ANNEX 2

to

REPORT ON PROJECT PD 107/90 (i)

Strategies for Sustainable Wood Industries in Sarawak

A REVIEW OF TRENDS IN THE EXPORT MARKETS OF SARAWAK'S TIMBER PRODUCTS

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1. Introduction

This summary presentation is based on data derived from FAO and Forest Department statistics. A more detailed set of data is contained in the Appendix attached to this paper.

The statistics which have been reviewed cover a period starting 1968 and ending, for world statistics, 1990 and, for those referring to Sarawak, 1992.

In the tabulations in the Appendix, statistics for individual years are presented. When calculating trends, averages for 3-year periods have been used instead of data for individual years.

The world statistics for 1990, as contained in FAO's Yearbook, Forest Products, 1979 - 1990, are, for some countries and geographic regions, estimates rather than data referring to actual production and trade. These estimates will be replaced with actual figures in subsequent editions of the Yearbook, as data are made available by reporting governments and other sources. Therefore, in many trend data presented in this summary and in the Appendix, the 1990 data have not been used. Instead the trends refer to periods ending 1989.

2. World Overview

North America had the largest apparent consumptions of primary processed timber products, among the geographic regions, during the last six years of the 1980:s (1984 - 1989). Thirty-one percent of the total world consumption took place there, while Europe consumed 19 percent, former USSR 17 - 18 percent and the Far East 12 - 13 percent. Japan and the Far East region consumed together 21 percent, that is, more than Europe.

Table 1
Consumption of Primary Processed Timber Products by Region, 1984 - 1989

Region	Sawnwood	Veneer	Plywood	Total	Percent of Grand Total
	-----------	---------	thousand cu m	-----------	
	864 144	3 520	132 820	1 000 484	30.9
Latin America	178 416	2 077	9 182	189 675	5.9
Europe	568 474	12 577	33 996	615 052	19.0
Africa	67 235	2 306	5 911	75 452	2.3
Far East	373 796	2 405	33 896	410 097	12.7
Near East	58 021	606	7 354	65 981	2.0
USSR	555 988	3 064	11 267	570 319	17.6
Oceania	39 546	416	1 485	41 447	1.3
Japan	217 793	3 501	50 173	271 467	8.4
Totals	2 923 418	30 472	286 084	3 239 974	100
Percent of Grand Total	90 2	0.9	8.8		

The increase in apparent consumption of primary processed wood, in a single geographic region in the period 1984 - 1989, was highest in North America, 36 - 37 percent of the total world increase. The Far East region together with Japan took 41 - 42 percent of the total world increase, while Europe's share was 14 percent and that of former USSR only 4.

The differences in percentages sawnwood, veneer and plywood in Table 1 and Table 2 may be an indication of a shift in preference from sawnwood towards panel products.

Table 2
Average Yearly Increase in Apparent Consumption by Region and Product Category, 1984 - 1989

Region	Sawnwood	Veneer	Plywood	Total	Percent of Total
	-----------	---------	thousand cu m	-----------	
North America	3 453.0	-60.0	218.6	3 611.6	36.6
Latin America	433.8	4.8	30.8	469.7	4.8
Europe	1 044.6	80.8	259.4	1 384.8	14.0
Africa	82.6	22.0	5.8	110.4	1.1
Far East	1 787.6	16.0	293.4	2 097.0	21.3
Near East	-388.4	-4.8	-30.4	-423.6	-4.3
USSR	388.8	-8.6	12.4	392.6	4.0
Oceania	212.0	5.4	13.0	230.4	2.3
Japan	1 379.6	48.2	561.4	1 989.2	20.2
Total	8 393.6	103.8	1 364.4	9 861.8	100.0
Percent of Grand Total	85.1	1.1	13.8	100.0	

The production of primary processed timber over the last six years of the 1980:s amounted to 3 246 million cu m. Of this total, 33 percent was produced in North America and 19 percent in former USSR. Europe contributed 16 - 17 percent and the Far East 14 - 15 percent. The Far East together with Japan produced 21 - 22 percent of the total.

Table 3

Production of Primary Processed Timber by Geographic Region, 1984 - 1989

Region	Sawnwood	Veneer	Plywood	Total	Percent of Total
	----------	thousand	cu m	----------	
North America	937 216	3 572	128 684	1 069 472	33.0
Latin America	177 208	2 326	10 030	189 564	5.8
Europe	512 982	10 535	19 178	542 695	16.7
Africa	49 333	3 236	4 175	56 744	1.7
Far East	403 156	5 002	67 248	475 406	14.7
Near East	34 104	224	853	35 181	1.1
USSR	601 500	2 575	13 562	617 637	19.0
Oceania	33 745	348	1 046	35 139	1.1
Japan	177 083	1 789	42 271	221 143	6.8
Total	2 926 327	29 607	287 047	3 246 981	100
Percent of Grand Total	90.2	0.9	8.9	100	

The increase in production of primary processed timber has to more than 50 percent taken place in North America. The Far East region has contributed 29 percent, and together with Japan, 32 percent, while Europe decreased its production.

Table 4

Change in Production of Primary Processed Timber by Region and Product Category, 1984 - 1989

Region	Sawnwood	Veneer	Plywood	Total	Percent of Total
	----------	thousand	cu m	----------	
North America	4 789.0	-45.2	298.0	5 011.8	52.4
Latin America	543.8	7.4	69.6	620.8	6.5
Europe	-202.0	56.6	23.6	-121.8	-1.3
Africa	246.2	16.2	21.0	283.4	2.9
Far East	1 795.4	-57.4	1 043.8	2 781.8	28.9
Near East	14.8	5.2	5.2	25.2	0.3
USSR	540.0	-8.0	34.2	566.2	5.9
Oceania	104.8	2.4	12.8	120.0	1.2
Japan	375.0	-2.2	-76.6	296.2	3.1
Total	8 207.0	-25.0	1 431.6	9 613.6	100
Percent of Grand Total	85.4	-0.3	14.7	100	

A comparison between consumption (Table 1), production (Table 3) and changes in consumption and production (Tables 2 and 4) indicates that there is one major surplus region, North America, and one major deficit region, Europe; the Far East together with Japan appears to be developing into a deficit region; Latin America and the former USSR have contributed minor amounts of the required increase of processed timber supply.

If one looks at the increases in production of logs (Table 5) and compare them with the increases in apparent consumption of processed wood, in an attempt to find indicators of the regions' potential to increase production of processed wood, it appears that North America and, to a lesser degree, Latin America, the former USSR and Oceania may have the potential to supply the deficit regions in the future.

Table 5

Changes in Production of Logs by Region, 1984 - 1989

Region	Change, thousand cu m	Percent of total change
North America	7 029.2	52.9
Latin America	774.2	5.8
Europe	1 508.6	11.3
Africa	12.8	0.1
Far East	2 037.4	15.2
Near East	- 144.2	-1.1
USSR	1 640.0	12.3
Oceania	534.2	4.0
Japan	- 93.8	-0.7
Total	13 268.4	100

It is no doubt that Latin America, with its extensive, still un-utilized forests, has such a potential, but economic and policy considerations may restrict the realization of this potential. The same may be said of North America and USSR, but in these two regions the utilization has already proceeded to a point where conservation considerations may hinder further expansion of production. In Oceania there is a potential for further expansion of production, but the resource is limited and the utilization of the forests is hampered by legal and social constraints as well as by problems of access.

The trade in timber products has become increasingly regionalized, especially with regard to logs and sawnwood. The deficit region of Europe has been supplied mainly from North America, while Near East has obtained its supply mainly from Far East and Africa.

3. Opportunities for Sarawak

Sarawak has now reached a point where log production can no longer be expanded but need to be stabilized and eventually reduced in order to safeguard the long term sustained production of timber from the resource. The question, with regard to market opportunities, that need to be answered is therefore, firstly, if there will continue to be a market for Sarawak logs if the production and export supply from the State remains at its present level, secondly, if it is possible to find markets for expanding export of primary processed timber products and, thirdly, if international market demand for further processed timber exists, or can be developed, and utilized by Sarawak in competition with other suppliers.

Sarawak is located within the fastest growing market for timber products, the Far East region together with Japan. The State has well established trade channels within the region and with the Near East region.

Sarawak can continue to export logs, if that is economically advantageous, and thereby extend the life of some of the mills, dependent on log import, in Hongkong, Taiwan, Korea and Japan. The State can also, if that is more advantageous, place more emphasis on export of primary processed wood, which should find ready markets in the region and in the Near East.

The potential of the region and of Japan, or markets outside the Far East, to absorb expanded export of secondary processed timber, dowels, mouldings, furniture and furniture components, construction carpentry, etc., can not be verified by available statistics. It is conceivable that the best economic result of the sector can be realized if secondary processing is expanded and efforts are made to develop markets for such products. Special studies should be undertaken to assess market opportunities, verify the economic viability of expanded secondary processing and to explore the need and possibilities of joint ventures with firms expatriate to Sarawak.

The indications which can be derived from past development of the export markets for Sarawak's primary processed timbers are that prices can be expected to continue their increasing trend.

APPENDIX

A1 WORLD PRODUCTION

A1.1 Logs

World production of saw logs and veneer logs has increased by an average of 1.55 percent per year over the twenty year period ending 1990 and exceeded 1000 million cu m for the first time in 1988. The coniferous and non-coniferous components of this production has remained very stable at round 72 and 28 percent respectively. There may, however, have been a slight tendency towards an increasing proportion of non-coniferous logs.

The largest shares of world log production, in 1987-89 was contributed by North America (39 percent), USSR (16.5) and Europe (15.5). In these three regions the production has increased by 1.9 percent, 0.2 percent and 0.75 percent respectively.

Table A1
World Production of Saw Logs and Veneer Logs by Region,
1970 - 1990

Year	World	Africa	Europe	N America	L America	USSR	F East
	millioncu m						
1970	757	18.6	144	267	33.1	167	78.7
-75	767	18.1	132	254	41.1	171	108.2
-80	877	23.2	159	304	59.3	152	136.3
-85	922	22.1	154	346	63.8	154	141.2
-90	980	22.5	196	356	67.6	146	149.8
Average change %	1.6	1.1	0.7	1.9	3.9	0.2	3.9

Latin America produced 6.7 percent of total world production at the end of the 1980:s and has increased production by an average of 3.9 percent per year.

The same production growth was experienced in the Far East region, which contributed 15.5 percent of total world log production at the end of the 1980:s. This over all growth was achieved in spite of the fact that two of the major producers of the 1960:s and 1970:s, Thailand and the Philippines, drastically cut down their log production in the 1980:s. The main increase has taken place in Malaysia and Indonesia, which together produced 6.7 percent of the total world log outturn in the last years of the 1980:s.

The fastest growth in production among the main log producers, was experienced by Papua New Guinea, but that country contributed only 1/4 percent to total world production.

Table A2
Production of Saw Logs and Veneer Logs in the Far East Region and in Japan, 1970-1990

Year	Region total	Indonesia	Malaysia	Thailand and Philippines	China	Japan
			---million cu m---			
1970	78.7	12.2	19.2	13.4	23.6	28.1
-75	108.3	18.4	27.6	11.5	42.2	21.6
-80	136.3	28.1	27.9	8.9	47.3	21.5
-85	141.2	23.8	28.7	5.1	53.9	19.2
-90	149.8	27.5	41.0	2.6	46.0	18.4
Average change %	3.9	5.7	4.1	-5.5	4.8	-2.4

A1.2 Sawnwood

The world sawnwood production has, over the 20 year period before 1990, increased by an average of 1.1 percent per year, that is, at a lower rate than log production, indicating that the proportion of logs converted to sawnwood is decreasing. That proportion has decreased from around 97 percent in the late 1960:s to 87 percent at the end of the 1980:s.

The production of non-coniferous sawnwood increased by 1.7 percent, which is 0.1 percent slower than production of non-coniferous logs. The allocation of logs to sawnwood production was just over 80 percent in the late 1960:s and just under 80 percent twenty years later.

The share of non-coniferous species in total sawnwood production has increased from 22 percent at the end of the 1960;s to nearly 25 percent 20 years later.

The sawnwood production has been dominated by the industrialised countries in North America and Europe and by USSR, which together produced 76 percent of the total at the end of the 1960:s and 70 percent 20 years later. The production has, over that period, increased in North America, but decreased in Europe and USSR. Far East has emerged as a major sawnwood producer contributing 14 percent to total world production in the late 1980:s.

The non-coniferous sawnwood production has also been dominated by the industrialised countries in North America and Europe, but the dominance has been less pronounced and is rapidly fading. Their share in total production was 56 percent in the late 1960:s but only 39 percent 20 years later. The by far largest producer among the regions in 1989 was Far East with 37 percent of the world total. Another large non-coniferous sawnwood producer, dependent on log supply from the Far East region, is Japan. However, the total production of sawnwood in Japan has been declining by some 1.7 percent per year. This decline is specially pronounced in non-coniferous material where it has been 5 percent per year.

Table A3
World Sawnwood Production by Region, 1970 - 1990

Year	World	Africa	Europe	N America	L America	USSR	Far East
	----------	----------	----------	-millioncu m-	----------	----------	----------
1970	413	4.5	82	109	15.9	120	28.7
-75	405	5.8	77	103	19.3	116	38.2
-80	451	7.7	91	128	25.9	98	52.4
-85	468	7.8	85	143	28.6	98	65.1
-90	486	8.7	88	157	31.5	92	68.3
Average change %	1.1	3.8	0.3	2.0	3.6	-0.7	4.9

Production sawnwood in Indonesia and Malaysia has been steadily increasing. Those two countries contributed together 6 percent to world non-coniferous sawnwood production in 1973 and 15 percent in 1989.

Three countries in the Far East region has decreased their sawnwood production: Thailand and the Philippines, which earlier were major sawnwood exporter, and Singapore, which relied on log import for her production.

Table A4
Sawnwood Production in the Far East Region and in Japan,
1970 - 1990

Year	Region total	Indonesia	Malaysia	Thailand, Philippines	Hongkong, R. Korea, Singapore	China	Japan
	----------	----------	----------	-millioncu m-	----------	----------	----------
1970	28.7	1.7	3.2	2.5	2.1	14.6	42.8
-75	38.2	2.4	4.0	3.1	2.8	16.7	36.8
-80	52.1	4.8	6.4	3.7	3.6	21.0	37.0
-85	64.9	7.1	5.5	2.0	3.5	27.1	28.5
-90	68.3	9.1	8.3	2.2	4.8	23.0	29.8
Average change %	4.9	9.9	5.0	-0.8	4.7	3.2	-1.7

A1.3 Veneer

The world production of veneer has increased by 2.5 percent per year, on an average, over the 20 year period ending 1990. The largest production has taken place in Europe, which accounted for more than 45 percent of the world total in the 1960:s. This share had been reduced to 38 - 39 percent in the 1980:s, though the production in Europe has increased by 1.5 percent per year. There has been increases in production in all regions except USSR.

Table A5

World Production of Veneer by Region, 1970 - 1990

Year	World	Africa	Europe	N America	L America	USSR	Far East
	---	---	---	thousandcu m	---	---	---
1970	3235	251	1464	220	132	476	340
-75	3533	248	1479	553	193	476	407
-80	4422	512	1501	474	360	476	733
-85	5012	531	1619	700	375	445	965
-90	4869	587	1876	501	408	400	705
Average change %	2.5	4.9	1.5	4.3	6.5	-0.7	4.5

A1.4 Plywood

The world production of plywood has increased by an average of 2.5 percent per year between 1970 and 1990. The largest production has taken place, and still takes place, in North America, which produced over 50 percent of the total in the 1960:s. The share of that region has decreased to just below 40 percent in the late 1980:s, though the production in North America has increased by 1.6 percent per year.

Table A6

World Plywood Production by Region, 1970 - 1990

Year	World	Africa	Europe	N America	L America	USSR	Far East
	---	---	---	millioncu m	---	---	---
1970	33.2	0.3	3.9	15.9	0.5	2.0	3.0
-75	34.3	0.4	3.5	16.6	1.1	2.2	4.0
-80	39.4	0.5	3.6	17.2	1.5	2.0	6.3
-85	44.8	0.7	3.1	20.8	1.4	2.2	9.3
-90	49.7	0.7	3.3	20.7	1.9	1.7	14.5
Average change %	2.5	5.1	-0.8	1.6	5.5	0.9	9.1

The production has increased very fast in Africa (5.1 percent per year), Latin America (5.5 percent) and the Far East (9.1 percent).

In the Far East region the development in plywood production has been very dramatic, with Indonesia emerging as one of the world's larger producers. The log importing countries, Republic of Korea, Singapore and Hongkong, have maintained and even increased their production of plywood.

Japan, which to a large extent is dependent on the Far East region for log supply, has also experienced an increase in plywood production but at a decreasing rate, which in the later part of the 1980:s may have changed to a decline.

Table A7
Plywood Production in the Far East and in Japan, 1970 - 1990

Year	Region	Indonesia	Malaysia	Thailand Philippines	China,	India	Hongkong R. Korea Singapore	Japan
	--------	--------	--------	--million cum--	--------	--------	--------	--------
1970	3.0	..	0.2	0.7	0.8	0.1	1.1	6.9
-75	4.0	0.1	0.4	0.5	1.0	0.1	1.8	6.2
-80	6.3	1.0	0.6	0.6	1.6	0.2	2.1	8.0
-85	9.3	4.6	0.7	0.4	1.4	0.4	1.7	7.0
-90	14.5	9.3	1.1	0.5	1.7	0.4	1.5	6.4
Average change %	9.1	large	10.0	0.3	5.1	6.0	2.7	1.0

In the former log exporting countries Thailand and the Philippines, plywood production has decreased during the 1980:s.

A2 TRADE

A2.1 Logs

Of the total world production of logs, some 7 - 8 percent are traded internationally. The international trade with logs increased till the end of the 1970:s and has since shown a tendency to decrease. The over all change over the 20 year period ending 1990 is an increase of 1.1 percent per year. The trade in coniferous logs appears to continue to increase while that of non-coniferous logs increased during the 1960:s and first half of the 1970:s, but has decreased from about 1980.

The European and Near East regions and Japan are net importers. Of the net exporting regions, North America and Latin America increased their export while the other exporters, Africa, Oceania, Far East and USSR have had stable or decreasing log export trade.

Table A8
World Export of Logs, 1970 - 1990

	Total	Coniferous	Non-coniferous
	----------	--million cu m--	----------
1970	63.1	24.4	38.7
1975	60.1	23.9	36.2
1980	70.0	27.9	42.1
1985	62.5	32.6	30.0
1990	66.8	34.9	31.9
Average change %	1.1	2.8	-0.2

Table A9
Net Export of Logs by Region, 1970 - 1990
(- indicates net import)

	1970	1975	1980	1985	1990
	millioncu m				
Africa	6.5	4.8	5.4	3.5	2.9
Europe	-8.4	-7.2	-8.3	-5.2	-4.2
N. America	11.5	10.5	13.3	16.5	17.1
L. America	0.1	-0.1	1.0	1.1	1.0
Oceania	2.1	1.1	1.9	1.9	4.5
Far East	22.2	17.6	16.9	2.1	0.6
Near East	-0.1	-0.2	-0.2	-0.4	..
USSR	7.4	8.2	6.3	7.6	6.1
Japan	-38.2	-34.5	-36.4	-27.8	-27.0

The trade with logs has more and more become confined to trade within geographical regions and trade to the Far East region. The Far East region and Japan now receive nearly 90 percent of all logs traded internationally.

Table A10
Direction of Trade with Logs by Region, 1988 - 1989
percent of export region total

	Importers Africa	N. America	EEC	Far East	Japan	Other
Exporters						
Africa	11	-	71	2	6	10
N. America	-	6	2	30	59	3
Europe	-	-	92	-	..	8
Far East	-	-	..	44	55	1
USSR	-	-	-	28	54	18
Oceania	-	-	-	35	59	6
All	1	3	9	32	51	4
All out of region trade	0	0	6	21	66	7

A2.2 Sawnwood

The world trade in sawnwood has increased by an average of 3.0 percent per year over the 20 year period ending 1990. North America the Far East and USSR have been net exporters, Latin America has some years been a net exporter and other years a net exporter, while the other regions are all net importers.

Table A11
Net Export of Sawnwood by Region, 1970 - 1990
(- indicates net import)

	1970	1975	1980	1985	1990
	million cu m				
Africa	-1.1	-1.5	-2.3	-3.6	-2.6
Europe	-9.5	-7.1	-9.2	-6.6	-13.3
N. America	5.9	4.2	10.6	7.6	13.0
L. America	0.2	-0.4	-0.7	-0.3	..
Far East	2.2	2.5	4.9	4.7	3.0
Oceania	-0.7	-0.7	-0.4	-1.0	-0.9
USSR	8.0	7.6	6.9	7.4	6.1
Japan	-2.9	-2.5	-5.5	-5.2	-9.0

The trade with sawnwood has, in the same way as trade with logs, become more and more trade within geographic regions. North America has traded some 75 percent within the region during the period 1970 - 1990, while Latin America traded round 80 percent within the region at the end of the 1960:s and over 90 percent twenty years later. Similarly, the Far East region traded 30 percent within the region in the 1960:s and 45 - 50 percent in the later part of the 1980:s. If Japan is included in the Far East region the figure for that region, at the end of the 1980:s, would be approximately 60 percent.

Table A12

Direction of Sawnwood Export of Some Producing Regions in 1988-1989

	Importers N. America	EEC	E. Europe	Far East	Japan	Other
Exporters		percent of region's export				
N. America	66	14	-	1	14	5
Europe	..	92	1	-	..	7
USSR	-	50	22	-	3	25
Far East	1	25	-	44	16	14
All	40	34	2	5	11	8
All out of region trade	..	47		1	29	23**

** Near East 4 percent, L America 6 percent

A2.3 Veneer

International trade with veneer has increased by an average of 3.9 percent per year from 1968 - 1970 to 1988 - 1989. The trade appears to have reached a peak in 1983 - 1984 after which it has declined.

The trade with veneer is directed towards three main regions, North America, EEC and Japan, which together received 72 percent of all export in 1988/1989. The trade with veneer is to some extent regional in nature, in that 45 percent of the North American veneer trade takes place between USA and Canada, 78 percent of the European trade is between countries in that region and 86 percent of the Far East export goes to Japan and countries in the Far East region. Africa is a supplier to EEC and countries in the Far East. Latin America exports mainly to North America.

Table A13

Direction of Veneer Export by Region, 1988 - 1989

	Importers							
	North America	EEC	Other Europe	Far East	Latin America	Japan	USSR	Other
Exporters	percent of region's total export							
N. America	45	30	7	6	-	6	-	6
Europe	1	50	28	-	-	-	12	9
Far East	6	1	1	2	5	84	-	1
Africa	9	47	-	42	-	-	-	2
L. America	48	9	8	-	29	1	-	5
Japan	4	2	-	82	-	-	-	12
All	23	25	8	10	3	24	2	5
All out of region export	8	24	8	8	2	36	3	11

A2.4 Plywood

The trade with plywood has been expanding at an average rate of 6.3 percent per year over the 20 year period ending 1990. There were three net exporting regions, Latin America, Far East and USSR. Of these, the Far East region was by far the largest net exporter, contributing 70 percent to total world export at he end of the 1980:s.

A large portion of the trade with plywood takes place within each geographic region, but the regionalization of the trade is not as pronounced as that with sawnwood and logs.

Table A14

Regional Net Export of Plywood, 1970 - 1990

(- indicates net import)

	1970	1975	1980	1985	1990
	----------------------------------	-------------------------million	cu m-------------------------	----------------------------------	----------------------------------
Africa	..	-0.1	-0.2	-0.3	-0.2
Europe	-0.9	-1.1	-1.6	-2.6	-2.8
North America	-1.4	-1.5	-0.3	-0.9	0.5
Latin America	..	-0.1	..	0.1	0.2
Oceania	..	-0.1	..	-0.1	-0.1
Far East	1.4	2.6	3.0	4.5	7.5
Near East	-0.1	-0.3	-0.8	-1.3	-1.0
USSR	0.2	0.3	0.3	0.4	0.4
Japan	0.1	-0.1	..	-0.3	-2.9

The out of region trade with plywood is directed towards three main market areas, North America, EEC and Japan. These three market areas receive 68 percent of all inter-regional trade with plywood.

Table A15

Direction of Plywood Export by Region, 1988 - 1989

	Importers North America	EEC	Other Europe	Latin America	Far East	Near East	Japan	Not defined
Exporters		Percent of region's total export						
N. America	15	60	2	4	..	..	2	17
Europe	2	50	10	..	..	1	..	37
L. America	5	41	3	18	-	14	-	20
Far East	11	12	..	..	31	6	27	13
USSR	2	43	4	11	-	4	-	37
All	10	23	1	1	23	5	20	17
All out of region export	13	26		1	-	7	29	24

Over 40 percent of all international trade with plywood is going to countries in the Far East region and to Japan, and over 70 percent of all plywood traded internationally originate in the Far East region.

A3 CONSUMPTION

A3.1 Sawnwood

World consumption of sawnwood has increased by an average of 1.1 percent per year over the period 1968/69 - 1987/89. The consumption growth has been faster than this average in the regions of North and Latin America, Africa and Far and Near East. However, in Africa and Near East the consumption of sawnwood appears to have stagnated over the last ten years of that period. There has been a similar development in Europe.

There appears to be a tendency for further consumption growth in Oceania and Japan, after a period of decline in the years round 1980.

The largest consumption increase at the end of the 1980:s, expressed in absolute terms, has taking place in the Far East region followed by Japan.

Table A16
Apparent Consumption of Sawnwood by Region, 1970 - 1990

	1970	1975	1980	1985	1990	Average change %	Percent of total 1987-1989
	----------	----------	million cu m	----------	----------		
North America	103	98	118	135	143	1.8	31
Latin America	15.7	19.7	26.6	28.8	31.5	3.8	6
Europe	92	84	100	92	101	0.4	20
Africa	5.7	7.3	9.9	11.4	11.3	4.4	2
Far East	26.4	35.7	47.5	60.3	65.3	4.9	13
Near East	4.3	5.1	9.2	10.6	9.0	4.5	2
USSR	113	108	91	91	86	-0.8	17
Oceania	6.3	6.6	6.2	6.8	6.6	0.3	1
Japan	45.7	39.3	42.5	33.7	38.9	-0.7	8

A3.2 Veneer

World consumption of veneer has increased by an average of 2.4 percent per year over the period 1968/79 - 1987/89. The largest market has been Europe where over 40 percent of total world consumption of the late 1980:s took place.

Table A17
Apparent Consumption of Veneer by Region, 1970 - 1990

	1970	1975	1980	1985	1990	Average change %	Percent of total
	----------	----------	thousand cu m	----------	----------		
North America	478	451	416	765	352	-1.1	8
Latin America	91	157	368	327	354	8.2	7
Europe	1620	1625	1812	1921	2193	2.0	43
Africa	117	175	350	368	451	7.5	8
Far East	197	218	601	436	389	7.4	8
Near East	13	61	140	112	107	12.4	2
USSR	495	504	604	525	480	0.2	10
Oceania	63	86	57	64	96	1.4	1
Japan	261	339	385	547	852	5.9	13

All geographic regions, except North America, have increased consumption. The fastest growth has been experienced in the Near East, 12.2 percent, Latin America 7.7 percent, Africa 7.6 percent, Far East, 7.4 percent and Japan 5.9 percent. In Europe the consumption has grown by an average of 2.2 percent, or slightly slower than total world consumption.

The largest increase in consumption, in volume terms, in the later part of the 1980:s, took place in Europe, 80 000 cu m per year and Japan, 48 000 cu m per year..

A3.3 Plywood

World consumption of plywood has increased by an average of 2.5 percent per year over the 20 year period ending 1990. Faster increase than this average has been experienced in Africa, Latin America, Far and Near East and in Japan. The consumption in the Near East appears to have stagnated after and initial rapid expansion in the 1970:s. In Europe the consumption has re-gained momentum after a decline in the early 1980:s.

Table A18
Apparent Consumption of Plywood by Region, 1970 - 1990

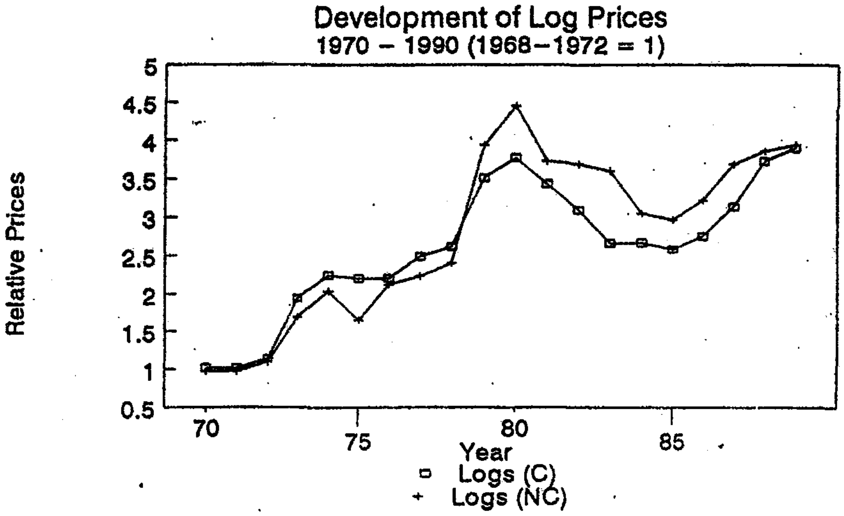
	1970	1975	1980	1985	1990	Average change %	Percent of total in 1987/88
	million cu m						
North America	17.3	18.1	17.5	21.7	20.3	1.3	45
Latin America	0.7	1.2	1.4	1.3	1.7	4.7	3
Europe	4.8	4.6	5.2	5.7	6.0	1.4	12
Africa	0.3	0.4	0.7	1.0	0.9	7.7	2
Far East	1.5	1.4	3.3	4.8	7.0	9.0	12
Near East	0.2	0.4	0.9	1.4	1.1	11.3	2
USSR	1.8	1.9	1.8	1.8	1.4	0.4	4
Oceania	0.2	0.2	0.2	0.2	0.3	2.0	1
Japan	6.9	6.2	8.0	7.3	9.3	2.8	19

The largest increase of consumption, in absolute terms, over the last five years of the 1980:s, has taken place in Japan and the Far East.

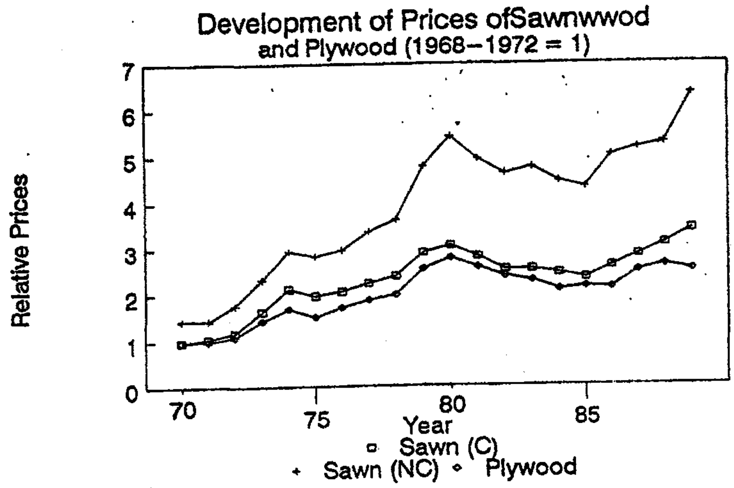
A3.4 Prices

Series of world timber prices, expressed in current value of one currency or another, are not reliable as indicators of real price development. They incorporate trends in the purchase strength of the currency used and do not account for changes in product quality, manufacture and freight costs, trading patterns, etc. However, if those weaknesses of the series are kept in mind, they provide, translated into a specific country's currency and adjusted for the changes in purchase power of that currency, broad indications of the change in price environment of the country for the specific product they refer to.

The world average unit prices contained in FAO's Forest Products Statistics indicate that the export prices of logs have increased by an average of 7½ percent annually between 1970 and 1990, expressed in current US$. The prices of coniferous and non-coniferous logs have followed each other very closely, though there may be a tendency for the non-coniferous log prices to increase slightly more rapidly.



The development of the sawnwood prices have shown a marked difference between coniferous and non-coniferous species. The non-coniferous sawnwood fetched prices which were some 50 percent higher than those of coniferous at the beginning of the 1970:s and have increased at an average rate of 7.6 percent per year between 1970 and 1990, while the prices for coniferous sawnwood increased at a rate one percent lower.



The slowest price development during the 1970:s and 1980:s has been that for plywood. The average increase in prices for that product has been 5.3 percent per annum only, between 1970 and 1990.

A4 DEVELOPMENT IN SARAWAK

A4.1 Production

The production of logs in Sarawak has increased very rapidly over the years, though there was a decline in the first half of the 1970:s, when no new concessions were granted while a forest survey and industry planning exercise was carried out. It reached a peak of nearly 19.5 million cu m in 1991. The Government is now restricting the outturn by imposing quotas on the concessionaires under a programme which aims at bringing the production down to a sustainable level.

The production of processed wood, sawnwood, veneer, plywood, mouldings and laminated boards, remained at a low and fairly stable level till the later part of the 1980:s, when a rapid expansion of processing activities started.

Table A19

Production of Logs and Processed Timber in Sarawk, 1970 - 1992

Year	Logs	Sawnwood	Veneer	Plywood	Mouldings	Laminated boards
	--------	--------	--------thousandcu m--------	--------	--------	--------
1970	4 693	630	5	10	na	na
1975	2 512	365	21	16	na	na
1980	8 399	357	33	24	69	11
1985	12 285	275	??	??	42	9
1990	18 838	733	54	131	46	23
1991	19 410					
1992	18 848					

A4.2 Trade

A4.2.1 Logs

Sarawak has been a supplier of hardwood logs to the international market since immediately after the end of WW II. European countries, Australia and Hongkong were the original customers. They were interested mainly in ramin timber. The outflow of logs increased steadily over the years and reached nearly 16 million cu m in 1991. The log importers have industries, which were established either in response to the abundance of logs from, in first hand, Malaysia, the Philippines and Indonesia, or for processing of logs available from local resources that have since become depleted or uneconomic to utilize.

Export of logs to Europe was almost exclusively made up of ramin, which also dominated the log export to Australia. Indonesia out-competed Sarawak, with better quality, on the ramin log market from round 1970. This coincided with a decline in ramin log production in Sarawak resulting in a shortage of logs in the ramin based industries in the state. In order to protect the industry, the Government of Sarawak increased the export duty on ramin logs, which also contributed to the decline of the ramin log export.

Table A20

Direction of Sarawak's Log Export, 1955 - 1990

Destination/Year	1955	1965	1975	1985	1990
	'000cu m				
Europe	44	86	0	0	0
Australia	21	23	1	0	0
Japan	0	715	778	5 817	7 055
Korea	0	81	6	1 833	2 447
Taiwan	0	41	204	2 474	3 109
Hongkong	48	246	198	413	450
Singapore	2	0	69	74	29
China	0	0	2	668	436
Thailand	0	0	0	133	557
Philippines	0	0	0	0	243
India/Pakistan	0	0	0	66	1 176

The export of logs to Europe and Australia has faded out and the entire export is since the early 1970:s going to the log deficit countries in Asia, to Japan, Korea, Taiwan, Hongkong and Singapore. In more recent years India, Pakistan, China, Thailand and the Philippines have emerged as major destinations of Sarawak's log export.

A4.2.2 Processed Timber

There has been, compared to that of logs, a relatively small export flow from Sarawak of primary processed wood: sawnwood, veneer and plywood. This production was originally based on low grade and defect logs from the pit swamp forests but is now utilizing also hill timbers. The production and export from the primary processing industries has remained at a fairly uniform level, supplying a small unsophisticated local market and complementing the log export to neighbouring countries. In the last few years of the 1980:s, the primary processing started to increase and is now rapidly expanding.

Along with the sawmill production, production of mouldings and dowels has developed. This production, which earlier was based almost exclusively on ramin timber, has, to nearly 100 percent, gone for export.

Table A21

Sarawak,s Timber Exports, 1950 - 1992

	Logs	Sawnwood	Veneer	Plywood	Mouldings
	'000cu m				RM million
1950	48	25	0	0	0
60	350	230	0	0	0
70	3 130	310	2	7	16
80	6 700	170	0	13	62
85	11 490	140	6	5	38
90	15 740	350	20	160	62
91	15 820	570	31	290	65
92	14 830	880	150	550	65

Sarawak has been and is supplying tropical hardwoods, which to some extent are favoured by importers for their specific characteristics of colour, finish and other appearance and quality features and for their durability. However, the bulk of the timbers from Sarawak are used as general utility material in building construction, furniture and panelling, and is, in these uses, competing with tropical and temperate softwoods.

A4.2.3 Trading Partners

The export of processed timber products from Sarawak was in the 1950:s and 1960:s directed towards industrialized countries: European countries, Australia and USA.

The countries in East and Southeast Asia are now taking an increasing share of the total sawnwood export of Sarawak. In addition to the countries included in the table, Thailand has emerged as a major importer of sawnwood from Sarawak and imported 190 thousand cu m in 1992.

Table A22
Direction of Sarawak's Sawnwood Export, 1975 - 1992

	EEC	Middle East	China, Hongkong, Taiwan	Japan, Korea	USA, Canada	Singapore	Total
	'000cu m						
1975	179	0	6	..	12	1	212
1980	152	0	1	9	2	1	170
1985	102	3	17	14	1	2	140
1990	145	14	44	51	5	33	348
1991	152	33	76	74	11	82	568
1992	114	72	277	92	10	92	884

There is a clear difference in preference between the market areas in that EEC has been and is interested in ramin in first hand and takes at present some 90 percent of the ramin sawnwood export but less than 10 percent of that of non-ramin species.

In the case of veneer and plywood export, the development patterns are similar to that of sawnwood; the early importers are becoming relatively less and less important while the countries in East and Southeast Asia are taking a larger and larger portion of the export.

Table A23
Direction of Sarawak's Veneer Export, 1980 - 1991

	China, Hongkong, Taiwan	Japan	Total
	'000cu m		
1980	0	0	0
1985	0	9.0	9.0
1990	2.2	17.2	20.4
1991	15.7	14.0	31.1

Table A24
Direction of Sarawak's Plywood Export, 1975 - 1991

	EEC	Middle East	China, Hongkong, Taiwan	Japan, Korea	USA, Canada	Singapore	Total
	'000cu m						
1975	0.9	0	0	0	6.0	0.3	7.5
1980	1.5	0	0.5	0	2.3	8.8	13.1
1985	0	0	0	0	0	4.6	5.3
1990	11.7	23.3	15.7	4.4	73.3	34.6	160.9
1991	17.8	50.8	54.9	25.2	86.0	54.2	284.4

Mouldings and dowels went exclusively to Europe and North America up to the middle of the 1980:s, when the countries in East and Southeast Asia emerged as importers of these products. EEC and USA has continued to import mouldings and dowels but the Asian markets are gaining in relative importance.

A4.2.4 Prices

Malaysia's average export prices of non-coniferous logs, non-coniferous sawnwood and of plywood, as they have been reported to FAO, have been somewhat lower than corresponding average world export prices, but have followed closely the development of those world averages , though at a slightly higher rate of increase.

Table A25
Direction of Sarawak' Export of Mouldings and Dowels, 1975 - 1991

	EEC	China, Hongkong, Taiwan	Japan, Korea	USA, Canada	Singapore	Total
	RM'000					
1975	4.7	0	0	15.0	0	22.8
1980	11.5	0	0.2	44.3	0.2	62.5
1985	11.9	0.1	0.3	23.1	0.2	38.1
1990	18.7	11.5	4.3	22.0	1.8	61.4
1991	13.2	19.0	7.9	17.6	0.6	63.3

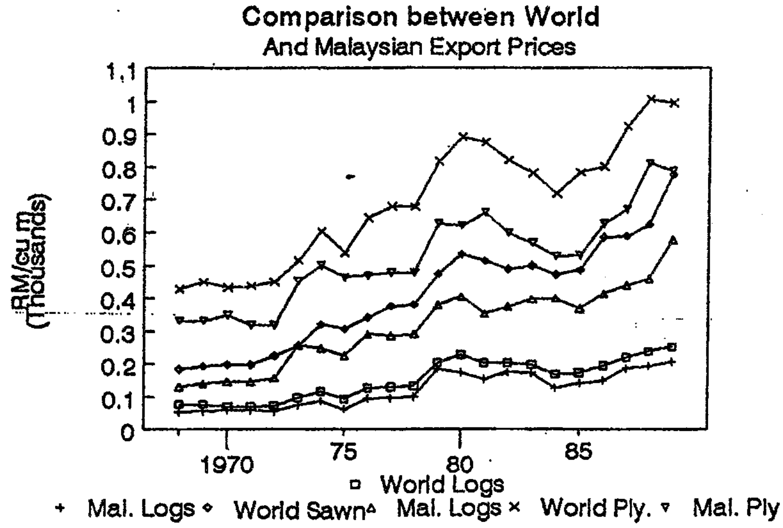
Table A26

Development of World and Malaysian Export Prices, 1970 - 1990

	Logs (NC)	Sawnwood (NC)	Plywood
	Increase Percent per Year		
World, in current US$	7.4	7.7	4.9
Malaysian,			
in Current US$	7.6	7.8	5.5
in current RM*	6.9	7.2	4.9

* Ringgit Malaysia

Because of the successively better exchange rate of the RM against US$, the increase in prices expressed in RM have increased slower than the equivalent in US$.



The importer who pays in US$ finds that Malaysian timber is becoming relatively more expensive than world average non-coniferous material, while the Malaysian exporter may have different opinion, if he looks only at the RM equivalent. The differences disappears, if both currencies are expressed in stable values and the fact that remains is that the Malaysian timber prices have grown somewhat faster than corresponding world average prices.

If a comparison is made of the timber prices, expressed in current values of US$, Japanese Yen and Malaysian Ringgit, the development shows striking differences. The Japanese consumer, who operates in an environment where prices have not changed in response to the increasing strength of the Yen, finds that timber prices decreased considerably during the 1980;s after an increase during the 1970:s, an increase which followed the world price development.