO Consuming Countries





In addition to exploring the potential usefulness for econometric estimation of timber supply and demand relationships, the presentation of these series here is intended to serve as a background for discussants of the particular national and regional experiences and expectations with respect to detail transactions.

With respect to the ITTO producers' log export prices, one of the most striking features of Figure 13 is the close tracking of African log unit values by those from Latin America/Caribbean in the several years just prior to the first Forecasting Enquiry period.

Consumers' log import prices portrayed in Figure 14 escalated sharply from 1985 to 1987 for both European and Asia/Pacific buyers, and although the calculated unit-value series include temperate as well as tropical hardwood logs, to a significant degree this evolution must reflect the effect of recently-emplaced producers' log export regulatory policies interacting with rising demands. The upturn in North American import unit values over the same period was more modest, a reasonable observation among other reasons because of that region's greater domestic hardwood log production possibilities.

Striking increases between 1985 and 1987 have been experienced in both tropical and total sawn hardwood trade prices illustrated in Figures 15 and 16, reflected in the export as well as the import unit value series for all regions. On the producers' side a noteworthy feature is the breaking-away in 1987, of the African export unit values from the Asian/Pacific series, having followed each other closely since 1983.

In the case of veneer sheets as shown in Figure 17 it is again the African and Latin American producers' unit value series which appear to be on convergent paths, although wide differentials persist on both the producing and consuming (Figure 18) sides of the market, inter alia reflecting the different mixes of decorative species in the trade of each region.

Figure 15

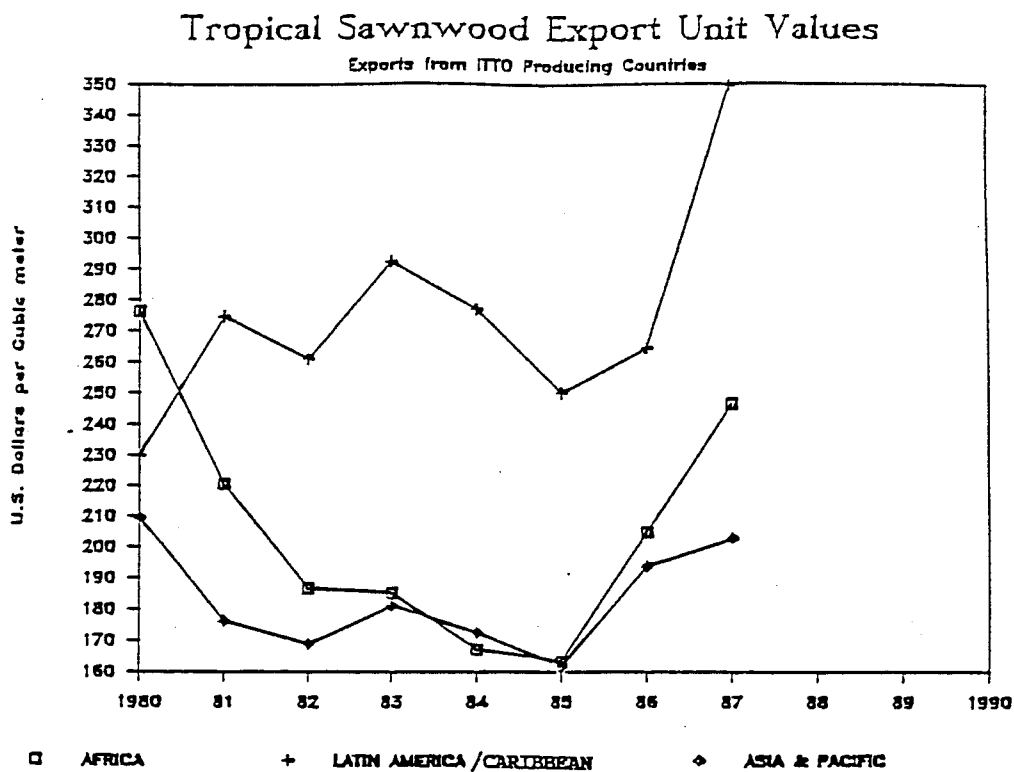


Figure 16

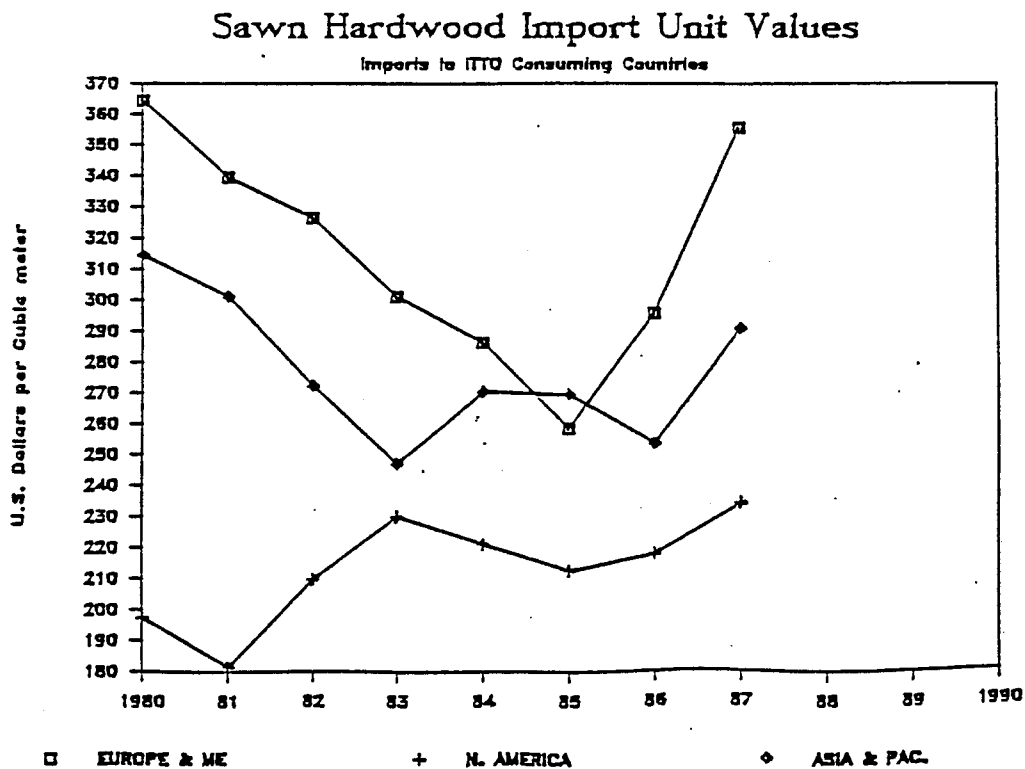


Figure 17

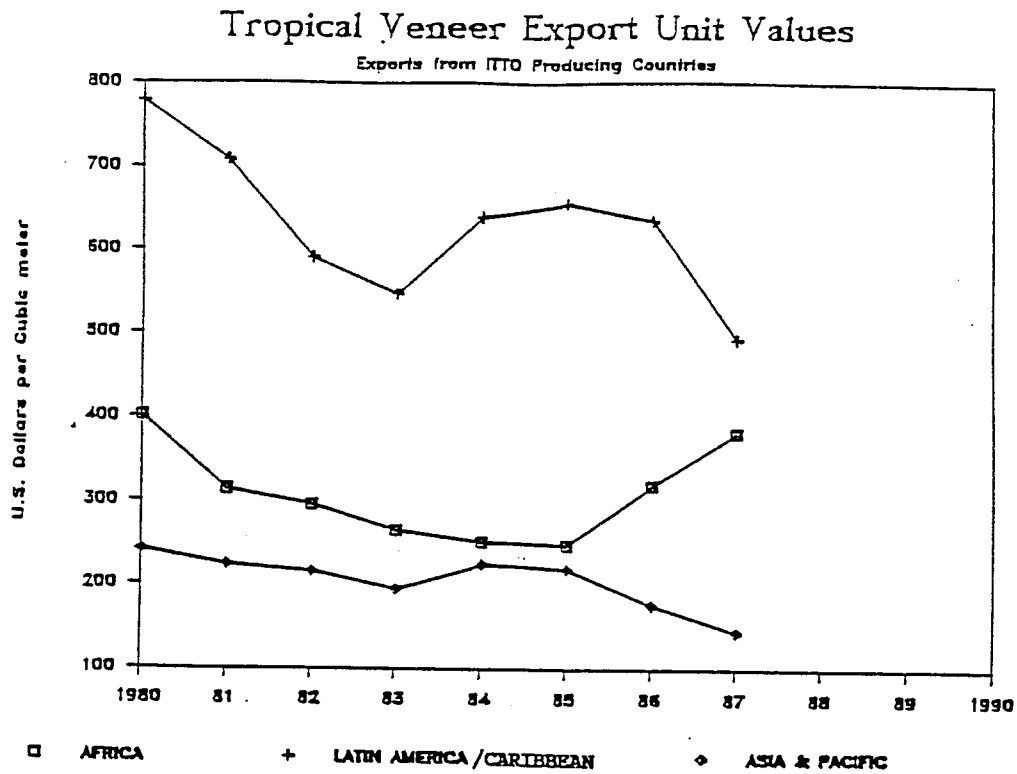


Figure 18

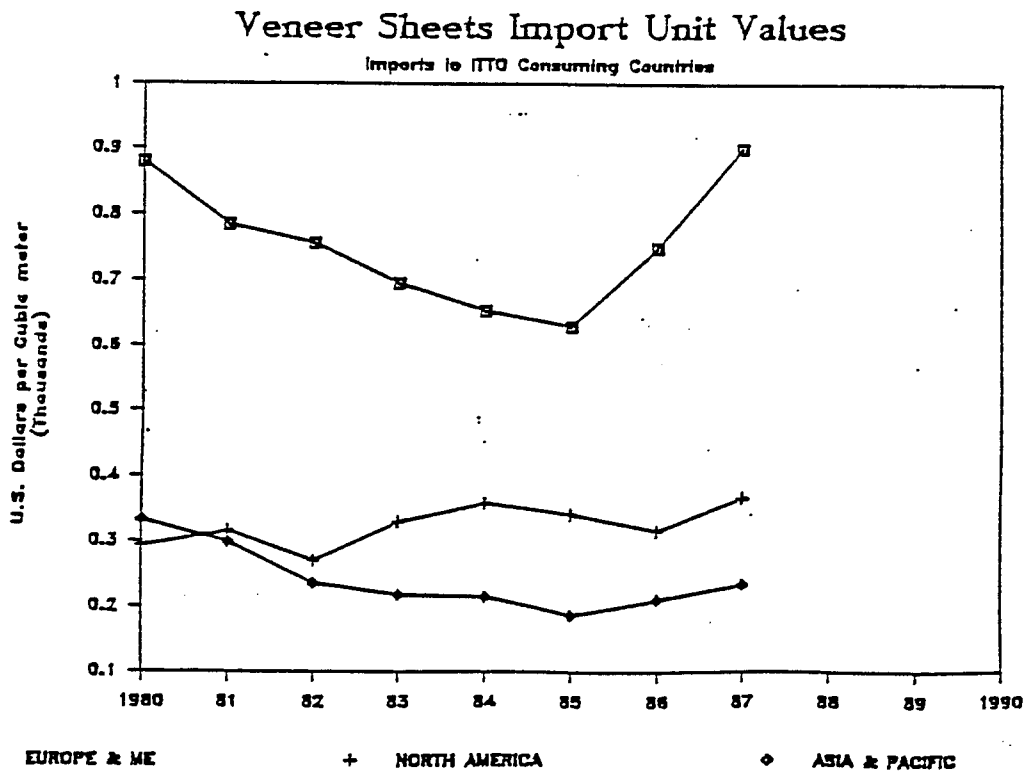


FIGURE 19

### Tropical Plywood Export Unit Values

Exports from ITTO Producing Countries

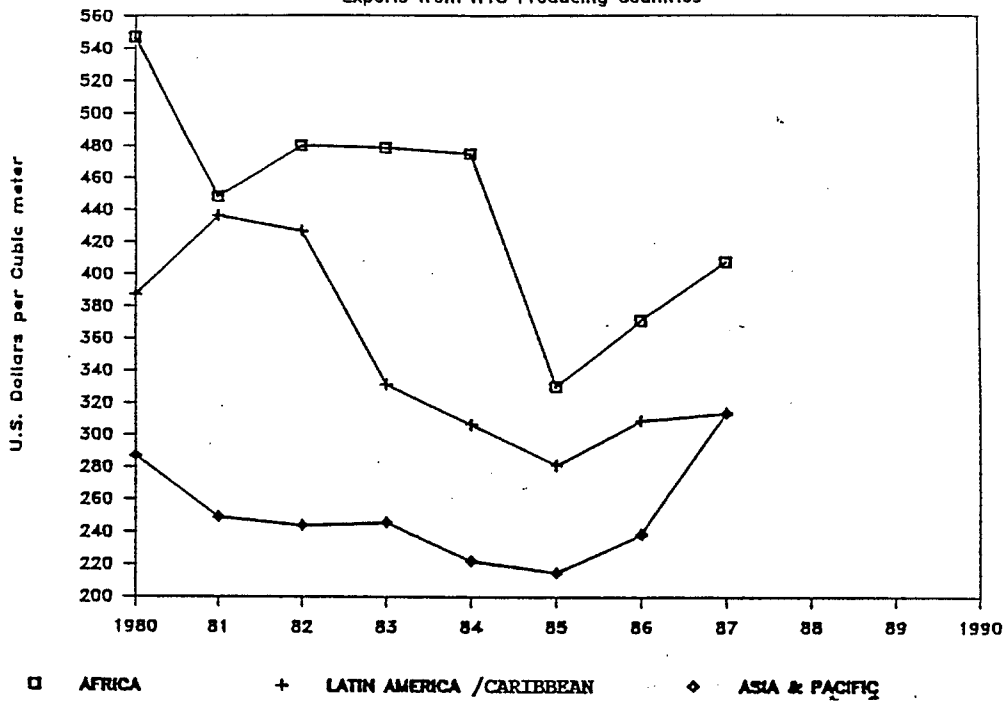
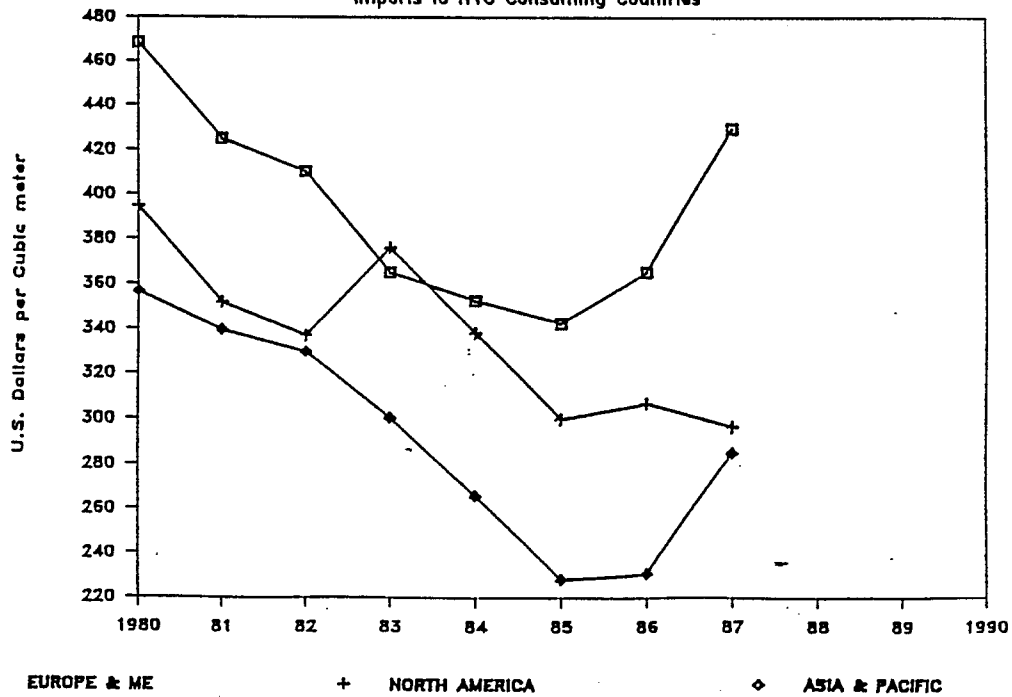


FIGURE 20

### Plywood Import Unit Values

Imports to ITTO Consuming Countries



On the other hand as can be seen in Figure 19, plywood exporters' unit values have become identical in 1987 for the Asia/Pacific and Latin American/Caribbean ITTO producing regions, by the Latin American/Caribbean values coming down to meet the Asian/Pacific level at \$ 313.60 per m<sup>3</sup>, as might be expected in view of their relative market positions.

Very similar convergence is observed in Figure 20 between North American and Asia/Pacific consumers plywood import prices in 1987, though there remained a 5.4% differential between the North American unit value of \$ 301.33 per cubic meter, and the Asia/Pacific level of \$ 285.42 per m<sup>3</sup>.

### 3.2.2 Developments in Market Shares

The requirement to review the entire tropical timber economy necessitates a closer examination of the market positions of the 48 recognized tropical-timber producing countries which currently are not members of ITTO.

Table 7 shows, on a net dollar value of exports basis, that the 47\* non-member countries together accounted for only 5.07% of the tropical timber trade in 1987. A cross-section examination of the three right-hand columns of the table, which record changes in individual-country market shares over time, reveals that there are pronounced cyclical tendencies particularly for the smaller producers.

Leaving aside the five largest producing countries\*\* which together held an 89.73% market share in 1987, a comparison can be made between the patterns of market-share changes among the remaining 70 producers, (a) during the overall market's down-cycle from 1980 to 1985; (b) during the recovery from 1985 to 1987.

From 1980 to 1985, 39 of these smaller producers had declining market shares, in comparison with 24 which increased, with seven

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\* No separate data are available for the Solomon Islands  
\*\* Brazil, Côte d'Ivoire, Indonesia, Malaysia, Philippines

keeping constant market shares. The three-decimal level was selected as the threshold criterion for tallying market share changes. From 1985 to 1987, the pattern of smaller producers' share changes is reversed: 37 enjoyed increasing shares compared with 28 which lost position, with five remaining constant.

The inference is clear that smaller producing countries tend to act as margin suppliers, improving their relative positions on a rising market but falling in relative market shares during the down phases of the overall tropical timber market cycle.

On a country-by-country examination of Table 8 it is found that 23 of the 75\* producing countries, including three ITTO Members, are in fact net importers of even the narrowly-defined ITTA forest products group of sawlogs and veneer logs, sawnwood, plywood and veneer.

Further, separating the logs from the primary processed commodities of Table 8 it is found that 34 tropical timber producing countries are net importers of hardwood sawnwood, plywood and veneer, and the number of net importers would become still greater if the closely-substitutable coniferous sawnwood trade is additionally included in the market definition by product group.

Of these producing countries which are net importers of hardwood timber products, several are at the same time net exporters of hardwood logs, and in at least four cases the net log exports are sufficient in value terms to more than offset the country's net import position in basic processed products, the lower unit values of the logs relative to processed products notwithstanding.

For a more process-oriented point of view on this phenomenon, the results of applying materials balance methodology to the producers' roundwood and processed-timber trade flows are presented in Table 26 of the appendix. For 1987 it is found that 32 of the producers are net importers of an aggregate of sawnwood, plywood and veneer compiled on the basis of roundwood equivalents.

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\* No separate data are available for the Solomon Islands

Table 7. Market Shares of Tropical Timber Producing Countries based on Value of Net Exports, US\$  
Nonconiferous Saw & Veneer Logs and Sawwood, Veneer Sheets, and Plywood  
( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987	Cyclical Market Share Change		
									80-85	85-87	80-87
<b>AFRICA</b>									0.000	0.000	0.000
Angola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.005	0.003	-0.001
Benin	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.000	0.000	0.000
Botswana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.019	0.013	0.032
Burkina Faso	-0.05	-0.09	-0.10	-0.09	-0.04	-0.04	-0.03	-0.02	-0.002	0.003	0.001
Burundi	-0.01	-0.01	-0.01	-0.01	0.00	-0.01	-0.01	-0.01	-0.262	-1.279	-1.542
* Cameroon	2.72	2.18	1.78	1.25	1.53	2.45	1.30	1.17	-0.162	-0.216	-0.378
Central African Republic	0.67	0.90	0.59	0.49	0.53	0.51	0.50	0.29	0.012	0.003	0.015
Chad	-0.02	-0.03	-0.03	-0.01	-0.01	-0.01	-0.01	-0.01	-0.297	0.109	-0.188
* Congo	1.47	1.32	1.11	0.88	1.18	1.18	1.31	1.28	-4.670	-1.767	-6.437
* Cote d'Ivoire	10.34	8.91	7.29	6.41	6.93	5.67	5.51	3.90	0.000	0.000	0.000
Ethiopia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.143	-0.674	-0.817
* Gabon	2.87	3.52	2.97	2.89	3.55	2.72	2.85	2.05	0.001	0.001	0.002
Gambia	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	-0.019	0.409	0.389
* Ghana	0.69	0.46	0.27	0.31	0.45	0.67	0.86	1.08	0.013	-0.005	0.009
Guinea	0.00	0.02	0.03	0.02	0.03	0.01	0.01	0.01	0.143	0.114	0.258
Guinea, Equatorial	0.04	0.14	0.25	0.18	0.22	0.18	0.40	0.30	0.000	0.005	0.005
Kenya	-0.01	0.01	0.01	0.00	0.00	-0.01	0.00	0.00	-0.751	-0.309	-1.060
* Liberia	1.63	1.28	0.98	0.63	0.60	0.60	0.61	0.60	0.003	0.003	0.008
Madagascar	0.00	-0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.015	0.012	0.027
Malawi	-0.03	-0.02	-0.03	-0.03	-0.03	-0.01	-0.01	0.00	-0.004	-0.001	-0.006
Mali	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.03	-0.02	-0.082	-0.012	-0.074
Mozambique	0.10	0.13	0.10	0.05	0.05	0.03	0.03	0.02	0.000	0.000	0.000
Namibia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.025	0.011	-0.014
Niger	0.00	-0.01	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	0.387	-0.001	0.388
Nigeria	-0.39	-0.51	-0.38	-0.38	0.00	0.00	-0.02	-0.02	-0.008	0.008	0.003
Rwanda	-0.02	-0.03	-0.03	-0.01	-0.01	-0.02	-0.02	-0.01	-0.071	0.085	0.014
Senegal	-0.18	-0.22	-0.24	-0.19	-0.23	-0.23	-0.20	-0.15	0.010	-0.001	0.009
-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.010	0.016	0.008
Sierra Leone	-0.04	-0.05	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.008	0.016	-0.016
Somalia	-0.04	-0.05	-0.05	-0.03	-0.04	-0.04	-0.03	-0.02	-0.030	0.014	-0.016
Sudan	-0.01	-0.05	-0.05	-0.04	-0.04	-0.04	-0.04	-0.03	0.051	-0.043	0.008
Tanzania	0.01	0.02	0.01	0.01	0.01	0.06	0.03	0.02	-0.001	0.001	0.000
Togo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.002	0.001	0.000
Uganda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.054	-0.087	-0.033
Zaire	0.38	0.58	0.45	0.48	0.48	0.43	0.47	0.34	0.001	0.015	0.015
Zambia	-0.04	-0.04	-0.04	-0.03	-0.04	-0.04	-0.03	-0.03	0.080	0.039	0.119
Zimbabwe	-0.04	-0.12	-0.04	0.01	0.04	0.04	0.10	-0.08			
<b>ALL AFRICAN PRODUCERS/ ALL ITTO AFRICAN PRODUCERS/ITTO</b>	<b>20.05</b>	<b>18.17</b>	<b>14.74</b>	<b>12.71</b>	<b>15.05</b>	<b>14.32</b>	<b>14.04</b>	<b>10.79</b>	<b>-5.730</b>	<b>-3.532</b>	<b>-9.281</b>
	<b>20.28</b>	<b>18.38</b>	<b>14.91</b>	<b>12.89</b>	<b>14.85</b>	<b>14.31</b>	<b>13.59</b>	<b>10.48</b>	<b>-5.971</b>	<b>-3.825</b>	<b>-9.797</b>
<b>LATIN AMERICA</b>									-0.018	-0.005	-0.023
Belize	0.03	0.03	0.04	0.03	0.02	0.01	0.01	0.00	-0.210	0.154	-0.057
* Bolivia	0.38	0.28	0.34	0.13	0.15	0.15	0.29	0.30	1.350	-0.601	0.749
* Brazil	3.09	4.99	3.10	4.10	4.88	4.44	3.61	3.84	-0.005	0.071	0.068
Colombia	-0.05	-0.10	-0.11	-0.11	-0.08	-0.05	0.02	0.02	0.077	-0.114	-0.037
Costa Rica	0.06	0.17	0.13	0.12	0.13	0.14	0.10	0.03	-0.270	-0.038	-0.306
Cuba	-0.21	-0.30	-0.39	-0.46	-0.48	-0.48	-0.81	-0.52	0.106	0.047	0.154
Dominican Republic	-0.23	-0.06	-0.06	-0.05	-0.12	-0.12	-0.11	-0.08	-0.075	-0.046	-0.121
* Ecuador	0.38	0.48	0.47	0.33	0.46	0.28	0.33	0.24	-0.020	0.081	0.041
El Salvador	-0.04	-0.08	-0.08	-0.06	-0.06	-0.06	0.00	0.00	0.014	-0.012	0.002
French Guiana	0.02	0.05	0.07	0.03	0.03	0.04	0.03	0.02	0.017	-0.022	-0.006
Guatemala	0.03	0.07	0.01	-0.03	-0.01	0.04	0.03	0.11	-0.014	0.037	0.023
Guyana	0.09	0.13	0.13	0.12	0.07	0.07	0.09	0.00	0.028	0.002	0.030
Haiti	-0.03	-0.05	-0.05	-0.05	-0.05	-0.01	0.00	0.00	-0.018	0.000	-0.018
* Honduras	0.02	0.05	0.03	0.00	0.00	0.00	0.00	0.00	-0.089	0.010	-0.078
Jamaica	-0.04	-0.31	-0.20	-0.18	-0.13	-0.13	-0.10	-0.12	0.018	0.027	0.045
Mexico	-0.09	-0.22	-0.08	0.13	-0.15	-0.07	-0.06	-0.05	0.018	-0.015	-0.041
Nicaragua	0.07	0.07	0.03	0.03	0.04	0.04	0.03	0.02	-0.005	-0.002	-0.008
Panama	0.00	0.01	-0.01	0.01	0.01	0.00	-0.01	0.00	1.114	-0.506	0.508
Paraguay	1.17	1.47	2.28	1.55	2.22	2.29	1.45	1.78	-0.063	-0.017	-0.080
* Peru	0.09	0.15	0.17	0.15	0.04	0.03	0.02	0.01	-0.081	-0.055	-0.137
Suriname	0.17	0.24	0.27	0.13	0.12	0.09	0.04	0.03	-0.028	0.297	0.271
* Trinidad and Tobago	-0.50	-0.71	-1.07	-0.81	-0.88	-0.53	-0.32	-0.23	-0.017	0.157	0.140
Venezuela	-0.41	-0.58	-0.89	-0.70	-0.81	-0.43	-0.37	-0.27			
<b>ALL L. AMERICAN PRODUCERS * 1.94</b>	<b>5.78</b>	<b>4.34</b>	<b>4.45</b>	<b>5.32</b>	<b>5.73</b>	<b>4.48</b>	<b>5.16</b>	<b>1.785</b>	<b>-0.568</b>	<b>1.217</b>	
<b>ITTO L. AMER. PRODUCERS/ITTO * 3.52</b>	<b>5.44</b>	<b>3.38</b>	<b>4.08</b>	<b>4.86</b>	<b>4.62</b>	<b>4.12</b>	<b>4.34</b>	<b>1.097</b>	<b>-0.275</b>	<b>0.822</b>	
<b>ASIA &amp; PACIFIC</b>									-0.009	0.029	0.020
Bangladesh	-0.03	-0.01	-0.01	-0.01	-0.03	-0.04	-0.02	-0.01	0.000	-0.002	-0.002
Bhutan	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	1.215	-0.952	0.263
Burma	1.94	2.75	2.20	3.28	2.78	3.17	3.03	2.22	0.045	-0.032	0.013
Philippines	0.04	0.08	0.07	0.06	0.08	0.09	0.08	0.08	-0.153	-1.082	-1.238
* India	0.30	0.18	0.15	0.13	0.16	0.15	-0.04	-0.94	-2.299	0.732	0.432
* Indonesia	31.53	22.67	19.12	24.33	29.81	29.23	38.21	37.98	0.000	-0.001	-0.001
Kampuchea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.154	0.125	-0.029
Laos	0.19	0.12	0.09	0.08	0.12	0.04	0.22	0.16	7.917	-1.690	0.226
* Malaysia	33.73	39.84	50.12	47.79	38.58	41.65	36.91	39.96	0.107	-0.110	-0.003
Nepal	0.19	0.27	0.29	0.28	0.28	1.55	1.55	1.55	-0.012	0.057	0.045
Pakistan	-0.10	-0.28	-0.42	-0.29	-0.41	-0.19	-0.18	-0.13	0.486	0.312	0.799
* Papua New Guinea	1.06	1.41	1.86	1.31	2.18	1.55	1.55	4.07	-2.627	-1.458	-4.086
* Philippines	8.18	10.79	9.01	7.77	8.15	5.53	4.44	4.07	-0.046	0.131	0.085
* Sri Lanka	-0.18	-0.02	-0.08	-0.06	-0.12	-0.23	-0.13	-0.09	-0.502	0.012	-0.490
* Thailand	-0.72	-1.62	-1.44	-1.76	-1.83	-1.23	-0.76	-1.21	-0.022	0.030	0.008
Viet Nam	-0.06	-0.08	-0.08	-0.07	-0.08	-0.08	-0.07	-0.05			
<b>ASIAPACIFIC PRODUCERS/ ALL ITTO ASIAPAC PRODUCERS/ITTO</b>	<b>78.01</b>	<b>76.07</b>	<b>80.92</b>	<b>82.84</b>	<b>79.82</b>	<b>79.95</b>	<b>81.50</b>	<b>84.05</b>	<b>3.945</b>	<b>4.100</b>	<b>8.045</b>
	<b>78.20</b>	<b>76.20</b>	<b>81.73</b>	<b>83.03</b>	<b>80.29</b>	<b>81.07</b>	<b>82.29</b>	<b>85.18</b>	<b>4.874</b>	<b>4.100</b>	<b>8.975</b>
<b>ITTO/ALL TROPICAL PRODUCERS</b>	<b>97.19</b>	<b>96.11</b>	<b>96.45</b>	<b>95.85</b>	<b>95.91</b>	<b>94.83</b>	<b>95.16</b>	<b>95.93</b>	<b>-2.360</b>	<b>1.100</b>	<b>-1.280</b>

Sources: YAO AGRSTAT Database by direct access  
Note: In annual shares negative values indicate net importers  
\* Latin America/Caribbean

Table 8. Tropical Timber Producing Countries' Total Value of Net Exports, 100 Nonconiferous Saw & Veneer Logs and Sawwood, Veneer Sheets and Plyw ( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1985	1987	Logs Only 1987	Processed Wood 1987
<b>AFRICA</b>					
Angola	0	0	0	0	0
Benin	-432	-486	-571	0	-571
Botswana					
Burkina Faso	-3076	-1398	-1398	0	-1398
Burundi	-351	-320	-320		-320
* Cameroon	153934	97701	73762	47663	26099
Central African Republic	38036	20251	18389	9000	9389
Chad	-1144	-331	-331		-331
* Congo	83489	46838	80777	54019	26758
* Cote d'Ivoire	585996	225705	245117	81070	164047
Ethiopia	0	0	0		0
* Gabon	162481	108450	128774	112000	16774
Gambia	-185	-75	-75	0	-75
* Ghana	38940	26587	67646	33150	34496
Guinea	0	535	535	800	-265
Guinea, Equatorial	2248	7257	18618	17208	1408
Kenya	-357	-258	-64	0	-64
* Liberia	92574	35121	36028	34587	1439
Madagascar	-132	34	258	264	-8
Malawi	-1724	-594	-202	0	-202
Mali	-729	-675	-1155		-1155
Mozambique	5386	1299	1299	843	656
Namibia					
Niger	-258	-1158	-1158	0	-1158
Nigeria	-21854	57	57	5774	-5717
Rwanda	-978	-912	-912		-912
Senegal	-9072	-9200	-9200	-3300	-5900
Sierra Leone	-595	-38	-124	0	-124
Somalia	-2025	-1741	-1741	-60	-1681
Sudan	-412	-1481	-1481		-1481
Tanzania	741	2568	1327	0	1327
Togo	-91	-108	-108	-108	0
Uganda	-114	-140	-140	0	-140
Zaire	21318	17121	21558	11000	10558
Zambia	-2293	-1589	-1589	-27	-1562
Zimbabwe	-2472	1457	4781	-302	5083
ALL AFRICAN PRODUCERS	1136829	570485	678339	403389	274950
ITTO AFRICAN PRODUCERS	1117394	540402	632102	382489	269613
<b>LATIN AMERICA</b>					
Belize	1559	367	258	488	-222
* Bolivia	26345	5923	18999	0	18999
* Brazil	175284	176896	241407	-3505	244912
Colombia	-2773	-2163	1055	0	1055
Costa Rica	3524	5550	1588	0	1588
Cuba	-12024	-19198	-32575	-5018	-27557
Dominican Republic	-13016	-4806	-4758	0	-4758
* Ecuador	20384	11330	14983	0	14983
El Salvador	-2457	-2512	-121		-121
French Guiana	1118	1334	1334	58	1276
Guatemala	1515	1728	1329	208	1121
Guyana	5014	2954	6988	4373	2613
Haiti	-1906	-230	-230		-230
* Honduras	1227	144	214	60	154
Jamaica	-2419	-5232	-7808	0	-7808
Mexico	-5155	-2908	-2908	0	-2908
Nicaragua	3688	1540	1500	0	1500
Panama	157	-108	-301	30	-331
Paraguay	68392	91030	111867	0	111867
* Peru	5369	1247	918	0	918
Suriname	9555	3471	1994	34	1960
* Trinidad and Tobago	-28588	-21118	-14640		-14640
Venezuela	-23370	-17098	-17098	0	-17098
ALL L. AMERICAN PRODUCERS *	223403	228049	324203	-3280	327483
ITTO L. AMERICAN PRODUCERS *	194003	174422	281879	-3445	265324
<b>ASIA &amp; PACIFIC</b>					
Bangladesh	-1930	-1727	-883		-883
Bhutan	289	217	217	217	0
Burma	111036	128407	139872	93478	46198
Fiji	2463	3525	3525	0	3525
* India	18942	5792	-58907	-66810	7903
* Indonesia	1787479	1184250	2386332	278	2386054
Kampuchea	113	79	79	0	79
Laos	10900	1533	10251	9989	262
* Malaysia	1912546	1659038	2512061	1652096	859965
Nepal	11000	12000	12000		0
Pakistan	-10039	-7541	-8323	-2404	-5919
* Papua New Guinea	60278	81723	117033	116133	900
* Philippines	462593	220353	256103	15000	241103
Sri Lanka	-10159	-8980	-5932	0	-5932
* Thailand	-41040	-48844	-78307	-53200	-23107
Viet Nam	-3360	-3240	-3240	-3100	-140
ITTO ASIAPACIFIC PRODUCERS	4198798	3082312	5138315	1883497	3472818
ALL TROPICAL-TIM PRODUCERS	5669343	3983119	6286223	2173784	4112439
ITTO TROPICAL-TIM PRODUCERS	5510195	3777136	6030296	2022541	4007755

Source: FAO AGROSTAT Database by direct access

\* Latin America/Caribbean



This aggregate can be interpreted as showing the equivalent in harvest of domestic timber which is substituted by imports. On a product-by-product basis, in the same year 12 of the 75 tropical timber producing countries are net importers of nonconiferous logs; 21 are net importers of nonconiferous sawnwood; 33 are net importers of plywood; and 10 are net importers of veneer sheets.

There are some countries whose net export of logs in the rough is greater than the roundwood equivalent of their net imports of sawnwood, plywood and veneer aggregated together. A case in point is that of Nigeria, for which the 1987 net hardwood log exports of 58,800 cubic meters are half again greater than the roundwood equivalent of the same year's net imports of processed products, 38,455 cubic meters, and both of these flows are significant fractions of the corresponding materials balances for the timber trade of Africa as a whole.

#### 4. FOREST RESOURCES

No recent, comprehensive set of data describing the extent and condition of the tropical forests has been collected. Most of the new estimates are based on the FAO/UNEP assessment of 1981.

A re-assessment of the state of the forest resources of the world is to be started in 1989. The new resource data will, in addition to assessments of the current situation and trends with regard to deforestation, reforestation and utilization, include information on environmental implications of deforestation and degradation of the forest vegetation.

The work will be coordinated by Dr K.D. Singh of the Forest Resources Division of the Forestry Department, FAO. The study will have 1990 as base year and the results are expected to be available in 1991.

#### 5. FOREST DEVELOPMENT AND THE ENVIRONMENT

##### 5.1 Government Action and Public Opinion

During 1988 the attention of media, politicians and scientists has increasingly been focussed on the continuing deforestation in the Tropics

and the adverse effect this has, immediately and in the long term, on the environment. The evidence of detrimental effects of reduced forest cover and the pressure from growing public opinion have resulted in several governments of tropical countries taking legislative and administrative action to slow down and eventually halt deforestation. Such restrictive measures, introduced in ITTO producing Member countries in 1988 will, if they are efficiently enforced, affect as much as 2/3 of the remaining total tropical forest resource. Examples of countries in which action has been taken during the year to reduce deforestation and forest degradation are Brazil, Thailand and Indonesia (See 6. Country Notes below).

In countries outside the tropics, public opinion against tropical deforestation and for measures to protect the environment has grown strong and resulted in pressure on Governments and on the general public to initiate action to affect the forest development in the tropics.

Governments have been urged to introduce measures which will restrict imports of tropical timber and timber products or reduce the market competitiveness of these products in order to reduce the economic pressure on the tropical forest resources. Campaigns have also been launched to inform the public on the negative environmental effects of tropical deforestation and to urge consumers to buy tropical wood products only if it can be guaranteed that the timber originates from forests under sustainable management.

## 5.2 Timber Surcharge for Financing Resource Management

A proposal for a surcharge on tropical timber imports was initiated by the timber importers of UK and the Netherlands. The surcharge was to be applied to imports into the EC countries. The resources derived from this tax were to be placed in a fund for financing ITTO activities, in the first instance, aimed at safe-guarding the resource and protecting the natural tropical environment.

The proposal is to be endorsed by the UCBT (Federation of European Timber Importers)\* before it will be presented to the European

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\* This endorsement was obtained in February 1989

Parliament and individual national Governments of EEC for consideration and action. Aspects of the proposal regarding the methods of collecting the surcharge and the administration of the Fund are yet to be developed.

The producing countries have still not officially reacted to the proposal, but it can be expected that their main concern would be how to devise a mechanism for levying a surcharge which will have no negative effects on the market development to the detriment of the revenues accruing to the tropical timber producers.

### 5.3 The Bellagio Meeting on Tropical Forests

As a follow-up of the first Bellagio meeting on tropical forests, (1-2 July 1987), a Task Force of well-known international experts was established by the World Bank, UNDP, FAO and the Rockefeller Foundation. This Task Force was to:

- (i) assess the potential benefits from an expansion of investment in research;
- (ii) identify priority research opportunities and
- (iii) define and recommend appropriate institutional mechanisms to guide and coordinate an expanded global research effort to meet the potentials and opportunities.

The report of the Task Force was presented at a second "Bellagio Meeting" of donor representatives which was entirely devoted to forest research and held at Wiston House, U.K. on 30 November and 1 December 1988.

The Second Bellagio Meeting on Tropical Forest "endorsed the recommendations of the Task Force for increasing the flow of resources to forestry research worldwide", expressed "concern that direct and early attention be paid to the research needs of national organizations engaged in agriculture and forestry research" and "was particularly concerned to improve the capability of these institutions by supporting the quality and number of their manpower". It "urged early action to

disseminate present research results through national systems and agencies concerned with global forestry" and "endorsed the five priority research areas presented by the Task Force" that is:

- (i) agroforestry and watershed management,
- (ii) natural forest ecology and management,
- (iii) tree selection, improvement and establishment,
- (iv) utilization and markets, and
- (v) policy and socio-economics.

The Meeting recommended that the proposals by the Task Force be studied and costed by the four co-sponsors of the Meeting and, together with the cost estimates, submitted to the next meeting of the Consultative Group on International Agricultural Research (CGIAR).

## 6. COUNTRY NOTES

These notes do not include all Producing Members. They cover only those countries for which detailed information on developments in 1988 is available.

### 6.1 Brazil

In order to protect the Amazon forests and safeguard the environment, the Government of Brazil took, in October 1988, a number of decisions which included:

- a) the reduction of subsidies and tax incentives for conversion of forest land to agriculture and cattle ranching;
- b) the scrutiny and selective screening of agriculture and industry projects to make sure that the retention of a healthy environment is safeguarded; and
- c) a moratorium on log export.

The estimates for areas of natural forests that were disturbed by logging or cleared for conversion into other uses in Brazil vary from 2.5 million to 3.5 million ha in 1988. The projection for 1980 - 1985 by FAO shows an annual deforestation of 2.53 million ha, including clearing of mixed forest/grass land formations.

Logs produced from hydro electric dam sites and from agricultural development projects could, before the decision to curb log export in October 1988, be exported unprocessed.

Supply of logs from hydro-electric dam sites and agricultural areas exceeded 200 000 m<sup>3</sup> in 1988 as was forecast. Almost the whole production from these areas was exported to Asia, mainly to China, India, Japan and the Republic of Korea. Logs exported originated mostly from hydro-electric dam sites in the states of Rondonia and Amazonas.

## 6.2 Ghana

The Government of Ghana has recalled logging permits and concessions found to be executed in violation of existing regulations. These permits and concessions were held mainly by concessionaires who had no direct interest in the timber industry. These recalled concessions will be re-issued to sawmillers and wood products manufacturers who have records of efficiency and adherence to regulations in a bid to improve the raw material supply situation and to increase the profitability of the processing industries.

Ghana's economic rehabilitation and restructuring program has so far benefitted some 80 forest industries which have received loans amounting to \$ 53 million disbursed from the export rehabilitation credit. Projects that have been supported include logging operations, sawmill expansion and improvements, furniture export activities, and wood preservation.

## 6.3 Honduras

In spite of a relatively large tropical hardwood resources (2.65 million ha.), Honduras harvests only 66 000 m<sup>3</sup> of hardwood logs per year

for industrial use. In 1988, there were only 5 sawmills processing around 12 000 m<sup>3</sup> per year, 2 veneer and plywood plants utilizing about 4 000 m<sup>3</sup> per year, some 800 pitsawyers using 50 000 m<sup>3</sup> per year, approximately 69 secondary processing industries, and over 100 small artisan-type carpentry shops.

Realizing the great potential of the forests as a basis for development, the Government of Honduras, assisted by Canada, initiated in 1988 a project to slow down the reduction of the country's tropical forests, which at present are disappearing at a rate of 71 000 ha per year, and to provide technical assistance to the timber using industries. In addition, the Government will soon implement a new timber supply/selling approach whereby each primary processing industry will have its own assigned forest area to harvest on a sustained yield basis to provide raw material for its own use. These developments, together with rural electrification and road paving programs in the forest areas, are expected to promote vigorous growth and improvement of the country's tropical hardwood-based industry.

#### 6.4 Indonesia

The Government, is paying increasing attention to forest conservation to preserve the environment and safeguard the continued production of timber for domestic use and export. At present, 26% of the forests are planned to be reserved for conservation.

Approximately 500 concessions are currently valid. The reduction in natural forest area is estimated to between 1 million and 1.2 million ha in 1988 compared to 600 000 ha per year estimated by FAO for the period 1980 - 1985.

The transmigration programme has come under criticism in various quarters. Within the country the main criticisms are that in principle the Government does not recognize customary rights and does not pay sufficient compensation to local people who find the forest, which they earlier regarded as theirs, diminishing and invaded by newcomers.

Indonesia received in 1988 \$ 26 million in international assistance for its forestry activities. 31 internationally supported projects were in progress concentrating on the long-term stabilization of the forest estate. A \$ 34 million loan for a forest inventory was granted during the year.

On October 15 1988 the Government of Indonesia initiated a new export tax system that caused prices for lumber of various species to increase between \$2.5 and \$13.5 per m<sup>3</sup>. The new taxes, in dollars per m<sup>3</sup> are:

<u>Species</u>	<u>Tax</u>
White Meranti	\$ 85.00
Agathis	\$112.50
Ramin	\$120.00
Red Meranti, Purai, Kapur and Keruing	\$ 20.00

#### 6.5 Malaysia

Malaysia's production of tropical hardwood sawlogs and veneer logs reached an all-time high in 1987 at approximately 35 million m<sup>3</sup>. Sarawak is expected to maintain an annual production of 12 million m<sup>3</sup> until 1995, while Peninsular Malaysia and Sabah are expected to decrease their log outputs substantially. Their projected production data for 1995 are 4.8 million m<sup>3</sup> and 5.7 million m<sup>3</sup> respectively. This later projection include 4 million m<sup>3</sup> of logs expected to be harvested annually in forest plantations in Sabah from 1990.

#### 6.6 Papua New Guinea

Production of sawlogs and veneer logs in Papua New Guinea totalled 2.4 million m<sup>3</sup> in 1987, or 16% more than 1986, while the production of sawnwood, veneer and plywood remaining in the region of 74 000, 10 000, and 9 000 m<sup>3</sup> respectively. However, veneer production is expected to rise substantially in 1989/1990, as a result of the development of new resources around a large rotary veneer mill.

A Government commission of inquiry into the forest industries identified as major problems the lack of proper grading and the lack of supervision of loading of logs for shipment overseas, leading to uncontrolled practices of transfer pricing through undergrading and inaccurate species identification. The inquiry also highlighted the absence of an implemented, effective program of reforestation and that little emphasis is placed on the encouragement of local processing. According to reports, the Government of Papua New Guinea is revising the forestry regulations with the aim of promoting downstream processing activities and more local participation in the wood-based industry.

#### 6.7 Philippines

In 1988, the Government of the Philippines considered the adoption of severe measures to further restrict logging. The proposals under consideration ranged from plans to reduce the area under timber licences and concessions, now totalling 4.4 million ha. of forest, to more drastic measures that include total logging ban. Earlier restrictive measures, imposed since 1986, have already considerably slowed down forest industry activities, and many companies have closed down their operations. At present, nearly two-thirds of the forest area of the Philippines are excluded from logging and the harvesting of 12 commercial species is prohibited. Finally, early in 1989, the Government announced a ban on lumber export to take effect on 1st July 1989.

The fees and taxes paid by the forest industries of the Philippines have been increased from \$ 1.5 to \$ 15 per m<sup>3</sup> of logs harvested and thus better reflect the cost of reforestation and forest management for sustained timber production.

Log production in the Philippines increased by 12% in 1987 over the level of the previous year to 3.85 million m<sup>3</sup>. The increase was almost entirely attributed to the harvest of Albizia falcataria from plantation forests.



Reduced logging and corresponding raw material shortage are leading to closing down or relocation of several plants. Several plywood mills have, because of shortage of raw material, applied for permits to import logs; and during the last quarter of 1988 a total of 170 000 m<sup>3</sup> was imported.

High internal demand supported by a substantial injection of funds to revitalize the construction sector, have resulted in a modest growth in the production of sawnwood and plywood in 1987 and 1988, in spite of the raw material supply constraints.

Investments in forestry announced in 1988 amounted to approximately \$ 240 million. A major share of the funds for this investment are to be supplied by the Asia Development Bank and Japan as support to forest management and reforestation projects.

#### 6.8 Thailand

Thailand suspended all timber concessions in the southern provinces of the country in November 1988. The proposal, by the Prime Minister and the Minister for Agriculture, was for a total ban, but the Cabinet decided to limit the ban on economic and legal grounds. The main reason for this limited action by the Cabinet was to avoid hurting the furniture industry and leaving the Government vulnerable to legal action by the concessionaires. The Cabinet also decided to increase its statutory powers to revoke concessions when conditions such as protection of the natural environment and compulsory re-planting are violated.<sup>1)</sup>

The above decisions by the Government of Thailand were prompted by the severe landslides and flooding which resulted from the heavy rains in late October and early November 1988. It was strongly believed that deforestation played a major role in causing and aggravating these catastrophes.

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1) The administration imposed a new country-wide ban on logging in January 1989. This new extended ban will be considered by Parliament in May/June for approval. The bill is apposed by a logging lobby and it is too early to judge if it will be accepted or, as the previous, be subject to amendment.

A total of 301 logging concessions were still valid at the time the decision on the suspension was taken.

Production from the forest industries of Thailand is expected to fall significantly as a result of the halt of logging operations as 75% of the raw material inputs (4 million m<sup>3</sup>) are of domestic origin. Although shortage of domestically produced raw material will be attenuated by a reduction in the import duties on logs from 7 to 1 %, the approximately 4 000 wood-based industries will be severely affected.

Part of Thailand's furniture and panel industries obtain their raw material from rubber plantations and will thus be relatively unaffected by the logging ban. The annual supply of rubberwood is estimated at 3 million m<sup>3</sup>. Most of the industry's supply will, however, depend on expanded import from traditional Asian suppliers and from Burma and Laos, the latter having recently suspended a ban on log export to Thailand. It is estimated that Thailand may have to triple wood imports in 1989, from some 1 million m<sup>3</sup> in 1988.

In anticipation of lower output volumes of industrial products and upward pressures put on price because of unchanged demand, the Government has reduced import duties on processed wood products from 12 to 2%.

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TABLE 9 - ITTO PRODUCING MEMBER COUNTRIES PRODUCTION OF  
HARDWOOD SAW & VENEER LOGS, SAW HARDWOOD, VENEER & PLYWOOD, 1980 - 1989  
(m<sup>3</sup>)

Africa		1980	1985	1986	1987	1988
Cameroon	Products					
	saw and veneer logs	1613000	2093000	2088000	2090596	1976759
	sawwood	380000	565000	565000	480207	492829
	veneer	63000	63000	63000	63000	63000
	plywood	10000	10000	10000	10000	10000
Congo	saw and veneer logs	603000	572000	715000	694000	1900000
	sawwood	64000	50000	77000	60200	536000
	veneer	75000	59000	51000	47000	53250
	plywood	4000	6700	6700	4800	
Côte d'Ivoire	saw and veneer logs	4844000	3315000	3020000	1959000	1900000
	sawwood	664000	753000	765000	759200	536000
	veneer	122000	140000	160000	166000	
	plywood	63000	44000	44000	44663	
Gabon	saw and veneer logs	1347000	1382000	1295000	1222000	1136747
	sawwood	88000	106000	106000	106000	358011
	veneer	97000	97000	97000	97000	
	plywood	95000	131000	131000	131000	
Ghana	saw and veneer logs	600000	700000	720000	1027353	25645
	sawwood	160000	280000	310000	387481	
	veneer	22000	34000	34000	34000	
	plywood	49000	21000	25000	25000	
Liberia	saw and veneer logs	745000	410000	540000	810000	
	sawwood	43000	69000	91000	311000	
	veneer	2000	2000	2000	2000	
	plywood	7100	3000	3000	2000	

(Table 9)

Asia/Pacific		1980	1985	1986	1987	1988
Products						
India	saw and veneer logs	12539000	15812000	15812000	15812000	15812000
	sawwood	9244000	14834000	14834000	14834000	14834000
	veneer plywood	3700 200000	3700 360000	3700 360000	3700 360000	3700 360000
Indonesia	saw and veneer logs	27559008	23500000	27400000	25000304	9100000
	sawwood	4797000	7065000	7400000	8200000	6800000
	veneer plywood	1011000	4615000	5750000	6100000	
Malaysia	saw and veneer logs	27916000	28641008	29868000	34580000	31107800
	sawwood	6234000	5379000	5431000	6260000	5902000
	veneer plywood	475000 601000	642000 711000	515000 711000	558000 857000	746000
Papua New Guinea	saw and veneer logs	1326000	1838000	2086000	2416000	
	sawwood	133000	74000	74000	74000	
	veneer plywood	10000 10300	10000 9000	10000 9000	10000 9000	
Philippines	saw and veneer logs	6212000	3124000	3039000	3311000	3500000
	sawwood	1529100	1062000	978000	1233000	1200000
	veneer plywood	133000 553000	69000 357000	50000 445000	50000 592000	650000
Thailand	saw and veneer logs	2544000	1875000	2015000	2149000	
	sawwood	1527000	938000	1007000	1075000	
	veneer plywood	22500 88700	53000 170000	53000 170000	53000 91000	

(Table 9)

		1980	1985	1986	1987	1988
<u>Latin America/Caribbean</u>						
Bolivia	saw and veneer logs	404000	136000	136000	310000	
	sawnwood	216000	93000	86000	140000	
	veneer	10000	1000	900	600	
	plywood	5900	2000	3400	9100	
Brazil	saw and veneer logs	16296000	17966000	33000000	33000000	
	sawnwood	7738000	9397000	14695000	14695000	
	veneer	465000	430000	520000	520000	
	plywood	900000	1000000	1370000	1520000	
Ecuador	saw and veneer logs	1961000	2350000	2285000	2285000	
	sawnwood	903000	1213000	1256000	1256000	
	veneer	2000	6000	6000	6000	
	plywood	59400	85000	85000	85000	
Honduras	saw and veneer logs	30000	21000	26000	26000	66000
	sawnwood	7000	2800	2500	2500	40000
	veneer					
	plywood	11000	7000	8000	8000	2600
Peru	saw and veneer logs	1367000	1116000	1300000	1116000	
	sawnwood	602000	528000	606656	528000	
	veneer	35000	14000	9954	9954	
	plywood	49000	20000	35207	47881	43093
Trinidad and Tobago	saw and veneer logs	73000	32000	39400	43300	
	sawnwood	33000	18000	18900	16500	
	veneer					
	plywood					

Source: FAO AGROSTAN Database

ITTO Forecasting Equitry Database

Country Reports Presented at the Roundtable on Opportunities and Constraints to Latin American Tropical Hardwood-Based Industrial Development.  
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Table 10.

Tropical Producers' Value of Net Timber Exports, Thousand U.S. Dollars  
Nonconiferous Saw & Veneer Logs and Sawwood, Veneer Sheets and Plywood  
( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
<b>AFRICA</b>								
Angola	0	0	0	0	0	0	0	0
Benin	-432	-430	-430	-428	-428	-486	-571	-571
Botswana								
Burkina Faso	-3078	-3655	-4255	-4085	-1421	-1398	-1398	-1398
Burundi	-351	-205	-443	-382	-141	-320	-320	-320
Cameroon	153934	88043	72359	56638	60055	97701	60043	73782
Central African Republic	38038	36272	23895	22198	20788	20251	23085	18389
Chad	-1144	-1186	-1190	-331	-331	-331	-331	-331
Congo	83489	53387	45361	39957	48287	46838	60518	80777
Cote d'Ivoire	585996	359659	296861	291514	271969	225705	253763	245117
Ethiopia	0	0	-157	-157	-157	0	0	0
Gabon	182461	141948	120892	131336	139422	108450	131201	128774
Gambia	-185	-285	-158	-184	-184	-75	-75	-75
Ghana	38948	18570	11184	13945	17784	28587	39522	67848
Guinea	0	800	1100	1100	1100	535	535	535
Guinea, Equatorial	2248	5817	10267	8368	8520	7257	18618	18618
Kenya	-357	489	427	-24	195	-258	-64	-64
Liberia	92574	50681	38881	28417	23717	35121	51114	38028
Madagascar	-132	-579	-60	-88	83	34	258	258
Malawi	-1724	-750	-1405	-1415	-1359	-594	-510	-202
Mali	-729	-714	-920	-819	-872	-875	-1155	-1155
Mozambique	5386	5259	3953	2060	1900	1299	1299	1299
Namibia								
Niger	-258	-558	-1158	-1158	-1158	-1158	-1158	-1158
Nigeria	-21854	-20851	-14587	-17071	147	57	57	57
Rwanda	-978	-1186	-1305	-646	-912	-912	-912	-912
Senegal	-9072	-9072	-9858	-8508	-8900	-9200	-9200	-9200
Sierra Leone	-595	-585	-582	-70	-137	-38	-124	-124
Somalia	-2025	-1930	-1741	-1741	-1741	-1741	-1741	-1741
Sudan	-412	-2061	-2061	-1481	-1481	-1481	-1481	-1481
Tanzania	741	701	589	338	338	2588	1327	1327
Togo	-91	-148	-108	-108	-108	-100	-100	-100
Uganda	-114	-148	-148	-148	-148	-148	-148	-148
Zaire	21318	22493	18278	21780	17968	17121	21558	21558
Zambia	-2293	-1589	-1589	-1589	-1589	-1589	-1589	-1589
Zimbabwe	-2472	-4966	-1683	511	1457	1457	4761	4761
ALL AFRICAN PRODUCERS	1138829	733491	600261	577805	598849	570485	646788	678339
ITTO AFRICAN PRODUCERS	1117394	712288	585538	581807	559214	540402	598181	632102
<b>LATIN AMERICA</b>								
Belize	1558	1184	1514	1216	824	387	258	258
Bolivia	20345	11205	13740	5923	5923	5923	13283	18999
Brazil	175264	201282	134469	186553	190885	178498	166182	241407
Colombia	-2773	-4158	-4404	-4898	-2183	-2183	728	1055
Costa Rica	3524	6681	5425	5504	5198	5550	4433	1588
Cuba	-12024	-12024	-15881	-20780	-22778	-19198	-27971	-32575
Dominican Republic	-13018	-2355	-2545	-2145	-4619	-4906	-4906	-4758
Ecuador	26384	19275	19072	14794	18140	11330	14983	14983
El Salvador	-2457	-3208	-2400	-2512	-2512	-2512	-162	-121
French Guiana	1118	1938	2858	1334	1334	1334	1334	1334
Guatemala	1515	2849	478	-1271	-511	1728	1329	1329
Guyana	5014	5231	5288	5288	2829	2954	4377	6988
Haiti	-1906	-2208	-2108	-2108	-2108	-238	-238	-238
Honduras	1227	2188	1204	148	148	144	214	214
Jamaica	-2419	-12358	-8122	-8157	-5232	-5232	-4503	-7808
Mexico	-5155	-8859	-2475	6048	-5972	-2908	-2908	-2908
Nicaragua	3688	2907	1405	1508	1508	1540	1508	1508
Panama	157	284	-451	388	414	-108	-301	-301
Paraguay	66392	59238	91823	70599	87238	91030	67005	111887
Peru	5389	5831	8902	8971	1445	1247	918	918
Suriname	9555	9892	10868	8050	4581	3471	1994	1994
Trinidad and Tobago	-28588	-28588	-43583	-36687	-33738	-21118	-14865	-14840
Venezuela	-23378	-23378	-36271	-31604	-31604	-17090	-17090	-17090
ALL L. AMERICAN PRODUCERS	223403	232529	178594	202178	209010	228049	205580	324203
ITTO L. AMERICAN PRODUCERS	194003	211287	131794	177722	182783	174422	180693	281879
<b>ASIAPACIFIC</b>								
Bangladesh	-1938	-231	-272	-525	-1100	-1727	-883	-883
Bhutan	289	289	432	432	432	217	217	217
Burma	111036	111036	89808	149000	108211	128407	139672	139672
FIJI	2483	2235	2945	2834	3008	3525	3525	3525
India	16942	8554	8132	8132	8132	5792	-1997	-58907
Indonesia	1787479	915038	778344	1108168	1170010	1184250	1868548	2386332
Kampuchea	113	113	79	79	79	79	79	79
Laos	10988	4746	3808	3784	4518	1533	10251	10251
Malaysia	1912546	1808214	2040372	2172984	1513508	1859038	1700850	2512081
Nepal	11008	11008	12008	12008	12008	12008	12008	12008
Pakistan	-10039	-10685	-17033	-13092	-18184	-7541	-8323	-8323
Papua New Guinea	80278	58859	75902	59608	84849	81723	71800	117033
Philippines	482593	435588	368785	353177	319975	220353	204593	258103
Sri Lanka	-10159	-885	-3182	-2591	-4853	-4880	-5932	-5932
Thailand	-41040	-85502	-58512	-79913	-71828	-48844	-34989	-78307
Viet Nam	-3388	-3260	-3260	-3260	-3260	-3240	-3240	-3240
ALL ASIAPACIFIC PRODUCERS	4309111	3071107	3294132	3788573	3125495	3184585	3755989	5283881
ITTO ASIAPACIFIC PRODUCERS	4198798	2958729	3209003	3818132	3022846	3082312	3608803	5138315
ALL TROPICAL-TIM PRODUCERS	5689343	4037127	4070987	4548558	3925354	3983119	4808335	6288223
ITTO TROPICAL-TIM PRODUCERS	5510195	3880284	3828335	4367881	3784843	3777138	4385457	6030298

Source: FAO AGROSTAT Database by direct access

\* Latin America/Caribbean

Table 11

Main Consuming Countries' Total Hardwood Logs and Sawwood, and Veneer and Plywood, Net Imports,  
( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
<b>EUROPE &amp; MIDEAST</b>								
*Austria	24125	21287	21286	40340	24054	19530	29025	45685
*Belgium-Luxembourg	239391	207400	183250	150572	135608	140454	75299	218190
*Denmark	60113	48484	50535	62308	94062	77107	101448	118343
*Finland	-318603	-282217	-252980	-231453	-226520	-204039	-267599	-340962
*France	411387	230155	236679	163325	90892	83578	92317	90446
*Germany, Federal Republic	957698	626373	534395	615629	554209	420254	502670	707285
*Greece	59273	46859	6809	18988	17197	17642	45391	42288
*Ireland	46798	50503	40080	33297	28412	26033	24490	24480
*Italy	895385	590558	564500	410494	481755	450919	520895	762835
*Netherlands	446325	364042	332890	360217	302970	276652	379342	438794
*Norway	83738	63175	61937	52769	52130	54155	77621	89888
*Portugal	61704	83667	70166	27824	14092	41009	61862	70530
*Spain	274715	149882	122499	135411	113267	149672	178648	197396
*Sweden	118968	71536	64774	62300	70224	68550	79930	106081
*Switzerland	81908	62159	47348	49492	58268	66600	93617	122070
*United Kingdom	564428	654504	631142	693765	627372	592068	709031	822648
*USSR	16200	50085	9105	11941	13157	10200	-13000	-41400
*Egypt	77009	94891	90130	118672	119667	127841	153127	148272
<b>MAIN EUROPE&amp;M CONSUMERS</b>	<b>4100562</b>	<b>3133343</b>	<b>2814545</b>	<b>2775899</b>	<b>2570816</b>	<b>2418025</b>	<b>2843914</b>	<b>3622889</b>
<b>ITTO EUROPE&amp;M CONSUMERS</b>	<b>4038858</b>	<b>3049676</b>	<b>2744379</b>	<b>2748075</b>	<b>2556724</b>	<b>2377016</b>	<b>2782252</b>	<b>3552359</b>
<b>NORTH AMERICA</b>								
*Canada	-88361	-12266	-97004	-63381	-41162	-15184	42627	69649
*United States	33295	86224	5275	205559	170674	242213	105980	176107
<b>ALL NORTH AMERICAN CONSUMERS</b>	<b>-55066</b>	<b>73958</b>	<b>-91729</b>	<b>142178</b>	<b>129512</b>	<b>227029</b>	<b>148607</b>	<b>245756</b>
<b>ITTO NORTH AMERICAN CONSUMERS</b>	<b>-55066</b>	<b>73958</b>	<b>-91729</b>	<b>142178</b>	<b>129512</b>	<b>227029</b>	<b>148607</b>	<b>245756</b>
<b>ASIA &amp; PACIFIC</b>								
*Australia	101339	115078	106698	68959	91632	141490	88811	92357
*China (exc. Taiwan)	65000	65010	108300	110960	154517	127140	88150	96150
*China (Taiwan Province)	227704	164636	167088	157559	270145	184484	313760	597930
*Japan	3118431	1877336	2146582	1708182	1899226	1673790	1684519	3202444
*Korea, Republic	300567	109920	288711	315742	372287	296246	306169	448568
*New Zealand	-707	-1314	3474	736	4714	4423	3206	7955
*Singapore	-124371	-53334	-79720	-97757	-114795	-156878	-152904	-195148
<b>MAIN ASIA&amp;PACIFIC CONSUMERS</b>	<b>3687963</b>	<b>2277340</b>	<b>2741133</b>	<b>2262381</b>	<b>2677726</b>	<b>2270695</b>	<b>2331711</b>	<b>4250256</b>
<b>ITTO ASIA&amp;PACIFIC CONSUMERS</b>	<b>3813041</b>	<b>2331988</b>	<b>2817379</b>	<b>2359402</b>	<b>2787807</b>	<b>2423150</b>	<b>2481409</b>	<b>4437449</b>
<b>MAIN TROPICAL-TIM CONSUMERS</b>	<b>7733459</b>	<b>5484641</b>	<b>5463949</b>	<b>5180458</b>	<b>5378054</b>	<b>4915749</b>	<b>5324232</b>	<b>8118901</b>
<b>ITTO TROPICAL-TIM CONSUMERS</b>	<b>7796833</b>	<b>5455622</b>	<b>5470029</b>	<b>5249655</b>	<b>5474043</b>	<b>5027195</b>	<b>5412268</b>	<b>8235564</b>

Source: FAO AGROSTAT Database by direct access

Table 12

Tropical Hardwood Saw & Veneer Logs, Producers' Domestic Requirements, Cubic Meters  
( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
<b>AFRICA</b>								
Angola	160000	50000	30000	31000	116000	134000	108000	198000
Benin	24000	24000	24000	24000	23000	20000	20000	32000
Botswana								
Burkina Faso	5000	5000	5000	5000	2000	1400	1400	1400
Burundi	0	0	0	0	0	0	0	0
* Cameroon	669700	1256300	1259200	1365900	1427000	1347300	1676800	1646000
Central African Republic	107600	214500	205700	172700	172100	204200	135400	113000
Chad	2000	2000	2000	2000	2000	2000	2000	2000
* Congo	322400	324400	316000	325700	338700	296800	428000	367000
* Cote d'Ivoire	1788600	1826000	1838100	1834600	1743900	1821000	1899800	1871000
Ethiopia	55000	55000	42000	42000	42000	42000	42000	42000
* Gabon	276000	293000	-24900	169000	-52200	283200	312200	-7900
Gambia	5000	5000	13000	14000	14000	14000	14000	14000
* Ghana	495100	495900	356800	512400	533000	570100	643300	491400
Guinea	160000	169800	168100	168100	168100	172000	172000	172000
Guinea, Equatorial	8000	8000	-1300	38200	-28200	83900	38700	38700
Kenya	141800	85800	92800	99900	121000	121000	121000	121000
* Liberia	210200	195600	154700	121000	133500	152300	170000	559500
Madagascar	467800	467800	467700	467700	467500	467600	466800	466600
Malawi	100000	80000	55000	40000	26000	25000	25000	25000
Mali	11000	8000	7000	7500	7300	5000	8200	10600
Mozambique	174600	245900	131200	100300	84000	58700	60700	59700
Namibia	0	0	0	0	0	0	0	0
Niger	0	0	0	0	0	0	0	0
Nigeria	5071400	6202300	5503700	4996500	5218200	5531200	5530200	5630200
Ruanda	16000	16000	17000	29000	31000	32000	32000	32000
Senegal	56700	56700	53900	49000	63200	45300	45300	45300
Sierra Leone	38000	41000	20000	20000	29000	23000	20000	20000
Somalia	35300	20400	28200	28200	28200	28200	28200	28200
Sudan	41000	41000	41000	41000	41000	41000	41000	41000
Tanzania	176000	212000	218000	218000	218000	218000	218000	218000
Togo	18200	18300	18200	18200	18200	18200	18200	18200
Uganda	70000	85000	66000	66000	66000	66000	66000	66000
Zaire	288900	267000	327000	315000	291000	337000	284000	284000
Zambia	121400	121200	121200	121200	121200	121200	121200	121200
Zimbabwe	121900	124900	110800	47400	80600	83600	51700	44700
<b>ALL AFRICAN PRODUCERS</b>	<b>11538400</b>	<b>12748900</b>	<b>11664200</b>	<b>11587600</b>	<b>11581500</b>	<b>12477200</b>	<b>12718900</b>	<b>12512700</b>
<b>ITTO AFRICAN PRODUCERS</b>	<b>4022000</b>	<b>4127500</b>	<b>3890900</b>	<b>4347700</b>	<b>4121800</b>	<b>4588700</b>	<b>4194100</b>	<b>4047600</b>
<b>ASIA &amp; PACIFIC</b>								
Belize	37100	33300	36100	24400	27700	28400	16100	16100
* Bolivia	404000	389000	213000	136000	136000	136000	136000	136000
* Brazil	18324000	18034000	16659500	17397300	17971100	17988300	18732400	18726800
Colombia	2030000	2100000	1900000	1900000	1900000	1900000	1900000	1900000
Costa Rica	1106300	984900	722700	594900	414500	313500	313500	314000
Cuba	34000	34000	34000	34000	64900	64400	64300	65700
Dominican Republic	2300	6900	3600	3600	3600	3600	3600	3600
* Ecuador	1981000	1961000	1981000	1982000	2077000	2360000	2285000	2285000
El Salvador	45000	45000	45000	39000	37000	37000	36000	36000
French Guiana	159400	169500	165800	178400	178400	178400	178400	178400
Guatemala	52400	76000	78000	44000	37000	44500	9500	9500
Guyana	168200	162300	166100	166100	161800	167200	165000	169800
Haiti	124000	124000	124000	124000	124000	124000	124000	124000
* Honduras	29600	30000	30000	25000	20000	20800	25800	25800
Jamaica	20400	17000	11000	27000	27000	40000	83000	85000
Mexico	333000	310000	309000	416000	375000	393000	374000	426000
Nicaragua	480400	480400	485000	485000	485000	484900	485000	485000
Panama	279000	279000	279000	250000	280000	278600	278800	278000
Paraguay	2073000	2073000	2073000	2073000	2358000	2362000	2846000	2948000
* Peru	1367000	1346000	1162000	1162000	1042000	1118000	1118000	1116000
Suriname	297600	228100	213600	158900	139100	176500	165800	165800
* Trinidad and Tobago	73000	73000	60000	43000	39000	32000	41000	41000
Venezuela	810000	810000	610000	810000	618000	690000	600000	600000
<b>ALL L. AMERICAN PRODUCERS *</b>	<b>20811700</b>	<b>27485400</b>	<b>27341400</b>	<b>27863600</b>	<b>28478100</b>	<b>28828100</b>	<b>29839200</b>	<b>30148300</b>
<b>ITTO L. AMERICAN PRODUCERS *</b>	<b>20158600</b>	<b>19752900</b>	<b>20065500</b>	<b>20725300</b>	<b>21285100</b>	<b>21643100</b>	<b>22336200</b>	<b>22330600</b>
<b>ASIA &amp; PACIFIC</b>								
Bangladesh	555000	555000	643000	510000	484000	487000	487000	487000
Bhutan	232600	232600	232600	232600	232600	232600	232600	232600
Burma	1860700	1550700	1710000	1281000	1572000	1565000	1658100	1658100
Fiji	200000	178000	141000	154000	140000	175000	175000	175000
* India	12526500	13138100	13770500	14423500	15107500	15830800	16150000	16611000
* Indonesia	12675300	17133400	19344500	22477500	26233700	23473500	27373500	24987804
Kanpuchea	102200	102200	105000	105000	105000	105000	105000	105000
Laos	112200	83100	124200	161000	131100	242200	179000	179000
* Malaysia	12001500	14820200	13434396	13999004	15087308	8869900	10873692	12287998
Nepal	414000	414000	414000	414000	414000	414000	414000	414000
Pakistan	300200	346600	426600	514700	937100	799500	813500	813600
* Papua New Guinea	684100	435000	851700	798000	501000	679700	772000	874000
* Philippines	5065800	3604800	2877700	3266000	2462000	2445000	2611900	3169000
Sri Lanka	183000	145000	162000	207000	165000	155000	128000	128000
* Thailand	2635400	1942500	1902300	2042900	2225100	2032000	2167700	2435100
Viet Nam	1416000	1416000	1416000	1416000	1416000	1416000	1416000	1416000
<b>ALL ASIA/PACIFIC PRODUCERS</b>	<b>51765300</b>	<b>56097300</b>	<b>57555496</b>	<b>62002204</b>	<b>65903408</b>	<b>58902204</b>	<b>65637092</b>	<b>66063200</b>
<b>ITTO ASIA/PACIFIC PRODUCERS</b>	<b>46388600</b>	<b>51074100</b>	<b>52181096</b>	<b>57006904</b>	<b>60616808</b>	<b>53330900</b>	<b>59948792</b>	<b>60474900</b>
<b>ALL TROPICAL-TIN PRODUCERS</b>	<b>91316400</b>	<b>96331600</b>	<b>96561096</b>	<b>101373404</b>	<b>105963008</b>	<b>100205500</b>	<b>108196192</b>	<b>108722200</b>
<b>ITTO TROPICAL-TIN PRODUCERS</b>	<b>70569200</b>	<b>74953600</b>	<b>76157488</b>	<b>82079904</b>	<b>86023608</b>	<b>78554700</b>	<b>87415092</b>	<b>87434100</b>

Source: FAO AGROSTAT Database by direct access

\* Latin America/Caribbean

Table 13. Tropical Nonconiferous Sawwood, Producers' Domestic Requirements, Cubic Meters  
( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
<b>AFRICA</b>								
Angola	10000	10000	8000	6000	2000	5000	5000	5000
Benin	9200	9200	9200	9200	5200	8300	11800	11800
Botswana								
Burkina Faso	19800	22900	18300	19000	13000	14850	14850	14850
Burundi	0	0	0	0	0	0	0	0
* Cameroon	296900	310400	307700	286000	461000	438200	495000	502000
Central African Republic	34200	32300	24800	21000	25900	24100	24200	22200
Chad	7100	7100	7100	1000	1000	1000	1000	1000
* Congo	32500	53900	46000	52000	41100	37000	81900	30300
* Cote d'Ivoire	387500	345200	440100	335000	261200	280200	290200	314900
Ethiopia	16000	16000	11000	11000	11000	11000	11000	11000
* Gabon	70400	84600	86400	85800	96500	103300	105000	105000
Gambia	1200	1500	1100	1100	1100	1000	1000	1000
* Ghana	90600	107100	110400	167400	163600	198700	207700	137100
Guinea	90000	91700	91300	91300	91300	91100	91100	91100
Guinea, Equatorial	2400	3500	7100	8000	10000	26900	35500	35500
Kenya	66000	66000	65200	66700	68200	66700	65500	65500
* Liberia	32000	106300	57700	54200	46800	62500	83300	306300
Madagascar	231000	233400	231400	231400	231200	231100	231100	231100
Malawi	31000	26000	23700	10700	8200	10400	12100	12000
Mal	8500	8000	8900	8900	7900	5600	10000	11700
Mozambique	42900	41400	29600	27900	23400	19800	19600	19600
Namibia								
Niger	1500	2200	5000	5000	5000	5000	5000	5000
Nigeria	2780500	2949000	2853900	2388900	2498900	2699400	2899400	2699400
Rwanda	3000	5000	8000	10000	12000	13000	13000	13000
Senegal	16400	16400	24400	20900	22600	30000	30000	30000
Sierra Leone	24300	22100	20000	18400	18700	12800	9000	9000
Somalia	15400	19900	15200	15200	15200	15200	15200	15200
Sudan	2400	2400	2400	8500	8500	8500	8500	8500
Tanzania	49600	58500	68800	79400	89400	98000	97200	87200
Togo	5100	5100	5100	5100	5100	5000	5000	5000
Uganda	16000	16000	18000	18000	16000	16000	16000	16000
Zaire	97800	85300	72700	96000	91300	95000	95000	95000
Zambia	39100	39100	39100	46100	46100	46100	46100	46100
Zimbabwe	24000	25500	17200	10600	22500	18500	-6700	-7700
ALL AFRICAN PRODUCERS	4553700	4823000	4532800	4213700	4416900	4698050	4809550	4980650
ITTO AFRICAN PRODUCERS	908900	1007500	1048300	880400	1070200	1118900	1243100	1395600
<b>LATIN AMERICA</b>								
Belize	15500	13500	13200	7900	11300	14400	8200	8200
* Bolivia	125300	125200	60200	69200	69200	69200	31900	34100
* Brazil	7577900	8142300	8651500	8904900	9290400	9329500	9728600	9527400
Colombia	895500	929000	879800	679600	691700	691700	679800	679000
Costa Rica	511900	519700	361400	289200	394200	394200	397600	356000
Cuba	68600	72500	61700	58300	54300	52500	68900	67900
Dominican Republic	47800	3800	4500	3800	7300	6300	6300	5700
* Ecuador	895300	972100	967600	1117000	1179500	1190400	1229400	1229400
El Salvador	20000	10000	10000	8000	10000	9000	9000	9000
French Guiana	18000	13300	10900	7300	7300	7300	7300	7300
Guatemala	7600	26700	41400	26000	21500	21000	-3500	-3500
Guyana	55600	55600	55600	55600	50300	56400	51300	48300
Haiti	15800	16800	14600	14600	14600	6000	6000	6000
* Honduras	5300	400	-3200	2200	2000	2400	2100	2100
Jamaica	44400	38800	36800	37200	37800	37800	37500	38200
Mexico	84000	58000	47000	83000	187500	175600	205600	194600
Nicaragua	229500	229200	229600	128300	128300	128300	128300	128300
Panama	52800	52800	52800	52800	46000	45000	45000	45000
Paraguay	364100	384000	309000	378000	489000	398100	507000	609300
* Peru	586200	439800	560300	560300	469000	525700	626500	526500
Suriname	61500	52100	42900	46700	47600	68100	60000	60000
* Trinidad and Tobago	106700	106700	106500	118500	133400	66300	83300	90400
Venezuela	401100	401100	281900	282000	282000	330100	358100	358100
ALL L. AMERICAN PRODUCERS	12191200	12863400	12605900	12930400	13622200	13821300	14172200	14025300
ITTO L. AMERICAN PRODUCERS	9296700	9986500	10342900	10772100	11143500	11183500	11601800	11409900
<b>ASIA &amp; PACIFIC</b>								
Bangladesh	180000	171100	188300	158300	153000	103800	77900	77900
Bhutan	-300	-300	-300	-300	-300	5000	5000	5000
Burma	303500	407500	575500	384700	423800	452000	410800	410800
FIJI	91100	78800	81300	68100	67100	77000	77000	77000
* India	9252800	10167900	11172900	12281900	13488900	14832300	14834400	14837900
* Indonesia	3594100	4078800	5571600	4503100	4401600	4698000	4758000	6333600
Kampuchea	43000	43000	43000	43000	43000	43000	43000	43000
Laos	16400	13800	15500	21800	22200	15500	14200	14200
* Malaysia	3301800	2936300	3288900	3814800	3089000	2720000	2520900	2386800
Nepal	210000	210000	210000	210000	210000	210000	210000	210000
Pakistan	23000	35000	95800	87400	111600	72000	65500	65500
* Papua New Guinea	87800	54200	56800	58000	60200	58200	67000	70000
* Philippines	787300	872100	609300	494100	663100	555000	483400	594600
Sri Lanka	27100	29200	19000	27600	27500	31900	23300	23300
* Thailand	1867700	1331500	1230400	1314500	1398400	1172900	1182000	1442400
Viet Nam	413000	372100	338100	307100	307100	307000	307000	307000
ALL ASIA&PACIFIC PRODUCERS	20198300	20601000	23480600	23773900	24476000	25555400	25079400	28899000
ITTO ASIA&PACIFIC PRODUCERS	18891500	19240800	21934400	22466400	23111200	24238200	23845700	25665300
ALL TROPICAL-TIM PRODUCERS	36943200	38287400	40829300	40918000	42515100	43874750	44081150	45884950
ITTO TROPICAL-TIM PRODUCERS	29098100	30234800	33325600	34218900	35324900	36540600	36690600	38470800

Source: FAO AGROSTAT Database by direct access

\* Latin America/Caribbean

Table 14. Tropical Plywood, Producers' Domestic Requirements, Cubic Meters  
( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
<b>AFRICA</b>								
Angola	3000	2500	3000	4100	4500	5000	4000	4900
Benin	1500	1500	1500	1500	1500	1500	1500	1500
Botswana								
Burkina Faso	1400	1800	1800	1200	2000	2000	2000	2000
Burundi	400	300	500	400	200	400	400	400
* Cameroon	3100	1200	1300	-200	2500	0	10000	10000
Central African Republic	700	900	1700	900	1200	1300	2200	1400
Chad	900	900	900	900	900	900	900	900
* Congo	3800	2600	3700	4800	5500	6700	6700	4800
* Cote d'Ivoire	49000	13200	8300	13000	7800	24200	16800	22100
Ethiopia	3000	3000	2200	1900	1900	1700	1700	1700
* Gabon	53300	31000	68000	60000	56500	84800	84800	84800
Gambia	600	600	400	200	200	200	200	200
* Ghana	47500	42900	38700	26100	25800	20100	24300	24200
Guinea	2000	2000	2000	2000	2000	2000	2000	2000
Guinea, Equatorial								
Kenya	24900	15100	15800	18300	21100	21400	21300	21300
* Liberia	4900	300	0	1100	1100	1100	3000	3000
Madagascar	900	400	100	100	0	0	0	0
Malawi	6800	4900	4600	3600	2600	3500	3200	2800
Mali	1000	1000	1100	700	700	700	500	500
Mozambique	1000	3300	300	-2000	-900	-1400	-1400	-1400
Namibia								
Niger	400	400	400	400	400	400	400	400
Nigeria	131600	214600	214600	218300	167800	181900	191900	191900
Rwanda	2591	3038	3423	2823	3323	3323	3323	3323
Senegal	6000	6000	4500	4500	5300	4800	4800	4800
Sierra Leone	1400	1400	1400	1000	400	400	1000	1000
Somalia								
Sudan	1300	3800	3600	3900	3900	3900	3900	3900
Tanzania	3100	2600	1900	2000	2000	2000	2000	2000
Togo	0	0	0	0	0	0	0	0
Uganda	1100	1100	4100	5100	5900	5900	5900	5900
Zaire	14100	17100	18100	16200	20900	20900	20900	20900
Zambia	10500	8600	12900	12900	13900	11900	14900	14900
Zimbabwe	10900	11400	12400	7800	5500	5900	9300	9300
ALL AFRICAN PRODUCERS	392691	399438	433523	411523	366523	397423	442423	444523
ITTO AFRICAN PRODUCERS	161600	81200	120000	104800	99200	136900	145600	148900
<b>LATIN AMERICA</b>								
Belize	1100	1300	1300	1400	1400	1300	2100	2100
* Bolivia	4400	3500	2500	3900	-100	900	2900	6900
* Brazil	728300	789300	820900	755000	696100	672900	684000	676800
Colombia	63000	65200	57800	47200	35900	35900	35900	35200
Costa Rica	25300	15400	23000	15100	18900	18600	17900	25000
Cuba	30500	30500	41200	49700	50400	41800	60000	85200
Dominican Republic	4200	4200	4200	4200	11000	11200	11200	11200
* Ecuador	8300	38700	47400	77000	76000	74000	69700	69700
El Salvador	3300	9200	4600	4600	4600	4600	300	200
French Guiana	500	400	400	1200	1200	1200	1200	1200
Guatemala	8600	6400	4500	4500	2000	3400	3000	3000
Guyana	700	300	700	700	700	700	700	700
Haiti	0	0	0	0	0	0	0	0
* Honduras	9800	7400	2900	5500	7800	7000	8000	8000
Jamaica	4800	32700	9300	12300	7400	7400	3800	9500
Mexico	249400	312900	320100	279200	287600	272000	274000	288000
Nicaragua	9300	11200	19000	10700	10700	10700	10700	10700
Panama	13800	13100	13000	12000	9000	12200	12300	12300
Paraguay	-19500	-8600	-8600	2700	2800	2600	2500	-1150
* Peru	47600	39200	36400	21200	29200	19900	22900	22900
Suriname	3200	4300	7500	8100	6500	9700	4400	4400
* Trinidad and Tobago	41500	41500	74000	84000	30600	29100	54400	37200
Venezuela	81200	95200	70200	80200	80200	48600	54700	54700
ALL L. AMERICAN PRODUCERS *	1319100	1513300	1552300	1480400	1369900	1285700	1336600	1343750
ITTO L. AMERICAN PRODUCERS *	839700	919600	984100	926800	839800	803800	841900	821500
<b>ASIA &amp; PACIFIC</b>								
Bangladesh	1000	1000	1200	1200	1200	1200	1200	1200
Bhutan	300	300	0	0	0	0	0	0
Burma	12000	15000	15000	15000	15000	15000	15000	15000
Fiji	3700	3400	3100	3700	3400	3300	3300	3300
* India	192700	273700	294100	294100	354100	354100	355700	355800
* Indonesia	768200	794700	1255700	1034100	580000	831200	1143300	1312100
Kampuchea	1800	1800	1800	1800	1800	1800	1800	1800
Laos	1700	3200	5000	5000	5000	5000	5000	5000
* Malaysia	149000	166900	416800	491200	415200	380200	290900	208900
Nepal								
Pakistan	4200	4600	4600	3700	3200	3900	3900	3900
* Papua New Guinea	4000	1200	2700	4000	4000	7900	8800	8800
* Philippines	185800	64800	185400	157500	235500	87600	189200	256800
Sri Lanka	32900	13800	16000	21200	22500	22000	15300	15300
* Thailand	87600	103100	159800	165000	184700	169300	164700	99200
Viet Nam	18200	21200	23200	49200	40200	40200	40200	40200
ALL ASIAPACIFIC PRODUCERS	1463100	1468600	2384400	2246700	1845800	1922700	2238300	2327300
ITTO ASIAPACIFIC PRODUCERS	1387300	1404300	2314500	2145900	1753500	1830300	2162600	2241600
ALL TROPICAL-TIN PRODUCERS	3174891	3381338	4370223	4118623	3582223	3605823	4017323	4115573
ITTO TROPICAL-TIN PRODUCERS	2388600	2415100	3418600	3177300	2692300	2771000	3140100	3212000

Source: FAO AGROSTAT Database by direct access

\* Latin America/Caribbean

Table 15

Plywood, Main Consumers' Domestic Requirements, Thousand Cubic Meters  
( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
Japan	8009.5	7027.3	6686.2	7235	7135	7292	7618	7618
Austria	21.1	17	17.6	17.7	18.7	8.1	24.2	49
Belgium-Luxembourg	151.3	162	144	158	144	159	212	217
Denmark	119.4	112.3	78.9	105.6	131.2	128.1	169.7	130.4
Finland	116	86	96	104.4	117.1	105.7	119.6	116.6
France	692.4	620.1	596.6	578.5	545.9	568.4	636.8	599.9
Germany, Federal Republic	863.6	759.9	697.9	744.6	766.9	673.1	780.2	800.8
Greece	47.1	60.8	31.9	30.3	77	62	72.6	55.3
Ireland	-	-	-	-	-	-	-	-
Italy	437	522.2	423.9	310	353	368	392	416
Netherlands	490.8	461.2	383.9	425.9	432.2	444	533.5	511.2
Norway	74.4	73.7	74.4	71.1	68.7	83.5	102.2	90.1
Portugal	12	11.7	22	14.1	19.1	12.8	15	15
Spain	126.8	74.9	108	67	64	75	120	127
Sweden	179.7	140.6	138.6	137.2	149.6	143.2	141.3	157.8
Switzerland	96.5	89	88.8	96.2	101	110.7	119.7	131.5
United Kingdom	709.4	980.8	889.3	1109	1012	1033	1190	1189.6
USSR	1759.5	1748.4	1711.8	1810.6	1795.1	1819.2	1890.2	1844.9
Canada	1870.7	1923.9	1332.8	1761	1466.7	1586.9	1727.8	2115.9
United States	15610.2	17088.9	13955.1	18164.2	19014.9	20174.8	21741.9	22714.7
Japan	8009.5	7027.3	6686.2	7235	7135	7292	7618	7618
Europe incl. USSR	5897	5920.6	5503.6	5780.2	5795.5	5793.8	6519	6452.1
North America	17480.9	19012.8	15287.9	19925.2	20481.6	21761.7	23469.7	24830.6
Main Consumers Total	31387.4	31960.7	27477.7	32940.4	33412.1	34847.5	37606.7	38900.7

Source: ECE TIMBER Database by magnetic media transfer

Table 16a

Tropical Nonconiferous Saw & Veneer Logs, Main Consumers' Domestic Requirements, 1000 m<sup>3</sup>  
( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
Japan	19148	15323.4	15193.8	14254	13367.7	13312	13312	13312
Austria	36	12	10.9	7.8	7.1	6	6.3	4.5
Belgium-Luxembourg	135.6	89	93	97	130	125	96	63
Denmark	13.3	12.6	10	12.2	14	11.1	6.5	0.5
Finland	-	-	-	-	-	-	-	-
France	1690.4	1391.7	1262.5	1286	1220.6	1073	1042	924
Germany, Federal Republic	752.9	534.7	490.3	538.9	451.4	420.5	410.7	352.7
Greece	265	225	72.2	122.8	115.1	104.5	184.3	145
Ireland	2.4	2	1	-	-	-	-	-
Italy	1277.3	978.6	899.1	752.1	815	646	535	534
Netherlands	150.9	117.2	107.8	97.7	113.2	116	118.1	102.9
Norway	-	-	-	-	-	-	-	-
Portugal	204	228	441	294.4	304.7	351.4	379	352
Spain	748	399	340.6	440.5	420	458	443	448
Sweden	8.4	8.3	7.8	7.3	6.9	5	6	5.4
Switzerland	71.2	54	33	23	25	22	27	25
United Kingdom	115.5	93.8	73.2	82.6	49	44	43	50
USSR	195.2	257.6	177.5	163.8	193.3	207	158.3	163.9
Canada	-	-	-	-	-	0.2	0.1	0.2
United States	4.7	7.9	6.7	13.7	12.7	79.8	32.5	12.5
Japan	19148	15323.4	15193.8	14254	13367.7	13312	13312	13312
Europe incl. USSR	5666.1	4403.5	4019.9	3916.1	3865.3	3589.5	3455.2	3170.9
North America	4.7	7.9	6.7	13.7	12.7	80	32.6	12.7
Main Consumers Total	24818.8	19734.8	19220.4	18183.8	17245.7	16981.5	16799.8	16495.6

Source: ECE TIMBER Database by magnetic media transfer

Table 16b

Tropical Nonconiferous Sawwood, Main Consumers' Domestic Requirements, 1000 m<sup>3</sup>  
 ( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
Japan	507.7	435.7	606.2	660.7	644	925.7	925.7	925.7
Austria	59	55	40.7	50.4	47.5	38.3	38.1	38
Belgium-Luxembourg	169	103	127	141	137	137	197.9	244
Denmark	27.6	29.8	28.4	31.7	28.9	42.4	18.1	16.7
Finland	7.7	5.6			10	10	9	7.9
France	519.5	356	390.8	342.8	295.2	366	366	989
Germany, Federal Republic	631.5	409.1	381.7	536.4	455.8	379.4	404.9	530.3
Greece	1.7		20.6	1.1	5.4	10.7	14.4	92
Ireland	58.6	70.4	60.2	55.7	43	46	44	44
Italy	342.7	222.8	372.4	267.7	339.7	365.2	384	473
Netherlands	347.5	393.2	356.7	498	353.2	387	494.4	632
Norway	17.1	10.3	9.9	7.9	8.2	8.8	8.9	6.8
Portugal	6.6	18.5	31	13	10	12	21	22
Spain	209	126	117.4	143.2	144.8	145	198	253
Sweden	17	9.3	9.6	14.8	9.6	10.9	3.2	7.8
Switzerland	28.6	26.8	6	6	7	8	9	8
United Kingdom	404.3	405.5	394.5	586	491	481	508	718
USSR			0.7		0.3		0.2	0.2
Canada	86	258.8	20.9	21.1	36.6	35.7	43.6	65
United States	233.4	489.3	296.9	393.3	499.3	526.3	473	720.9
Japan	507.7	435.7	606.2	660.7	644	925.7	925.7	925.7
Europe incl. USSR	2847.4	2241.3	2347.6	2695.7	2386.6	2447.7	2719.1	4082.7
North America	319.4	748.1	317.8	414.4	535.9	562	516.6	785.9
Main Consumers Total	3674.5	3425.1	3271.6	3770.8	3566.5	3935.4	4161.4	5794.3

Source: ECE TIMBER Database by magnetic media transfer



Table 17a

Log Consumption by Species Groups, Main Consumers' Domestic Requirements, Percent  
( Prepared in ITTO Data Processing Center, Yokohama )

	Tropical Nonconiferous			Temperate Nonconiferous			Coniferous		
	1980	1985	1987	1980	1985	1987	1980	1985	1987
Japan	33.11	28.29	26.43	6.50	6.09	5.77	60.39	65.62	67.80
Austria	0.34	0.06	0.04	11.92	13.26	12.61	87.74	86.68	87.34
Belgium-Luxembourg	10.46	9.06	3.95	49.57	43.15	42.81	39.98	47.79	53.23
Denmark	1.12	0.97	0.05	41.96	49.40	47.21	56.92	49.62	52.75
Finland				6.38	7.55	7.80	93.62	92.45	92.20
France	8.51	5.79	4.62	38.52	36.53	37.89	52.96	57.69	57.49
Germany, Federal Republic	3.98	2.55	2.11	21.08	21.64	21.19	74.95	75.81	76.70
Greece	35.16	17.38	20.49	22.86	27.08	27.73	41.99	55.54	51.77
Ireland	0.95			6.91	2.14	1.49	92.14	97.86	98.51
Italy	18.02	11.89	10.03	47.98	52.78	55.76	34.00	35.33	34.21
Netherlands	28.16	16.13	12.87	42.27	47.01	47.25	29.58	36.86	39.88
Norway				0.46	0.21	1.73	99.54	99.79	98.27
Portugal	4.98	8.53	8.07	11.38	6.20	5.25	83.64	85.27	86.69
Spain	18.00	9.97	8.90	23.46	12.08	11.46	58.53	77.96	79.64
Sweden	0.04	0.02	0.02	1.56	1.62	1.55	98.40	98.36	98.43
Switzerland	3.35	1.03	1.09	8.56	9.62	8.71	88.09	89.35	90.20
United Kingdom	4.23	1.45	1.61	34.92	17.50	13.84	60.85	81.05	84.55
USSR	0.13	0.14	0.11	14.58	14.63	14.75	85.29	85.23	85.13
Canada		0.00	0.00	4.98	4.52	4.88	95.02	95.48	95.12
United States	0.00	0.04	0.01	18.55	14.32	15.07	81.45	85.64	84.92
Japan	33.11	28.29	26.43	6.50	6.09	5.77	60.39	65.62	67.80
Europe incl. USSR	2.11	1.37	1.20	16.18	15.67	15.90	81.71	82.96	82.90
North America	0.00	0.02	0.00	13.60	10.76	11.66	86.40	89.22	88.34
Main Consumers Total	3.94	2.66	2.40	14.05	12.43	12.85	82.02	84.91	84.75

Source: ECE TIMBER Database by magnetic media transfer

Table 17b

Sawwood Consumption by Species Groups, Consumers' Domestic Requirements, Percent  
( Prepared in ITTO Data Processing Center, Yokohama )

	Tropical			Temperate			Coniferous		
	1980	1985	1987	1980	1985	1987	1980	1985	1987
Japan	1.20	2.76	2.61	16.58	13.89	13.80	82.22	83.35	83.59
Austria	2.05	1.31	1.36	12.43	7.20	8.14	85.52	91.49	90.50
Belgium-Luxembourg	8.76	7.82	10.83	26.73	27.04	20.85	64.51	65.15	68.32
Denmark	1.45	1.98	0.77	18.25	18.54	14.52	80.30	79.48	84.71
Finland	0.23	0.41	0.30	2.01	2.31	2.90	97.76	97.28	96.81
France	4.27	3.63	8.93	28.62	26.59	21.86	67.11	69.78	69.22
Germany, Federal Republic	4.20	3.14	4.09	13.15	12.38	11.99	82.64	84.48	83.92
Greece	0.18	1.56	9.72	24.01	17.83	19.14	75.80	80.61	71.14
Ireland	10.03	8.83	8.13	2.02	0.58	1.11	87.96	90.60	90.76
Italy	4.13	5.12	6.75	29.71	29.12	27.83	66.16	65.76	65.42
Netherlands	10.87	13.19	19.74	12.59	14.66	9.44	76.54	72.15	70.82
Norway	0.70	0.34	0.23	2.21	1.68	1.70	97.09	97.98	98.07
Portugal	0.56	1.59	2.13	15.94	35.36	27.25	83.50	63.05	70.63
Spain	6.76	4.55	6.75	25.84	28.37	26.30	67.40	67.07	66.95
Sweden	0.30	0.29	0.19	4.27	7.11	6.41	95.43	92.60	93.41
Switzerland	1.38	0.37	0.36	7.36	9.39	9.60	91.26	90.24	90.04
United Kingdom	4.91	5.56	6.61	9.76	6.27	4.46	85.33	88.17	88.93
USSR	0.00	0.00	0.00	13.40	13.47	13.32	86.60	86.53	86.68
Canada	0.52	0.21	0.30	10.84	8.66	6.38	88.64	91.12	93.32
United States	0.25	0.45	0.53	18.24	11.51	13.27	81.50	88.05	86.19
Japan	1.20	2.76	2.61	16.58	13.89	13.80	82.22	83.35	83.59
Europe incl. USSR	1.73	1.58	2.48	14.80	14.50	13.55	83.46	83.92	83.97
North America	0.29	0.42	0.50	17.12	11.15	12.31	82.59	88.43	87.18
Main Consumers Total	1.17	1.22	1.62	15.84	13.03	13.03	82.99	85.75	85.34

Source: ECE TIMBER Database by magnetic media transfer

Table 18 . Tropical Nonconiferous Sawlogs & Veneer Logs, Export Unit Values, U.S. Dollars per Cubic Meter  
( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
AFRICA								
Angola								
Benin								
Botswana								
Burkina Faso								
Burundi								
* Cameroon	153.20	125.13	102.30	88.06	67.23	86.23	89.98	107.83
Central African Republic	198.77	211.61	165.78	151.97	154.84	180.00	218.79	219.51
Chad								
* Congo	158.91	129.20	104.95	103.84	104.00	104.35	137.49	165.29
* Cote d'Ivoire	160.43	128.56	97.67	88.96	83.78	93.77	118.69	131.39
Ethiopia								
* Gabon	120.94	103.74	84.26	92.91	72.19	84.21	116.43	91.13
Gambia								
* Ghana	118.19	81.16	65.21	69.98	73.43	73.52	104.36	104.95
Guinea		117.65	100.72	100.72	100.72	100.00	100.00	100.00
Guinea, Equatorial	137.50	107.41	103.88	101.87	97.53	86.98	141.86	141.86
Kenya	175.00	175.00	260.00	260.00				
* Liberia	176.92	180.94	161.10	125.66	122.99	129.49	132.36	138.07
Madagascar	345.00	347.50	346.67	346.67	172.00	115.00	188.57	188.57
Malawi								
MalI								
Mozambique	288.25	324.27	350.00	367.14	513.64	494.62	494.62	494.62
Namibia								
Niger	80.21	79.88	80.03	103.17	100.02	100.02	100.02	100.02
Nigeria								
Rwanda								
Senegal								
Sierra Leone								
Somalia								
Sudan								
Tanzania								
Togo								
Uganda								
Zaire	125.57	125.86	128.30	118.38	68.72	58.60	62.50	62.50
Zambia								
Zimbabwe	115.00	86.67		49.23	48.71	48.71	43.08	43.08
ALL AFRICAN PRODUCERS	153.53	126.62	99.46	94.09	82.48	92.68	116.60	113.36
ITTO AFRICAN PRODUCERS	152.63	124.36	97.87	92.24	80.73	92.09	116.81	113.84
LATIN AMERICA								
Belize	83.88	194.00	81.11	111.67	243.33	250.00	252.63	252.63
* Bolivia								
* Brazil	212.86	222.95	171.25	216.19	67.29	85.15	117.77	114.21
Colombia								
Costa Rica	170.00	170.00	153.33	260.00	292.00	292.00	292.00	
Cuba								
Dominican Republic		170.00						
* Ecuador								
El Salvador								
French Guiana	68.70	89.79	90.91	96.67	96.67	96.67	96.67	96.67
Guatemala						171.33	138.67	138.67
Guyana	134.07	107.78	131.78	131.78	82.86	127.29	110.25	240.27
Haiti								
* Honduras	275.00						300.00	300.00
Jamaica								
Mexico								
Nicaragua	319.78	319.78				400.00		
Panama				12.50	11.68	42.50	150.00	150.00
Paraguay								
* Peru								
Suriname	72.72	67.51	87.27	88.77	88.09	141.87	170.00	170.00
* Trinidad and Tobago								
Venezuela								
ALL L. AMERICAN PRODUCERS	116.38	117.35	113.08	81.26	56.21	108.39	127.44	195.91
ITTO L. AMERICAN PRODUCERS	216.22	222.95	171.25	216.19	67.29	85.15	121.56	118.04
ASIA & PACIFIC								
Bangladesh								
Bhutan	29.32	29.32	29.32	29.32	29.32	29.32	29.32	29.32
Burma	544.99	544.99	546.08	552.85	421.28	547.98	636.32	636.32
Fiji								
* India	694.44	622.63	290.55	290.55	290.55	290.00	4.75	4.75
* Indonesia	99.06	93.42	100.58	99.09	89.89	94.68	94.68	111.20
Kampuchea	12.14	12.14						
Laos	460.67	454.55	455.88	663.80	406.87	248.82	293.79	293.79
* Malaysia	79.53	66.75	75.01	75.00	54.00	56.56	58.15	72.42
Nepal	87.30	87.30	95.24	95.24	95.24	95.24	95.24	95.24
Pakistan								
* Papua New Guinea	72.41	62.52	83.22	51.83	80.43	50.25	53.27	80.54
* Philippines	129.00	108.00	104.00	94.00	104.01	90.00	73.90	75.00
Sri Lanka	135.00							
* Thailand	418.57	396.62	396.83					
Viet Nam								
ALL ASIA&PACIFIC PRODUCERS	91.95	78.08	81.70	80.53	63.74	60.99	62.67	76.50
ITTO ASIA&PACIFIC PRODUCERS	90.69	76.43	79.66	77.91	60.79	57.33	58.08	72.76
ALL TROPICAL-TIM PRODUCERS	101.64	85.75	84.54	82.68	87.41	66.17	70.74	81.29
ITTO TROPICAL-TIM PRODUCERS	100.15	83.84	82.39	80.10	84.56	62.65	66.01	77.49

Source: FAO AGROSTAT Database by direct access

\* Latin America/Caribbean

Table 19

Total Hardwood Sawlogs and Veneer Logs, Import Unit Values, U.S. Dollars per Cubic meter  
( Prepared in ITTO Data Processing Center, Yokohama )

EUROPE & MIDEAST	1980	1981	1982	1983	1984	1985	1986	1987
* Austria	97.82	81.10	68.20	60.03	54.32	52.80	78.22	107.87
* Belgium-Luxembourg	217.75	217.97	217.92	163.93	161.06	151.87	179.64	198.54
* Denmark	135.18	116.13	116.36	89.21	88.97	69.67	85.33	92.04
* Finland	40.75	49.50	50.00	43.50	45.05	48.01	59.21	58.94
* France	209.93	166.93	151.33	137.35	137.51	145.66	178.13	195.82
* Germany, Federal Republic	278.36	237.65	220.25	185.49	203.38	191.92	238.29	304.51
* Greece	229.03	199.68	169.71	153.00	152.79	171.43	208.51	220.75
* Ireland	369.70	279.00	297.33	311.67	312.00	246.00	246.00	246.00
* Italy	168.28	137.96	138.00	112.27	104.86	111.42	137.43	160.81
* Netherlands	154.71	130.40	129.82	117.37	104.57	99.31	134.74	140.31
* Norway	118.89	122.74	123.87	124.42	229.00	205.56	47.98	49.05
* Portugal	201.84	181.36	149.26	130.06	84.64	153.78	178.98	197.93
* Spain	204.60	157.56	131.85	125.50	118.48	126.95	127.09	127.03
* Sweden	258.89	201.20	178.11	230.28	215.15	177.27	20.27	192.76
* Switzerland	193.86	148.51	123.77	129.21	121.85	127.47	155.59	176.41
* United Kingdom	230.56	191.73	190.39	173.66	166.43	213.48	246.31	405.61
* USSR	165.13	188.04	145.33	145.12	145.00	144.93	145.57	146.43
* Egypt								
MAIN EUROPE&ME CONSUMERS	202.52	168.37	155.88	136.14	130.83	136.89	163.81	183.67
ITTO EUROPE&ME CONSUMERS	202.55	167.44	156.39	136.43	133.30	135.77	162.44	182.81
NORTH AMERICA								
* Canada	34.95	48.41	60.34	61.94	62.21	57.73	59.90	83.03
* United States	46.04	44.27	42.32	35.05	37.40	32.92	33.95	52.15
ALL NORTH AMERICAN CONSUMERS	36.38	47.80	55.90	55.46	58.44	52.20	55.09	62.11
ITTO NORTH AMERICAN CONSUMERS	36.38	47.80	55.90	55.46	56.44	52.20	55.09	62.11
ASIA & PACIFIC								
* Australia	375.00	360.00	174.44	236.00	150.00	235.00	182.22	302.86
* China (exc. Taiwan)	63.06	65.02	93.31	92.86	93.00	66.92	70.00	71.43
* China (Taiwan Province)	110.10	102.88	106.04	87.32	95.31	74.88	78.08	106.24
* Japan	154.58	115.42	130.54	109.77	125.16	101.28	105.09	161.45
* Korea, Republic	142.77	115.05	112.19	93.77	101.10	89.16	61.86	113.70
* New Zealand	573.08	415.00	419.15	326.67	326.25	300.00	615.71	772.76
* Singapore	100.58	116.00	117.00	140.00	141.94	206.56	207.30	207.84
MAIN ASIA&PACIFIC CONSUMERS	139.89	112.39	122.16	102.79	114.92	93.92	90.81	141.11
ITTO ASIA&PACIFIC CONSUMERS	141.32	112.26	122.20	101.97	114.53	93.31	90.00	140.85
MAIN TROPICAL-TIM CONSUMERS	151.87	123.42	128.19	108.82	117.26	102.47	105.45	148.08
ITTO TROPICAL-TIM CONSUMERS	152.90	122.74	128.01	108.08	117.36	101.33	103.90	147.14

Source: FAO AGROSTAT Database by direct access

Table 20 . Tropical Nonconiferous Sawwood, Export Unit Values, U.S. Dollars per Cubic Meter  
( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
<b>AFRICA</b>								
Angola								
Benin								
Botswana								
Burkina Faso								
Burundi								
* Cameroon	256.93	211.65	162.99	151.31	150.90	148.29	164.80	236.03
Central African Republic	262.01	233.82	167.72	156.63	171.71	219.87	272.58	272.58
Chad								
* Congo	361.51	282.23	247.35	213.45	209.71	283.27	310.93	365.90
* Cote d'Ivoire	263.07	210.09	186.23	185.90	166.29	156.82	210.78	265.20
Ethiopia								
* Gabon	198.86	95.86	210.63	210.91	156.00	185.19	128.00	128.00
Gambia								
* Ghana	334.47	226.35	167.68	180.42	178.21	175.31	175.95	176.40
Guinea								
Guinea, Equatorial	160.00	170.00	193.16	178.00	172.00	94.19	96.46	96.46
Kenya	188.00	188.00	88.57	76.92	139.44	102.31	100.00	100.00
* Liberia	258.22	291.32	224.86	265.65	147.58	233.54	266.75	291.28
Madagascar		220.00	200.00	200.00	200.00			
Malawi								
Mali								
Mozambique	250.00	433.33	480.00	366.36	366.67	440.00	440.00	440.00
Namibia								
Niger								
Nigeria	166.67	170.00	181.82	181.82	181.82	183.33	183.33	183.33
Rwanda								
Senegal								
Sierra Leone				420.00	260.00	147.50	48.67	48.67
Somalia								
Sudan								
Tanzania	355.00	446.67	465.00	563.33	563.33	320.75	170.13	170.13
Togo								
Uganda	86.67							
Zaire	166.67	170.00	170.00	283.33	119.26	107.69	107.69	107.69
Zambia								
Zimbabwe	480.00	332.20	167.62	259.17	256.59	256.59	253.44	253.44
ALL AFRICAN PRODUCERS	271.13	223.09	185.72	187.67	166.67	165.93	203.31	239.94
ITTO AFRICAN PRODUCERS	275.90	220.25	186.21	184.90	166.87	163.14	204.62	246.09
<b>LATIN AMERICA</b>								
Belize	261.11	340.00	340.42	327.07	365.93	277.50	221.25	221.25
* Bolivia	209.48	228.97	230.11	231.09	231.09	231.09	237.36	320.40
* Brazil	230.20	272.70	256.94	282.45	261.65	243.37	259.41	351.06
Colombia	233.82	408.72	245.50	176.88	151.82	151.82	151.82	152.50
Costa Rica	200.00	219.57	175.00	231.88	252.07	251.21	252.92	
Cuba								
Dominican Republic								
* Ecuador	516.62	521.01	519.23	521.74	521.31	372.57	390.86	390.86
El Salvador								
French Guiana	194.00	232.81	209.88	156.41	156.41	156.41	156.41	156.41
Guatemala	150.91	163.80	190.29	183.67	197.78	187.75	123.13	123.13
Guyana	256.32	256.32	256.32	256.32	256.70	286.98	314.71	314.71
Haiti								
* Honduras	141.76	151.52	152.68	185.00	185.00	360.00	385.00	385.00
Jamaica	40.00							
Mexico								
Nicaragua	104.00	100.00	112.58	137.14	137.14	137.14	137.14	137.14
Panama								
Paraguay	183.08	184.15	184.12	184.13	184.07	183.95	227.11	353.46
* Peru	190.69	370.41	348.62	348.62	312.00	323.91	275.33	275.33
Suriname	261.76	258.09	290.49	237.95	257.04	227.76	261.33	281.33
* Trinidad and Tobago	210.00	210.00	60.00	100.00			20.00	62.50
Venezuela								
ALL L. AMERICAN PRODUCERS *	216.41	247.77	229.72	252.56	238.37	220.83	248.07	343.30
ITTO L. AMERICAN PRODUCERS *	229.59	274.27	260.46	292.91	278.11	249.45	264.18	349.41
<b>ASIA &amp; PACIFIC</b>								
Bangladesh								
Bhutan	40.57	40.57	40.57	40.57	40.57			
Burma	586.45	586.45	589.57	598.87	651.43	706.79	754.84	754.84
Fiji	269.68	260.00	246.50	231.87				
* India	390.00	429.09	430.00	430.00	430.00	409.09	409.09	409.09
* Indonesia	214.55	161.05	150.79	158.89	152.97	154.48	209.22	221.40
Kampuchea								
Laos	109.76	111.82	107.69	130.88	128.95	182.00	145.56	145.56
* Malaysia	185.64	153.20	159.72	171.00	170.00	148.11	160.15	171.77
Nepal								
Pakistan								
* Papua New Guinea	204.00	225.55	224.76	189.45	208.65	202.43	214.29	200.00
* Philippines	244.39	229.98	209.41	204.80	198.47	178.35	209.68	240.55
Sri Lanka	957.14	957.14						
* Thailand	250.00	355.71	250.71	230.00	290.00	921.52	736.46	315.89
Viet Nam								
ALL ASIA&PACIFIC PRODUCERS	209.30	175.93	168.58	180.93	172.11	181.42	193.57	202.61
ITTO ASIA&PACIFIC PRODUCERS	201.15	165.17	163.81	171.57	166.20	155.31	188.02	198.04
ALL TROPICAL-TIM PRODUCERS	215.77	191.49	178.47	189.41	179.74	169.14	199.82	218.86
ITTO TROPICAL-TIM PRODUCERS	210.57	182.17	173.48	181.42	174.57	162.84	184.34	211.65

Source: FAO AGROSTAT Database by direct access

\* Latin America/Caribbean

Table 21

Total Hardwood Sawwood (NC), Import Unit Values, U.S. Dollars per Cubic meter  
( Prepared in ITTO Data Processing Center, Yokohama )

EUROPE & MIDEAST	1980	1981	1982	1983	1984	1985	1986	1987
* Austria	382.80	363.33	349.89	340.48	288.55	271.77	272.10	338.45
* Belgium-Luxembourg	425.53	424.69	426.02	335.24	299.35	286.86	150.16	357.15
* Denmark	342.27	393.91	394.74	377.39	376.64	275.03	378.36	449.23
* Finland	535.72	536.35	458.14	485.14	456.68	452.81	523.06	567.39
* France	380.95	375.06	331.70	305.07	294.67	291.19	322.68	376.66
* Germany, Federal Republic	432.74	379.51	349.53	345.63	314.91	296.03	348.91	410.10
* Greece	160.58	302.70	225.77	226.57	211.87	226.97	270.82	312.91
* Ireland	390.78	337.99	338.60	307.83	310.00	262.97	275.86	275.86
* Italy	329.31	281.18	280.96	246.72	229.64	185.77	278.19	353.20
* Netherlands	402.49	336.54	336.02	308.21	289.79	248.12	293.07	335.38
* Norway	488.90	437.36	440.18	397.53	406.94	413.85	484.23	473.35
Portugal	289.43	266.70	190.09	206.34	204.72	238.19	265.96	325.52
* Spain	269.79	228.29	200.35	186.59	172.37	191.58	192.00	192.43
* Sweden	500.89	450.68	385.21	360.35	349.07	360.63	461.85	544.42
* Switzerland	386.39	343.04	327.90	333.15	282.79	292.06	403.16	485.52
* United Kingdom	364.23	379.74	380.00	339.39	370.70	334.82	376.26	406.47
* USSR	198.28	315.27	357.08	356.76	357.06	356.69	359.15	359.17
* Egypt	227.34	259.63	219.73	190.82	191.29	190.71	193.33	193.08
MAIN EUROPE&ME CONSUMERS	364.10	338.92	325.41	300.76	285.83	258.09	295.34	355.32
ITTO EUROPE&ME CONSUMERS	364.27	339.31	326.25	301.00	286.06	258.14	295.46	355.45
NORTH AMERICA								
* Canada	182.78	151.55	214.90	204.44	222.72	220.31	237.28	252.85
* United States	213.05	220.62	205.43	258.61	219.34	206.38	199.24	219.38
ALL NORTH AMERICAN CONSUMERS	197.15	181.25	209.93	229.99	220.96	212.53	217.79	234.48
ITTO NORTH AMERICAN CONSUMERS	197.15	181.25	209.93	229.99	220.96	212.53	217.79	234.48
ASIA & PACIFIC								
* Australia	264.54	283.21	272.68	235.96	246.59	387.28	236.69	265.92
* China (exc. Taiwan)								
* China (Taiwan Province)	233.97	215.85	206.61	228.90	229.94	201.05	256.02	273.03
* Japan	360.94	345.90	305.78	260.94	301.61	270.83	275.87	334.78
* Korea, Republic			246.31	231.19	284.89	259.52	190.26	210.17
New Zealand	388.74	435.34	434.64	347.17	323.54	349.95	345.09	364.55
Singapore	138.63	134.55	117.24	114.74	121.29	121.01	121.39	137.74
MAIN ASIA&PACIFIC CONSUMERS	223.36	215.93	203.18	190.08	221.96	231.66	220.59	254.98
ITTO ASIA&PACIFIC CONSUMERS	314.39	300.98	272.09	246.84	270.45	269.11	253.19	290.65
MAIN TROPICAL-TIM CONSUMERS	310.38	282.97	278.15	262.08	259.26	244.33	282.87	304.01
ITTO TROPICAL-TIM CONSUMERS	331.67	302.95	302.21	281.33	272.61	253.44	273.66	317.50

Source: FAO AGROSTAT Database by direct access

Table 22 . Export Unit Values of Tropical Timber, Producing Countries, U.S. Dollars / Cubic meter  
( Prepared in ITTO Data Processing Center, Tokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
<b>AFRICA</b>								
Angola								
Benin								
Botswana								
Burkina Faso								
Burundi								
* Cameroon	695.91	581.75	514.24	402.95	369.22	409.81	632.25	715.22
Central African Republic			287.10	241.07	289.23	298.18	372.50	372.50
Chad								
* Congo	393.61	307.57	293.65	283.78	278.00	286.83	350.40	366.72
* Cote d'Ivoire	302.24	221.15	230.46	191.00	178.61	173.12	254.03	379.09
Ethiopia								
* Gabon	404.02	273.21	272.36	268.11	173.50	173.46	336.60	336.60
Gambia								
* Ghana	391.33	304.37	193.21	190.80	229.35	213.96	186.34	185.71
Guinea								
Guinea, Equatorial					100.00	98.86	150.19	150.19
Kenya								
* Liberia	43.16	43.16	43.16				435.00	350.90
Madagascar								
Malawi								
Mali								
Mozambique								
Namibia								
Niger								
Nigeria								
Rwanda								
Senegal								
Sierra Leone								
Somalia								
Sudan								
Tanzania								
Togo								
Uganda								
Zaire	374.98	363.89	360.98	360.98	360.98	360.98	360.98	360.98
Zambia								
Zimbabwe								
ALL AFRICAN PRODUCERS	396.80	322.27	303.50	276.95	259.39	257.80	319.70	372.95
ITTO AFRICAN PRODUCERS	400.32	313.43	294.67	263.68	249.69	246.54	318.90	381.95
<b>LATIN AMERICA</b>								
Belize								
* Bolivia	431.82	430.77	433.33	430.00	430.00	430.00	560.00	368.33
* Brazil	860.53	773.67	827.35	570.28	640.94	660.75	639.72	495.24
Colombia	823.33	867.14	940.00	1010.00	895.00	895.00	895.00	
Costa Rica	316.30	324.32	186.77	276.54	184.17	181.50	181.50	377.33
Cuba								
Dominican Republic								
* Ecuador								
El Salvador								
French Guiana								
Guatemala	955.00	955.00						
Guyana								
Haiti								
* Honduras								
Jamaica								
Mexico	916.67	916.67	1236.67	1236.67	1236.67	1236.67	1236.67	1236.67
Nicaragua								
Panama	492.50	484.00	590.00	554.00	620.00	680.00	680.00	660.00
Paraguay	150.97	217.08	339.87	373.83	400.65	401.24	308.90	439.10
* Peru	289.04	371.35	371.35	371.35	255.00	441.00	437.00	437.00
Suriname								
* Trinidad and Tobago								
Venezuela								
ALL L. AMERICAN PRODUCERS	* 420.43	503.86	442.02	464.96	500.34	502.88	494.86	471.63
ITTO L. AMERICAN PRODUCERS	* 777.50	706.82	589.80	546.07	639.06	656.17	635.41	493.24
<b>ASIA &amp; PACIFIC</b>								
Bangladesh								
Bhutan								
Burma								
Fiji	140.00	157.64	171.91	143.00	168.23	147.38	147.38	147.38
* India	1009.03	1008.89	1468.06	1468.06	1468.06	1468.06	1470.59	1450.00
* Indonesia				213.51	213.51	177.97	177.97	228.22
Kampuchea								
Laos								
* Malaysia	129.09	130.85	130.53	149.82	185.25	185.54	72.35	75.66
Nepal								
Pakistan								
* Papua New Guinea	218.00	255.00						
* Philippines	245.48	250.54	185.13	227.10	197.04	169.27	188.33	234.52
Sri Lanka								
* Thailand	1935.29	2037.50	2176.33	2291.88	2185.78	2476.03	2843.62	1415.09
Viet Nam								
ALL TROPICAL-TIM PRODUCERS	337.37	311.01	297.94	236.60	261.06	263.44	241.34	234.73
ITTO TROPICAL-TIM PRODUCERS	365.84	316.56	289.79	228.77	251.45	252.60	237.31	220.24

Source: FAO AGROSTAT Database by direct access

\* Latin America/Caribbean

Table 23

Total Veneer Sheets, Import Unit Values, U.S. Dollars per Cubic Meter  
( Prepared in ITTO Data Processing Center, Yokohama )

EUROPE & MIDEAST	1980	1981	1982	1983	1984	1985	1986	1987
* Austria	2868.75	2452.59	2378.67	2293.96	1971.41	2040.25	2893.08	2880.85
* Belgium-Luxembourg	837.17	837.50	838.89	618.76	578.32	619.74	660.24	817.61
* Denmark	1396.29	1261.66	1261.72	1016.34	1015.99	987.34	1091.97	1088.50
* Finland	1408.63	1390.67	1343.80	1375.60	1215.83	1376.05	1514.00	1905.50
* France	484.22	370.13	303.56	303.88	304.00	306.05	305.04	478.16
* Germany, Federal Republic	1441.38	1307.13	1197.81	1199.07	1084.67	1049.54	1265.80	1412.06
* Greece	1648.33	1500.00	1690.00	1360.00	1449.33	1395.26	1822.17	1759.71
* Ireland	1803.89	1457.41	1744.62	1303.00	1043.13	1371.25	1371.25	1371.25
* Italy	986.83	906.24	905.97	699.72	610.22	602.98	728.07	863.40
* Netherlands	665.90	497.96	496.77	424.60	356.88	330.65	471.71	565.12
* Norway	1167.27	926.12	1009.46	587.01	718.21	681.84	819.35	913.73
Portugal	1030.00	1030.00	1058.00	1610.00	1692.50	2252.00	1799.00	1740.00
* Spain	2740.93	2109.71	2055.75	1960.50	1565.50	1452.44	1452.44	1452.44
* Sweden	1810.79	1478.40	1430.15	1319.55	1304.25	1238.42	1222.14	1410.33
* Switzerland	1947.89	1658.60	1266.83	1228.91	1119.20	1129.87	1416.00	1873.77
* United Kingdom	617.35	596.19	596.19	464.38	455.93	452.53	542.78	743.13
* USSR	274.21	273.87	291.82	290.00	289.77	290.52	296.42	292.50
* Egypt	1300.43	1832.50	1832.50	1832.50	1666.67	1666.67	1919.09	1920.00
MAIN EUROPE&ME CONSUMERS	879.28	784.57	755.78	696.21	655.46	631.60	750.12	903.89
ITTO EUROPE&ME CONSUMERS	879.09	784.20	755.31	695.68	654.89	630.50	748.74	901.74
NORTH AMERICA								
* Canada	743.47	803.21	671.40	647.29	648.84	601.72	486.16	598.23
* United States	256.76	272.76	243.57	302.74	329.79	314.63	294.27	341.16
ALL NORTH AMERICAN CONSUMERS	293.75	316.45	269.96	331.24	360.72	343.43	317.09	368.93
ITTO NORTH AMERICAN CONSUMERS	293.75	316.45	269.96	331.24	360.72	343.43	317.09	368.93
ASIA & PACIFIC								
* Australia	563.47	560.48	446.09	565.71	578.74	459.56	564.91	563.37
* China (exc. Taiwan)								
* China (Taiwan Province)	1082.45	693.46	428.99	429.72	425.75	531.29	531.29	507.11
* Japan	227.53	171.15	164.10	144.81	132.24	121.69	128.69	157.38
* Korea, Republic								
New Zealand	1093.00	1135.83	1112.40	1052.00	1058.85	935.00	1393.33	1726.11
Singapore	211.50	184.13	171.89	213.83	257.97	426.17	426.42	429.18
MAIN ASIA&PACIFIC CONSUMERS	301.17	263.43	224.12	221.33	225.92	209.01	235.05	249.25
ITTO ASIA&PACIFIC CONSUMERS	332.80	298.85	234.62	217.56	215.53	187.48	211.46	234.68
TROPICAL-TIM CONSUMERS								
MAIN TROPICAL-TIM CONSUMERS	622.84	539.31	480.66	466.29	460.11	442.91	508.93	567.93
ITTO TROPICAL-TIM CONSUMERS	642.78	565.54	501.86	478.95	465.36	441.73	506.45	567.25

Source: FAO AGROSTAT Database by direct access



Table 24 . Tropical Plywood, Producers' Export Unit Values, U.S. Dollars per Cubic Meter  
( Prepared in ITTO Data Processing Center, Yokohama )

	1980	1981	1982	1983	1984	1985	1986	1987
<b>AFRICA</b>								
Angola								
Benin								
Botswana								
Burkina Faso								
Burundi								
* Cameroon	683.29	252.32	427.08	365.25	338.93	340.00		
Central African Republic	300.00	395.00	361.32	305.73	322.00	366.18	484.00	484.00
Chad								
* Congo	500.00	555.00	610.00	610.00	710.00			
* Cote d'Ivoire	607.14	533.90	458.60	486.45	419.95	373.74	461.91	592.01
Ethiopia								
* Gabon	522.78	523.08	525.00	525.00	525.23	321.69	321.69	321.69
Gambia								
* Ghana	263.33	440.00	170.00	298.00	295.00	116.67	117.14	120.00
Guinea								
Guinea, Equatorial								
Kenya	830.00	830.00	830.00					
* Liberia	314.55	241.43	161.67	123.18	123.16	123.16		
Madagascar								
Malawi		371.25	375.00	375.00	375.00			
MalI								
Mozambique			523.33	538.48	423.08	300.00	300.00	300.00
Namibia								
Niger								
Nigeria								
Rwanda								
Senegal								
Sierra Leone								
Somalia								
Sudan								
Tanzania	310.00	310.00	310.00					
Togo								
Uganda								
Zaire								
Zambia								
Zimbabwe	945.45	1315.00	650.00	310.91	443.23	443.23	420.00	420.00
ALL AFRICAN PRODUCERS	542.03	451.77	470.57	466.95	464.40	334.87	373.09	407.78
ITTO AFRICAN PRODUCERS	547.05	448.11	479.94	478.50	474.82	329.96	371.23	407.94
<b>LATIN AMERICA</b>								
Belize								
* Bolivia	263.16	351.85	342.86	345.45	345.45	345.45	620.00	683.75
* Brasil	418.67	425.78	397.81	329.10	307.64	281.23	308.94	313.60
Colombia	489.00	489.00	728.00	470.00	552.78	552.78	552.78	552.78
Costa Rica	456.99	360.72	400.86	463.21	452.73	452.58	372.60	359.69
Cuba								
Dominican Republic								
* Ecuador	321.06	497.15	534.06	349.25	248.89	264.55	299.74	299.74
El Salvador								
French Guiana								
Guatemala	535.00	800.00	805.00	620.00	689.00			
Guyana								
Haiti								
* Honduras	419.02	367.44	320.42					
Jamaica								
Mexico	303.42	346.94	330.00	605.10	605.10	639.07	639.07	630.07
Nicaragua	426.92	428.18	463.33	425.45	425.45	425.45	425.45	425.45
Panama	515.00	610.00	550.00	430.00	375.00	655.00	353.33	353.33
Paraguay	202.21	255.79	255.79	537.69	590.00	433.33	558.00	798.22
* Peru	620.00	598.75	572.50	572.50	572.50	610.00	660.00	660.00
Suriname	371.39	388.71	385.44	316.87	321.20	308.23	326.67	326.67
* Trinidad and Tobago								
Venezuela								
ALL L. AMERICAN PRODUCERS *	362.89	414.84	409.24	360.43	331.88	308.46	332.87	343.80
ITTO L. AMERICAN PRODUCERS *	366.84	436.43	426.42	331.48	306.27	280.90	309.16	314.00
<b>ASIA &amp; PACIFIC</b>								
Bangladesh								
Bhutan								
Burma								
Fiji		790.00	684.00	835.00	881.43	583.16	583.16	583.16
* India	416.76	447.19	535.50	535.50	535.50	535.50	535.50	535.50
* Indonesia	227.49	194.73	229.06	242.02	219.50	214.31	238.15	320.96
Kampuchea	158.00	158.00	158.00	158.00	158.00	158.00	158.00	158.00
Laos								
* Malaysia	284.73	287.40	255.94	245.37	225.00	213.50	242.22	263.28
Nepal								
Pakistan								
* Papua New Guinea	674.92	585.13	621.43	599.60	514.20	475.45	500.00	500.00
* Philippines	319.48	297.69	278.79	259.02	229.97	212.23	234.34	279.63
Sri Lanka								
* Thailand	278.50	169.29	176.00	93.16	101.88	89.00	270.63	331.77
Viet Nam								
ALL ASIAPACIFIC PRODUCERS	286.83	248.90	243.70	245.58	221.79	214.71	238.81	313.87
ITTO ASIAPACIFIC PRODUCERS	286.69	248.79	243.49	245.51	221.72	214.58	238.69	313.60
ALL TROPICAL-TIM PRODUCERS	312.37	273.98	263.81	259.02	234.10	222.23	245.87	315.85
ITTO TROPICAL-TIM PRODUCERS	311.85	271.26	261.00	255.66	231.44	219.85	243.38	314.58

Source: FAO AGROSTAT Database by direct access

\* Latin America/Caribbean

Table 25

Total Plywood, Import Unit Values, U.S. Dollars per Cubic Meter  
( Prepared in ITTO Data Processing Center, Tokohama )

EUROPE & MIDEAST	1980	1981	1982	1983	1984	1985	1986	1987
* Austria	648.50	577.75	528.89	516.81	462.23	453.71	612.84	636.87
* Belgium-Luxembourg	399.58	399.10	400.94	279.73	278.15	295.72	308.78	370.36
* Denmark	379.85	313.78	313.97	330.95	331.06	321.81	344.03	391.60
* Finland	503.58	811.87	599.25	738.00	709.00	510.40	654.64	769.17
* France	443.83	405.81	380.59	380.79	381.08	346.03	346.10	548.23
* Germany, Federal Republic	549.63	464.94	430.85	396.59	370.34	358.73	335.07	522.46
* Greece	565.91	634.00	450.50	310.53	257.78	293.21	372.69	414.04
* Ireland	547.90	508.66	445.54	436.09	440.00	365.69	365.69	365.69
* Italy	480.34	483.35	462.82	364.67	343.92	341.76	434.84	477.70
* Netherlands	429.86	382.23	382.00	350.94	320.94	314.34	341.22	385.28
* Norway	590.54	519.82	479.91	466.94	463.70	416.20	477.88	704.76
Portugal	740.00	740.00	510.00					
* Spain	832.00	539.07	981.50	594.50	591.50	560.00	568.87	577.78
* Sweden	624.97	850.93	754.21	732.13	696.40	680.81	546.08	624.98
* Switzerland	808.84	679.55	566.71	518.61	499.52	487.44	641.42	772.97
* United Kingdom	420.53	385.77	386.00	323.19	310.87	297.03	312.78	301.52
* USSR	349.42	350.13	481.97	485.71	485.71	472.81	485.71	486.75
* Egypt	425.38	515.33	397.18	388.23	385.09	410.79	546.02	546.02
MAIN EUROPE&ME CONSUMERS	468.34	425.09	410.29	365.32	352.84	342.60	385.76	429.98
ITTO EUROPE&ME CONSUMERS	468.32	425.07	410.29	365.32	352.84	342.60	385.76	429.98
NORTH AMERICA								
* Canada	399.35	290.17	324.57	307.21	414.63	388.38	333.28	305.20
* United States	394.00	364.19	337.93	382.58	332.47	293.91	303.73	296.05
ALL NORTH AMERICAN CONSUMERS	394.40	351.82	337.08	376.25	338.18	299.87	308.78	296.86
ITTO NORTH AMERICAN CONSUMERS	394.40	351.82	337.08	376.25	338.18	299.87	308.78	296.86
ASIA & PACIFIC								
* Australia	464.79	465.46	429.96	446.64	392.85	330.33	329.96	390.27
* China (exc. Taiwan)		299.53	299.47	302.89	258.48	249.50	275.00	275.00
* China (Taiwan Province)	522.06	320.54	257.58	275.38	266.81	223.10	222.22	304.19
* Japan	291.15	294.12	305.09	133.40	222.95	188.29	209.08	278.79
* Korea, Republic								
New Zealand	998.13	1058.42	1030.53	839.33	955.88	841.11	858.15	862.58
Singapore	283.10	270.49	253.26	225.69	235.57	224.44	227.37	242.72
MAIN ASIA&PACIFIC CONSUMERS	316.49	307.05	296.66	259.93	259.38	228.45	230.95	278.68
ITTO ASIA&PACIFIC CONSUMERS	358.56	339.39	329.66	300.40	265.75	228.08	230.78	285.42
MAIN TROPICAL-TIM CONSUMERS	438.47	389.98	378.54	354.21	331.87	310.41	322.84	346.79
ITTO TROPICAL-TIM CONSUMERS	445.08	397.50	386.80	364.47	338.31	313.21	325.87	351.50

Source: FAO AGROSTAT Database by direct access

Table 26

Materials Balance of Producers' Net Trade Positions in Tropical Logs  
and Processed Timber Products, 1987  
( Prepared in ITTO Data Processing Center )

	Net Export of Logs	Net Export of Processed Products			Roundwood Equivalent of Net Processed Products Exports
		Sawnwood	Plywood	Veneer	
<b>AFRICA</b>					
Angola	0	0	0	0	0
Benin	0	-800	-1500		-4756
Botswana					0
Burkina Faso	0	-14100	-2000		-28107
Burundi			-400		-912
* Cameroon	442000	63000	0	15700	134255
Central African Republic	41000	29800	2000	800	55806
Chad		0	-900		-2052
* Congo	327000	29700	0	42700	128594
* Cote d'Ivoire	617000	460100	22900	75100	959514
Ethiopia	0	0	0	0	0
* Gabon	1229000	1000	46200	5300	116811
Gambia	0	0	-200	0	-456
* Ghana	318600	172900	800	21000	329417
Guinea	8000	-1100			-1837
Guinea, Equatorial	121300	6500		5200	20475
Kenya	0	2500	-300		3491
* Liberia	250500	4700	0	200	8219
Madagascar	1400	-100	0		-167
Malawi	0	0	-800	0	-1824
Hali		-4300	-500		-8321
Mozambique	1300	400	1600	0	4316
Namibia					0
Niger	0	-5000	-400	0	-9262
Nigeria	58800	600	-16900	1500	-38455
Rwanda		0	-1600		-3648
Senegal	-25300	-19000	-4800		-42674
Sierra Leone	0	3000	-1000	0	2730
Somalia	-290	-1200		-1400	-4594
Sudan		0	-3900		-8892
Tanzania	0	7800	0		13026
Togo	-200	0	0	0	0
Uganda	0	0	-100		-228
Zaire	176000	26000	-1900	23500	82563
Zambia	-200	-1100	-4900	-2000	-16709
Zimbabwe	-1700	19700	700	-200	34125
ALL AFRICAN PRODUCERS	3564300	781000	32100	185400	1720448
ITTO AFRICAN PRODUCERS	3184100	731400	69900	160000	1676810
<b>LATIN AMERICA</b>					
Belize	1900	800	-2100		-3452
* Bolivia	0	56900	800	800	97957
* Brazil	-42800	151600	225200	15800	795858
Colombia	0	1000	1800	0	5774
Costa Rica	0	0	3000	1500	9615
Cuba	-20700	-5900	-63200		-153949
Dominican Republic	0	-5700	-11200		-35055
* Ecuador	0	26600	15300		79306
El Salvador			-200		-456
French Guiana	600	11700	-1200	0	16803
Guatemala	1500	11500	-600	0	17837
Guyana	18200	8700	-700		12933
Haiti		-1000	0		-1670
* Honduras	200	400	0		668
Jamaica	0	-8200	-9500	0	-35354
Mexico	0	-25600	-2000	-5500	-57487
Nicaragua	0	700	3300		8693
Panama	200	0	-300	-100	-869
Paraguay	0	246700	4500	48000	511049
* Peru	0	1500	100	1000	4583
Suriname	200	3000	3600		13218
* Trinidad and Tobago		-71400	-37200	0	-204054
Venezuela	0	-22100	-15000	-4700	-79802
ALL L. AMERICAN PRODUCERS *	-40700	381200	114400	56600	1002146
ITTO L. AMERICAN PRODUCERS *	-42600	165600	204200	17400	774318
<b>ASIA &amp; PACIFIC</b>					
Bangladesh		-4900			-8183
Bhutan	7400	0	0		0
Burma	146900	61200	0	0	102204
Fiji	0	0	1900	16400	34672
* India	-799000	-3900	4200	4000	10463
* Indonesia	2500	2766400	5487900	53900	17232015
Kampuchea	0	0	500		1140
Laos	34000	1800	0		3008
* Malaysia	22812004	3802200	648100	430400	8623582
Nepal	126000	0			0
Pakistan	-30800	-65500	-600	-1100	-3403
* Papua New Guinea	1442000	4000	200	0	7136
* Philippines	200000	638400	260200	63000	1775934
Sri Lanka	0	-7300	-8300		-31115
* Thailand	-286100	-367400	70800	10900	-431969
Viet Nam	-34000	0	-200	-100	-641
ALL ASIA&PACIFIC PRODUCERS	23621104	6825000	6464700	577400	27314841
ITTO ASIA&PACIFIC PRODUCERS	23371404	6839700	6471400	562200	27217161
ALL TROPICAL-TIM PRODUCERS	27144704	7987200	6611200	819400	30037435
ITTO TROPICAL-TIM PRODUCERS	26512904	7736700	6745500	739600	29668289

Source: FAO AGROSTAT Database by direct access

\* Latin America/Caribbean