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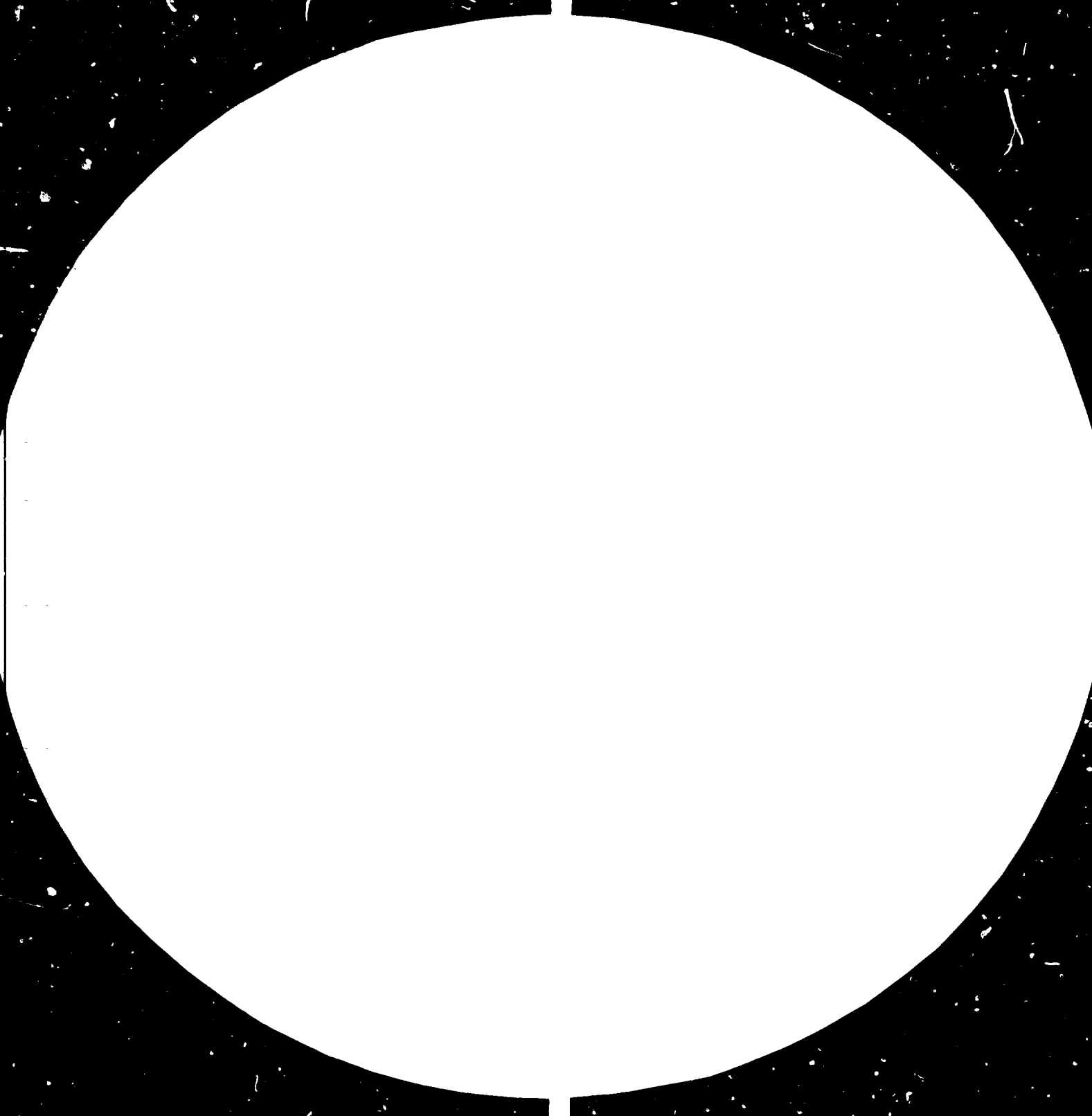
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11406



Distr.  
LIMITED

IL/WG.371/10  
29 April 1982

ENGLISH

United Nations Industrial Development Organization

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Regional Preparatory Meeting for Asia in preparation  
of the First Consultation on the Wood and Wood  
Products Industry  
Manila, Philippines, 22-26 March 1982

PAPUA NEW GUINEA WOOD AND WOOD BASED INDUSTRIES

PAST AND PRESENT \*

by

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## 1. HISTORY

Timber is mentioned often in history books as a desirable and important trading commodity in the Asian, 'Far East' regions.

By the early 1700's for example some European countries had already virtually exhausted their own hardwood forests, and to an adventurer or merchant venturer from colder climes, the vast forests of huge tropical trees must have appeared as a new and exciting source of raw material for ship construction and for building of all kinds.

All the 'Far Eastern' countries had well developed, centuries old civilisations, mostly with large populations and had, therefore, equally well developed timber uses. Trading patterns for export to Europe as well as for local use for a wide variety of products, including timber were already well established more than a century ago.

### 1.1 Pacific

The Pacific region on the other hand has relatively small land masses (with the exception of PNG) which are scattered over many thousands of miles of ocean. The population density was, and is, small and although some possessed complex cultural systems the Pacific lands around the equator were certainly not developed in any sense of the word.

Development was slow and confined largely to missionary activities and trading in copra. There was no trade in timber.

### 1.2 Papua New Guinea

Papua New Guinea came early into the care of Australia as a trust territory and since Australia had good supplies of tropical timbers there was no need to develop the PNG timber resource. Indeed, we read that the first 'European style' house in PNG was actually imported from Australia!

Mary Jane Mountain of the Prehistory Department of the Research School of Pacific Studies, Canberra writing in the Air Niugini "Paradise" Magazine for January 1981 said: "We now know that much of the primary forest in the highlands of Papua New Guinea was cleared over large areas presumably for garden plots, at least 6000 years ago. At Kuk, near Mount Hagen in the Western Highlands, there is evidence that the forest on the surrounding slopes was cleared as long as 9000 years ago. This is one of the earliest documented cases of forest clearance for food production anywhere in the world."

Timber was felled only to clear for shifting agriculture or for plantations and the timber was burnt or left to rot. Thus, it is clear that there is no history of formal timber usage nor trading in Papua New Guinea.

In the financial year 1950-5, when the world's timber trading patterns totalling many millions of cubic metres annually had been established for generations, Papua New Guinea exported just 4,600 M3 of round logs, and no other timber or timber products, so that when considering the wood and wood products industries of PNG in the context of the Asia/Pacific region it is necessary to apply a very different time scale.

## 2. DOMESTIC CONSUMPTION

The export figures in Table 1, 1951-1981 are a guide to the slow development of the PNG timber and wood products industries.

There are no reliable data for domestic consumption, however, a recent FIC survey produced figures for sawn lumber usage, and combining with estimated usage from other sources including PNG Office of Forests, Table 2 gives a reasonable estimate.

## 3. HARVEST

The estimated PNG total harvest in recent years is shown in Table 3.

## 4. RESOURCE

PNG has a land area of 46 million hectares of which 36 million hectares is classed as closed forest. The operable forest area is 15 million hectares with a volume estimate of 1,480 million M3. (Table 4).

With an annual harvest of only 1.25 to 1.5m M3, it is clear that PNG is only at the beginning of its development of these forest resources.

With this vast resource, large land mass with few roads, and very long coastline, a low population and small domestic market for wood products, it is obvious that forest policies appropriate for PNG might be entirely different from those relevant elsewhere in the region. This will be discussed in paragraph 6.

## 5. THE WOOD AND WOOD PRODUCTS INDUSTRY

- 5.1 It is thought there are about 72 sawmills in operations in Papua New Guinea, one plywood mill, 3 veneer mills (two of which belong to the same company) and one woodchip mill. In addition, there are joinery manufacturers and some furniture factories. Many of the sawmills are very small and only operate intermittently supplying purely local markets.

PAPUA NEW GUINEA LOG AND SAWN LUMBER EXPORTS 1951-1981

VOLUME '000m3 AND VALUE KINA '000

YEAR	50-51	51-52	60-61	61-62	62-63	63-64	64-65	65-66
Logs Vol m3	4.6	4.6	3.4	4.8	35.4	46.4	35.3	63.7
Value (K)	51	134	90	98	638	748	609	884
Average K per m3	11.0	19.1	26.4	20.0	18.0	16.1	17.4	13.9
Sawn Vol m3	-	2.5	8.2	6.6	9.0	11.0	12.5	12.4
Value (K)	-	124	450	382	572	702	830	812
Average K per m3	-	49.6	54.9	57.9	63.6	63.9	66.4	65.5
Total Value K	51	257	540	480	1210	1450	1438	1696

YEAR	66-67	67-68	68-69	69-70	70-71	71-72	72-73	73-74 *
Logs Vol m3	113.6	143.6	102.3	193.3	429.6	409.1	424.7	655.2
Value (K)	1372	1639	1177	2464	5251	4415	5659	11804
Average K per m3	12.1	11.4	11.5	12.7	12.2	10.8	13.3	18.0
Sawn Vol m3	12.6	14.2	17.3	17.3	13.7	24.9	30.4	51.6
Value (K)	892	1023	1119	1218	1005	1902	2301	4713
Average K per m3	70.8	72.0	64.7	70.4	73.3	76.4	75.7	91.3
Total Value K	2264	2662	2296	3682	6255	6317	7960	16517

YEAR	1974	1975	1976	1977	1978	1979	1980	1981
Logs Vol m3	550.0	288.9	488.9	412.4	421.9	472.0	641.9	737.7
Value (K)	9578	5561	9716	10970	11329	20720	31193	31018
Average K per m3	17.4	19.2	19.9	26.59	26.8	43.90	48.59	42.0
Sawn Volume m3	43.1	23.3	52.5	55.9	31.9	62.6	45.2	23.8
Value (K)	4736	2615	5321	5805	3398	7092	6282	3609
Average K per m3	109.9	109.9	101.3	103.93	106.24	113.29	136.77	152.0
Total Value K	14314	8176	15037	16775	14726	27812	37375	34628

PNG KINA = Approx US\$ 1.2 1975  
 " " " " US\$ 1.45 1979  
 " " " " US\$ 1.52 1980

\* 1973/4 mark change-over  
 to calendar reporting

Table 2

PNG Domestic Consumption for Sawn Wood and Wood Products, 1979/80

Sawn Lumber	84,000 M3	approx	1979/80
Plywood	2,141 M3	imported	1980
	7,000 M3	local mnfr	1980
Chipboard	1,214 M3	imported	1980

Table 3

Total Commercial Harvest Excluding Use for Firewood and Other Non-Recorded Felling

1976	1,130 million M3
1977	1,136 " "
1978	1,186 " "
1979	1,117 " "
1980	1,022 " "

Table 4

Comparison Forest Statistics

	<u>Operable Area</u> Million of <u>Hectares</u>	<u>Hectares Per Head</u> of <u>Population</u>	<u>Operable Vol.</u> Million <u>Cubic Metres</u> (M3)	<u>M3 Per Head of</u> <u>Popula-</u> <u>tion</u>
Papua New Guinea	15	7.5	1480	627
Indonesia	42	0.3	5200	44
Malaysia	19	1.7	2100	190
Philippines	11	0.3	1800	50



- 5.2 The timber processing industry is the third largest in the industrial sector of Papua New Guinea economy, coming after engineering including car repairs, and brewery and soft drink making. Therefore the timber processing industry is in fact the largest industry using Papua New Guinea's own resources rather than using or repairing imported raw materials.
- 5.3 It is not known exactly how many people are employed in the forestry sector it is certainly several thousand. Processing, sawmilling, and timber manufacturing employs about 5000 people and is 95% localised.

Table 5

SUMMARY-FOREST PRODUCTS EXPORTS 1981 AND 1980

COMMODITY	QUANTITY ( '000 M3)		VALUE (K '000)		Destination 1981
	1981	1980	1981	1980	
Logs	737.7	641.9	31018.3	3,192.9	Japan 66% Korea 26%
Sawn Timber	23.8	45.2	3609.4	6182.3	Australia 60% Japan 25%
Woodchip	120.1*	121.1*	5460.6	7092.2	100% Japan
Plywood	7.8	6.5	3068.9	2982.0	100% Australia
Chopsticks	4.8	5.4	1270.2	1135.4	Japan
Veneer	0.412	1.5	68.6	212.0	
Sandalwood	NA		NA	23.3	
Other	NA	0.03	NA	24.3	
<b>TOTAL</b>	<b>774.5</b>	<b>700.53 M3</b>	<b>K44496.2</b>	<b>K46844.4</b>	
* '000 Dry Tonnes, Not cubic Metres					Note 1Kipa
Total Subject to Rounding Errors					= US\$ 1.5

6. FOREST POLICY

6.1 PAST

A 1975 PNG Department of Forests Publication "Facts and Information" stated in part:

QUOTE

"CONTRIBUTION TO EXPORTS BY LARGE PROJECTS

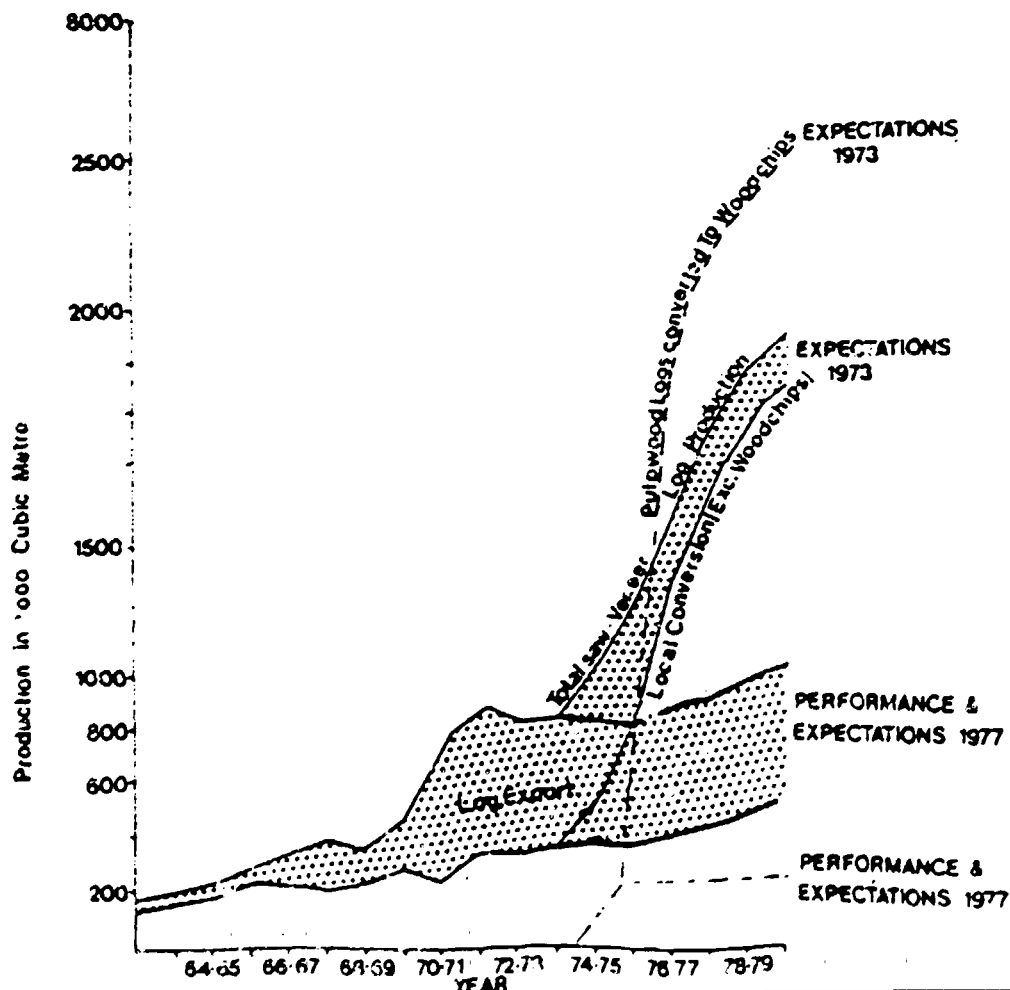
There are at present about 90 small to medium size sawmills in Papua New Guinea. By 1980-1985 over three quarters of the total log production will come from 6-8 major integrated operations. This will lead to a higher quality export product.

AN INCREASING PROPORTION OF LOGS WILL BE CONVERTED WITHIN PAPUA NEW GUINEA.

It is Government policy to phase out the export of unprocessed logs as soon as practicable" UNQUOTE.

1973 PNG Government forecast of increase in processing:

Table 6. GRAPH



The actual Forest Policy document of the time gave only very general guidance on the lines of "developing the forest resource in the best interests of the nation." No detail was given and it appears there was no formally published government forest development policy other than departmental objectives such as in the 1975 paper and a forecast made in 1973 giving expectations for vastly increased processing.

These expectations and growth were not realised (see Table 5) and following on from discussions with Forest Industries Council and Industry, the PNG government recognised the need for a new, formal government National Forest Policy designed to guide prospective developers and others, not least the newly emerging 19 separate Provincial Governments on how best the important PNG forest resource might properly and most expeditiously be developed.

## 6.2 Present

The White Paper "Revised National Forest Policy" was presented to the PNG Parliament in late 1979. This document runs to 60 pages and is a practical approach to realistic development, taking into account PNG's geography, population and variety of timber species.

Briefly, the policy abandons previous efforts to phase out log exports, recognising that these should, in fact, be greatly increased, and changing the emphasis away from a total commitment to processing.

The policy says the government will:

- 6.2.1 Promote the formation of nationally-owned Forest Development (Logging) Corporations.
- 6.2.2 Make sure that the existing and proposed timber processing industry uses the nation's timber resources efficiently.
- 6.2.3 Encourage local processing and foreign investment in order to complement nationally-owned enterprises.
- 6.2.4 Ease log export restrictions within a national forest development programme.

The stated Objectives and Benefits:

- 6.3.1 Revenue generation
- 6.3.2 Employment and training
- 6.3.3 Infrastructure development
- 6.3.4 Social stability and continuity of economic activity

- 6.3.5 Decentralization and rural development.
- 6.3.6 Income distribution.
- 6.3.7 PNG ownership and control, self-reliance - local processing and import replacement.

## 7. DEVELOPMENT

Since publication of the White Paper development has accelerated:

- 7.1.1 Two of the nationally-owned Forest Development (Logging) Corporations have been formed and have begun operations.
- 7.1.2 The agreement for a second woodchip mill signed and building soon to begin.
- 7.1.3 Wide interest is now shown in several other forest areas for logging and processing operations.

## 8. CONSTRAINTS

Many of the constraints hampering primary and secondary processing in PNG are demographic and geographic.

### 8.1 Market

The domestic market for wood and wood products is small. Supply of sawn lumber is finely in balance with demand. The demand is very largely tied to government activity and in today's difficult financial conditions it is often building projects which first face curtailment. On the other hand, large projects such as the \$billion Ok Tedi Gold and Copper mine, the Ramu Sugar Scheme, Hydro-electric and agricultural developments do provide some stimulus.

Nevertheless, any new primary wood processing projects must be almost entirely geared to export.

e.g. The PNG local demand for chipboard is only about 1200 m<sup>3</sup> p.a., far too small to support even the smallest manufacturing plant.

### 8.2 Freight

The high cost of coastal freight inhibits economic internal movement of wood products to the extent that it is cheaper to import than to ship coastwise.

Costs of all materials and services are high due to long distances, high freights and small demands.

### 8.3 Currency

The government high currency (Kina) policy causes PNG export prices to appear high and encourages imports, e.g., The PNG Kina was at parity with the Australian dollar in 1976; by 1979 the Kina was worth A\$1.3. Thus, a 30% 1976 PNG tariff barrier protecting a local product had been effectively negated by 1979.

In September 1981, the government was obliged to place a ban on plywood imports to prevent continued dumping of imports ruining the sole PNG plymill.

### 8.4 Wage Rates

Wage rates are high in comparison with neighbouring countries. Minimum urban wage is K29.53 per week (US\$40.93).

### 8.5 Negotiations

Government is slow in negotiation and has complex, overlapping procedures, e.g., only one of 6 project areas listed in the 1975 "Forest Facts and Information" came into operation within 5 years.

A booklet on "Guidelines for Forest Development Proposals" issued by the PNG government, runs to 49 pages, and while investors are able and willing to go into the fine details required, there are very often long delays in negotiations causing heavy expense to the proponents.

### 8.6 Imports

PNG is an import oriented economy. It is relatively simple to import goods of all kinds, e.g., timber, furniture, chipboard. A one-man office and telephone are sufficient. By contrast to set up processing of these products within PNG is expensive and time consuming, requiring vast detail, licensing, agreements, localisations schedules, etc. There is no effective policy for import substitution.

### 8.7 Training

There is a lack of management training in the wood processing industries, though facilities for practical training in sawmilling, wood machining, preservation and other aspects are well covered at the Timber Industries Training College.

