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MALAYSIAN SECTOR PROFILES

CONDUCTED FOR

THE CANADIAN HIGH COMMISSION

KUALA LUMPUR

SECTOR: FOREST INDUSTRY

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THE MALAYSIAN FOREST INDUSTRY

RESEARCH

CONDUCTED FOR

THE CANADIAN HIGH COMMISSION

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1.0 INTRODUCTION

The total forest area in Malaysia is estimated to be 20.4 million hectares or 61.8% of the total land area, with 6.5 million hectares in Peninsular Malaysia, 4.5 million hectares in Sabah and 9.4 million hectares in Sarawak. Although the rich timber resource is still subject to large scale land clearance for agricultural and urban development, a total of 12.7 million hectares of forested land has been earmarked as the Permanent Forest Estate (PFE) to be managed under sustained yield. Of this area approximately 4.7 million hectares are located in Peninsular Malaysia, 3.4 million hectares in Sabah and 4.6 million hectares in Sarawak. The remaining area will be planted with crops such as rubber and oil palm.

The forestry sector plays a major role in the socio-economic development of Malaysia. In 1988, this sector was responsible for 5.1% of the country's GDP, earning some M$7.07 billion (US$2.62 billion) or 12.8% of total export earnings. The sector also directly employs some 162,000 people. Government expenditures on forest management and development, including research, amounted to M$172.94 million in 1988.

The most striking feature about the forest industry in Malaysia is the excess milling capacity in Peninsular Malaysia vis-a-vis raw material supply and the reverse in Sabah and Sarawak. All but 72,600 cubic metres of the 9.8 million cubic metres of logs produced in Peninsular Malaysia in 1987 were processed in the mills, mainly to meet expanded overseas demand. Most mills were running at more than one shift/day and many of them, especially the plywood mills, could have run at full capacity (3 shift/day) if more logs were available. In Sabah and Sarawak, where resources are abundant and processing mills are few and far between, unprocessed quality logs are sold directly overseas which leaves the local mills with raw materials of lower grades.

2.0 LOCATION OF THE TIMBER RESOURCE

Land use maps can be found on pages 16 and 17 in Appendix B - Malaysian Rain Forest, A Living Resource.

3.0 PRODUCTION

Statistical information in this section was drawn from the magazine Asia Pacific Forest Industries, November 1988, and relates to 1987. Puan Roszehan bte Mohd Idrus, Director, Planning and Development of the Malaysian Timber Industry Board confirmed that these are the latest comprehensive figures available.

a) Logs

Log production in 1987 totalled 34.6 million cubic metres. Compared to 29.2 million cubic metres in 1986, it showed an increase of 18.5%.

A total of 9.8 million cubic metres of logs were produced from Peninsular Malaysia, 12.3 million from Sabah and 12.5 million from Sarawak.

b) Sawn Timber

In 1987, a total of 6.3 million cubic metres of sawn timber were produced. This reflects an increase of 21.2% over 1986's figure of 5.2 million cubic metres.

Production of sawn timber in Peninsular Malaysia totalled 4.8 million cubic metres, while Sabah produced 895,000 cubic metres and Sarawak 525,000 cubic metres.

c) Plywood

Production of plywood totalled 857,360 cubic metres in 1987. 720,360 cubic metres of the total production were from Peninsular Malaysia, 124,000 cubic metres from Sabah and 13,000 cubic metres from Sarawak.

d) Moulding

A total of 259,350 cubic metres were produced in 1987 with Peninsular Malaysia contributing 216,350 cubic metres and Sarawak 43,000 cubic metres.

4.0 EXPORT

a) Logs

1987 exports of logs totalled 22.9 million cubic metres valued at M$4.24 billion; the main export markets being Japan, South Korea and Taiwan.

Of this, 72,615 cubic metres were exported from the Peninsula, 10.1 million cubic metres from Sabah and 12.6 million cubic metres from Sarawak.

b) Sawn Timber

A total of 3.8 million cubic metres of sawn timber with a value of M$1.9 billion was exported in 1987. Exports from Peninsular Malaysia totalled 2.8 million cubic metres with 908,377 cubic metres from Sabah and 176,050 cubic metres from Sarawak.

c) Plywood

Malaysia exported 728,966 cubic metres of plywood in 1987 valued at M$486.3 million. In 1987, 611,271 cubic metres of plywood valued at M$391.4 million were exported from Peninsular Malaysia. Sabah and Sarawak exported 99,671 cubic metres (M$78.4 million) and 18,024 cubic metres (M$16.4 million) respectively.

d) Veneer

In 1987, a total of 492,904 cubic metres of veneer valued at M$102.9 million were exported. A large proportion of this (397,282 cubic metres) was exported from Sabah. Peninsular Malaysia exported 44,202 cubic metres while Sarawak exported 51,420 cubic metres.

e) Moulding

A total of 267,341 cubic metres of moulding was exported in 1987 with a value of M$314.9 million. Peninsular Malaysia's contribution was M$269.5 million while Sarawak's exports were valued at M$45.4 million.

f) Furniture

Exports of furniture remained insignificant although figures improved by 105% in 1987 compared to 1986. A total of M$56.4 millions' worth of wooden and rattan furniture was exported in 1987. Exports of wooden furniture totalled M$45.3 million while exports of rattan furniture were valued at M$11.1 million.

TABLE 1: EXPORT OF MAJOR TIMBER PRODUCTS

EXPORT OF MAJOR TIMBER PRODUCTS BY PENINSULAR MALAYSIA

PRODUCT	DECEMBER 1988 Volume (M3)	DECEMBER 1988 FOB Value (M$)	JANUARY-DECEMBER 1988 Volume (M3)	JANUARY-DECEMBER 1988 FOB Value (M$)	DECEMBER 1988 % Change in Volume 88/87	DECEMBER 1988 % Change in FOB Value 88/87	JANUARY-DECEMBER 1988 % Change in Volume 88/87	JANUARY-DECEMBER 1988 % Change in FOB Value 88/87
Graded Surface Dried	101.399	45.497.027	1.150.657	491.240.330	+ 1.3	+ 14.7	6.1	0.0
Graded Kiln Dried	51.504	42.711.751	557.505	410.456.144	+ 5.7	+ 19.7	– 5.5	– 3.3
Total: Graded Sawntimber	152.903	88.208.778	1.708.162	901.696.474	+ 2.7	+ 17.1	– 6.2	– 1.9
Ungraded	98.329	26.216.265	1.151.114	305.480.358	+ 15.2	+ 21.0	+ [illegible]	+ 10.7
Grapestakes	-	-	33	12.343	-	-	68.8	75.1
Ungraded Timber For Piling	387	88.846	4.827	1.265.280	+ 100.0	+ 100.0	+ 100.0	+ 100.0
Total: Ungraded Sawntimber	98.716	26.305.111	1.155.974	306.757.981	+ 15.6	+ 21.4	– 23.1	+ 40.3
Total: Sawntimber	251.619	114.513.889	2.864.136	1.208.454.455	+ 7.4	+ 18.0	+ 3.7	+ 6.2
Plywood	48.680	38.904.195	626.751	505.632.648	+ 10.0	+ 23.6	+ 11.2	+ 39.2
Veneer	3.311	1.943.964	45.011	25.767.646	+ 10.8	+ 22.7	+ 1.8	+ 10.7
Moulding	32.646	41.571.973	305.141	354.778.102	+ 52.4	+ 83.7	+ 15.5	+ 33.6
Blockboard	1.936	1.280.571	24.449	15.439.225	– 30.9	– 27.4	– 48.7	– 45.1
Sawlogs	-	-	30.464	3.149.179	– 99.9	– 99.9	– 57.9	– 47.8
Chipboard	5.031	2.141.049	47.397	19.923.587	+ 26.9	+ 33.3	+ 3.8	+ 1.8
Builders Carpentry & Joinery	1.063	1.975.742	8.726	17.339.631	+ 100.0	+ 100.0	+ 100.0	+ 100.0
GRAND TOTAL	344.286	202.331.383	3.952.075	2.150.484.473	+ 10.6	+ 29.5	+ 4.0	+ 16.7

Graded sawntimber includes railway sleepers & baulks

EXPORT OF MAJOR TIMBER PRODUCTS BY SABAH

PRODUCT	DECEMBER 1988 Volume (M3)	DECEMBER 1988 FOB Value (M$)	JANUARY-DECEMBER 1988 Volume (M3)	JANUARY-DECEMBER 1988 FOB Value (M$)	DECEMBER 1988 % Change in Volume 88/87	DECEMBER 1988 % Change in FOB Value 88/87	JANUARY-DECEMBER 1988 % Change in Volume 88/87	JANUARY-DECEMBER 1988 % Change in FOB Value 88/87
Logs	685,800	182,969,000	8.247,600	2.158.902.000	– 17.6	– 12.7	– 19.7	– 8.9
Sawntimber	103,800	55,569,000	1,033.200	520.071.000	+ 29.1	+ 37.8	– 13.7	– 25.1
Plywood	7,700	5,702,000	128.400	105.864.000	+ 8.5	– 10.1	– 29.3	– 35.6
Veneer	6,700	4,119,000	136,600	74.367.000	– 44.6	– 37.4	+ 1.7	– 17.2
GRAND TOTAL	804,000	248,359,000	9,545,800	2,859,204,000	– 13.8	– 5.5	– 16.3	– 2.3

EXPORT OF MAJOR TIMBER PRODUCTS BY SARAWAK

PRODUCT	DECEMBER 1988 Volume (M3)	DECEMBER 1988 FOB Value (M$)	JANUARY-DECEMBER 1988 Volume (M3)	JANUARY-DECEMBER 1988 FOB Value (M$)	DECEMBER 1988 % Change in Volume 88/87	DECEMBER 1988 % Change in FOB Value 88/87	JANUARY-DECEMBER 1988 % Change in Volume 88/87	JANUARY-DECEMBER 1988 % Change in FOB Value 88/87
Logs	1,146,700	182,105,000	12.293.200	1,849,707,000	+ 12.8	+ 19.4	– 2.3	– 2.5
Sawntimber	25,600	17,189,000	205,400	149,895,000	+ 91.0	+ 65.2	+ 16.7	+ 11.4
Plywood*	4,099	4,425,000	53.283	47,542,000	+ 149.9	+ 164.2	+ 195.6	+ 189.7
Moulding	n.a.	1,371,000	n.a.	21,387,000	–	– 0.7	–	– 7.7
Dowels	n.a.	2,652,000	n.a.	34,088,000	–	+ 820.8	–	+ 53.1
Woodchips	n.a.	833,000	n.a.	4,229,000	–	–	–	+ 14.4
Veneer	1,872	1,189,000	29.530	19,373,000	– 21.3	– 39.7	+ 14.4	+ 16.7
GRAND TOTAL	1,178,271	209,764,000	12,581,413	2,126,221,000	+ 13.9	+ 24.2	– 1.7	+ 0.6

*Includes laminboard.

Source: Maskayu
Monthly Timber Bulletin of the Malaysian Timber Industry Board, Ministry of Primary Industries

5.0 TIMBER SPECIES

The following Figure presents species found in Malaysian forests.

Figure 1

SOURCE: (THE REGENERATION SAMPLING LIST OF 1982)

(A) Preferred Species

Bil.	Local name	Latin name	Symbol
1.	Balau bukit	Shorea foxworthyi	BLBT
2.	Balau kumus	+Shorea laevis	BLKS
3.	Balau kumus hitam	Shorea maxwelliana	BLKHM
4.	Balau laut	Shorea glauca	BLLT
5.	Balau laut merah	Shorea kunstleri	BLLMH
6.	Balau membatu	Shorea guiso	BLMM
7.	Balau membatu jantan	Shorea ochrophloia	BLMJN
8.	Balau merah	Shorea collina	BLMH
9.	Balau tembaga	Shorea exelliptica	BLTB
10.	Chengal	Neobalanocarpus heimii	CGL
11.	Damar hitam bulu	Shorea longisperma	DHBL
12.	Damar hitam katup	Shorea dolichocarpa	DHKP
13.	Damar minyak	+Agathis borneensis	DMY
14.	Giam lintah bukit	Hopea helferi	GMLBT
15.	Jelutong	Dyera costulata	JLG
16.	Kapur	Dryobalanops aromatica	KPR
17.	Keladan	Dryobalanops oblongifolia	KLN
18.	Keledang keledang	Artocarpus lanceifolius	KLKL
19.	Kempas	Koompassia malaccensis	KPS
20.	Keruing belimbing	Dipterocarpus grandiflorus	KRBG
21.	Keruing bulu	Dipterocarpus baudii	KRBL
22.	Keruing gombang	Dipterocarpus cornutus	KRGB
23.	Keruing gondol	Dipterocarpus kerrii	KRGL
24.	Keruing kelabu	Dipterocarpus pseudofagineus	KRKU
25.	Keruing kertas	Dipterocarpus chartaceus	KRKS

Bil.	Local name	Latin name	Symbol
26.	Keruing kipas	Dipterocarpus costulatus	KRKP
27.	Keruing latek	Dipterocarpus apterus	KRLK
28.	Keruing mempelas	Dipterocarpus crinitus	KRMP
29.	Keruing ropol	Dipterocarpus hasseltii	KRRP
30.	Mengkulang jari	Heritiera javanica	MKJR
31.	Meranti batu	Shorea dasyphylla	MTBU
32.	Meranti belang	Shorea resinosa	MTBE
33.	Meranti bukit	+Shorea platyclados	MTBT
34.	Meranti daun besar	Shorea hemsleyana	MTDB
35.	Meranti kepong	Shorea ovalis	MTKP
36.	Meranti langgong	Shorea lepidota	MTLG
37.	Meranti melantai	Shorea macroptera	MTML
38.	Meranti nemesu	Shorea pauciflora	MTNM
39.	Meranti pa'ang	Shorea bracteolata	MTPA
40.	Meranti rambai daun	Shorea acuminata	MTRD
41.	Meranti sarang punai	Shorea parvifolia	MTSP
42.	Meranti seraya	+Shorea curtisii	MTSY
43.	Meranti temak nipis	Shorea roxburghii	MTTN
44.	Meranti tembaga	Shorea leprosula	MTTB
45.	Merawan batu	+Hopea beccariana	MWBU
46.	Merawan penak	Hopea mengarawan	MWPK
47.	Merawan siput	Hopea sangal	MWSP
48.	Merawan siput jantan	Hopea odorata	MWSJN
49.	Merbau	Intsia palembanica	MRU
50.	Mersawa durian	Anisoptera laevis	MADR
51.	Mersawa gajah	Anisoptera scaphula	MAGH
52.	Nyatoh sidang	Palaquium rostratum	NYSG
53.	Sepetir lichin	Sindora ceriacea	SPLN

(B) Acceptable Species

Bil.	Local name	Latin name	Symbol
1.	Ara berteh	Parartocarpus spp.	AB
2.	Balau, dan lain-lain	Shorea spp.	BL
3.	Bintangor	Calophyllum spp.	BN
4.	Damar Hitam dan lain-lain	Shorea spp. drp. Kump. Meranti Kuning	DH
5.	Dedali	Strombosia javanica	DDI
6.	Durian	Durio spp.	DR.
7.	Geronggang	Cratoxylum spp.	GG.
8.	Gerutu	Parashorea spp.	GR
9.	Giam, dan lain-lain	Hopea spp. drp. Kump. Giam	GM
10.	Jelawai	Terminalia spp.	JW
11.	Kasai	Pometia spp.	KI
12.	Kedondong	Burseraceae spp.	KD
13.	Kekabu hutan	Bombax valetonii	KKH
14.	Keledang, dan lain-lain (termasuk Bangkong dan Pudu)	Artocarpus spp. drp. Kump. Keledang	KL
15.	Kembang semangkok	Scaphium spp.	KS
16.	Keranji	Dialium spp.	KJ
17.	Keruing, dan lain-lain	Dipterocarpus spp.	KR
18.	Mata ulat	Kokoona	MU
19.	Melunak	Pentace spp.	ML
20.	Mengkulang, dan lain-lain	Heritiera spp.	MK
21.	Meranti bakau	*Shorea rugosa	MTBK
22.	Meranti bumbong	Shorea dealbata	MTBB
23.	Meranti bunga	*Shorea teysmanniana	MTBA
24.	Meranti jerit	Shorea henryana	MTJT
25.	Meranti kepong hantu	Shorea macrantha	MTKH
26.	Meranti lapis	Shorea lamellata	MTIP
27.	Meranti mengkai	Shorea bentongensis	MTMG
28.	Meranti paya	*Shorea platycarpa	MTPY
29.	Meranti pepijat	Shorea leptoclados	MTPJ

Bil.	Local name	Latin name	Symbol
30.	Meranti pipit	Shorea assamica	MRPP
31.	Meranti sarang punai bukit	+Shorea ovata	MTSBT
32.	Meranti sengkawang merah	Shorea singkawang	MTSMH
33.	Meranti temak	Shorea hypochra	MTTK
34.	Meranti tengkawang ayer	*Shorea palembanica	MTTA
35.	Merawan, dan lain-lain	Hopea spp. drp. Kump. Merawan	MW
36.	Merpauh	Swintonia spp.	MP
37.	Mersawa, dan lain-lain	Anisoptera spp.	MA
38.	Nyatoh, dan lain-lain (termasuk Taban)	Sapotaceae selain dari Betis	NY
39.	Pelong	Pentaspadon spp.	PL
40.	Perupok	Lophopetalum spp.	PR
41.	Petai	Parkia spp.	PT
42.	Podo	Podocarpus spp.	PD
43.	Pulai	Alstonia spp.	PU
44.	Punah	Tetramerista glabra	PNH
45.	Ramin	*Gonystylus spp.	RM
46.	Resak	Vatica spp.	RK
47.	Sepetir, dan lain-lain	Sindora spp.	SP
48.	Sesendok	Endospermum malaccense	SSK
49.	Simpoh	Dilleria spp.	SM
50.	Surian	Cedrela spp.	SR
51.	Terap (termasuk Tampang dan Temponek)	Artocarpus spp. drp. Kump. Terap.	TP
52.	Terentang	*Campnosperma spp.	TR
53.	Tualang	Koompassia excelsa	TLG
54.	Lain-lain jenis, mengikut budibicara- Pengarah Perhutanan Negeri, bagi Daerah-Daerah tertentu sahaja.		

* Species that are found mostly around fresh water swamps and peat swamps.

\+ Species that are found mostly in hill forests at the height above 300m. (Sometimes found at lower altitudes along the coast.

6.0 THE MALAYSIAN SAWMILLS

The sawmills in Malaysia are classified into three types :

i) Class A : No restriction regarding log diameters and sawntimber destination.
ii) Class B : Limited to process logs of only 16" (41cm) and below; production can be sold on both export and local markets.
iii) Class C : Licensed to process logs of 16" (41cm) and below, however sawnwood production must be used in the manufacturing of end products. (e.g furniture, pallets, boxes).

Grouping the industry according to sawmill categories and inherent production capacities, three main types of production units can be identified :

a) The typical Malaysian sawmill consisting essentially of a small, manually operated, bench-type bandsaw used for both breakdown and resawing operations. The installed capacity is about 7 ton/8 hr - shift ($10m^3$/8hr - shift).

b) The partly mechanized sawmill equipped with a breakdown bandsaw (headrig) combined with an average of 6 small band resaws of the type mentioned above. The installed capacity is approximately 60 ton/8hr - shift ($85m^3$/8hr - shift).

c) The fully-automated timber complex consisting of breakdown bandsaw, pony rigs (both with fully-automatic carriages), resaws with power feed, edger and trimmer. The installed capacity for one production line is about 40 ton/8hr - shift ($57m^3$/8hr - shift).

There are other combinations of machinery including the use of horizontal bandsaws, circular twin and resaws or gang (slash) saws for blockboard production. However, essentially it is the three above mentioned sawmill types that characterizes the Malaysian sawmill industry.

7.0 AUTOMATED TIMBER COMPLEXES

In the mid-seventies, serious efforts were made by the sawmill industry to increase productivity and profitability. Modern, fully-automated timber complexes were set up taking into account the latest developments in relevant machinery and techniques. Among other equipment, mechanized log decks, high speed bandsaws with double cutting blades, fully automatic carriages, pony rigs, line bar resaws with merry-go-round systems, multiple saw edgers, trimmers, powered conveyors, green chains and sorting tables were introduced and combined in modern hardwood mills. The floor levels of such sawmills were raised to facilitate the installation of under-slung conveyors for the removal of waste material and sawdust. Line bar band resaws equipped with power feed and automatic setting device, and highly productive, precision cutting gang edgers were used to replace the commonly used small Malaysian bandsaw.

Unfortunately, most, if not all, such projects have failed. Today in Peninsular Malaysia there do not appear to be any line bar resaws or gang edgers still in operation. Both machines have been replaced by the multiple-use, more productive and flexible Malaysian band resaw. In Sabah, despite the technical assistance of Japanese, US, and Philippine companies, none of the three highly modern, mechanized sawmills run as joint ventures by the Sabah Foundation have been able to reach break-even.

As far as can be ascertained, no fully mechanized sawmill complex anywhere in Malaysia has so far proven to be more profitable than the typical Peninsular sawmill consisting of a semi-mechanized headrig combined with 6 to 8 independent band resaws. Indications are that the future development of Malaysia's sawmill industry will tend towards improving and perfecting the unique local sawmill process rather than following the general trend of fully mechanized operations.

8.0 FUTURE DEVELOPMENT OF THE INDUSTRY

In Peninsular Malaysia, the primary processing industry has established processing capacity in excess of present log output. Hence the Government has stopped approving the erection of new primary processing mills or the expansion of existing mills. However modernization and machine replacement are encouraged. All future developments will focus on mill efficiency improvements and technology in the area of downstream processing. In the longer term the industry is also encouraged to examine technology for processing small-diameter tropical logs from rubber and oil palm plantations.

On the other hand, there is still room for expansion of the primary processing industry for Sabah and Sarawak since only approximately 20% of the total annual log production is consumed domestically. The State Governments of both Sabah and Sarawak have adopted a prudent stance in optimising the establishment of new processing plants with gradually reduced quotas for log export. The Industrial Master Plan (IMP) has proposed to set up "timber processing zones" in Sabah and Sarawak to facilitate the establishment of a large production base in both states through an integrated approach.

The key strategies recommended in the IMP include the following :

- designate both moulding and furniture as priority products which qualify them to receive a range of incentives under the Industrial Coordination Act (see Appendix C at pages 3 to 8 for details of incentives);

- designate the joinery/mouldings and furniture industries as priority industries;

- designate the sawmill and plywood/veneer industries as those requiring restructuring and rationalization;

- encourage greater utilization of existing forest resources, including rubberwood, for which the establishment of an integrated rubberwood processing plant is proposed;

- concentrate efforts on expanding the higher value added products, i.e., joinery/mouldings and furniture, through the export market;

- undertake active marketing for high visibility of the proposed furniture complex in Peninsular Malaysia as well as the timber processing zones in Sabah and Sarawak.

- strengthen the Forest Research Institute of Malaysia (FRIM) with more staff and equipment to carry out applied research for product development in order to provide more active support to the industry;

- enlarge the role of the Malaysia Timber Industry Board for planning and developing the industry on a national basis, including Sabah and Sarawak, while not violating the vested rights of the states.

9.0 RESEARCH AND DEVELOPMENT

Forestry research in Malaysia started in 1929 with the establishment of the Forest Research Institute in Kepong, Selangor. The Institute became a statutory body in 985 and is now known as the Forest Research Institute of Malaysia (FRIM). FRIM is responsible for all aspects of forestry and forest products. In East Malaysia, the responsibility for research and development rests with the State Forestry Departments of Sabah and Sarawak.

The Asean Timber Technology Centre (ATTC) is a Kuala Lumpur - based Asean project to foster regional cooperation. It is supported by the European Economic Community with a grant of M$21 million. The Centre is currently striving to improve the utilisation of forest resources and upgrade the technical capability of the downstream timber industries. In an effort to upgrade the skills and management of industry personnel, ATTC has conducted 11 short courses and seven workshops and trained 611 trainees from Asean member countries in various aspects of timber processing and utilisation. ATTC also provides advisory and consultancy services

Another regional project sited in Malaysia is the Asean Institute of Forest Management (AIFM) which was established in 1985 to provide training to foresters in the Asean region. Under this project, technical and financial assistance are provided by Canada in the form of expert services, equipment, training and other inputs amounting to C$7.3 million.

10.0 POTENTIAL FOR CANADIAN PARTICIPATION

Dr. Liew Wing Hing, the Director of ATTC, commented that Canadian technology is not suitable for Malaysian forests which have many species intermixed in the logging areas. He recalled that Canadians have had several failures here due to their lack of experience in tropical forests. These problems have been mentioned in the Forestry Study prepared for the Canadian Department of External Affairs in 1986. Nevertheless, Mr. Ooi Seng Hock from the Malaysian Industrial Development Authority (MIDA), indicated that good potential exist for Canadian participation in both downstream and pulp and paper projects. The Industrial Master Plan has outlined strategies to modernize and rationalise local timber mills to make them more competitive. At the same time, Malaysia is facing a shortage of waste paper and pulp. In view of these plans and constraints, a wide scope for consultancy services can be anticipated.

Mr. Paul Brett, Deputy Director of the Asean Institute of Forest Management, commented that, in most cases, foreign technology is not readily transferable for Malaysian purposes. He added that there are a lot of local innovations in the Malaysian mills. The tropical multi-species forest means that the local mills have to develop their own processing methods with available equipment and technology which is primarily designed for non tropical forests and plantations.

11.0 IMPLICATIONS OF THE PROPOSED BAN ON LOG EXPORTS

In July 1989, the Malaysian Government announced its plan to ban the export of certain species of sawn timber in the interest of local industries. Currently, the export of logs is banned in Peninsular Malaysia but not in Sabah and Sarawak. Recently the Minister for Primary Industry made another announcement to confirm that from March 1st 1990 a restrictive export tax will be imposed on selected species of sawn timber.

The Federal Government has also suggested that the export of logs be banned from Sabah and Sarawak. The State Governments are resisting this on economic grounds, arguing that it will take time to develop a downstream timber industry to compensate for the significant loss of revenue from reduced log sales. Discussions are continuing.

At present there are levies on the export of sawn timber, plywood and veneer. The bulk of the levies collected are used to finance the operations of the Malaysian Timber Industry Board and not for reforestation programmes. There are plans to collect a separate levy for reforestation, research and development. There is also a 15 percent export tax on the export of logs.

Many say that the combination of the taxes and the proposed ban could give the needed push for sawmillers to move downstream to more value added processing. It may also be another way to stabilise the price of timber which has escalated in the past year. Industry analysts say that Malaysia cannot continue to export the same level of logs and sawn timber as the local industry needs a larger supply to expand. The Industrial Master Plan has outlined the industry's long term plan:

i) the downstream sector is to be the growth engine and policies should be formulated with this in mind. Industry observers say that the local downstream industry is expected to grow by about 30 percent a year and, according to the Ministry of Primary Industry, the demand from local manufacturers should catch up to log supply in about two to three years. This seems rather optimistic.

ii) establish furniture complexes where furniture mills can enjoy the benefits of favourable land prices, common facilities, technology transfer, product specialization, supporting services and industries, etc;

iii) establish integrated rubberwood processing plants in which rubberwood can be sawn and processed into various finished and semi-finished products.

12.0 PAPER MILL PROJECT

Malaysian Pacific Industries (MPI), a local packaging specialist, announced plans in late November 1989 to set up a M$130 million paper mill in the country. The plant will have an initial capacity to produce 120,000 tonnes of paper annually and will be able to produce 200,000 tonnes when it reaches full capacity in four years. The company will enlist the help of experts on technology for the project as it is the group's policy to manufacture internationally recognised quality products. According to the Project Manager, Mr. K.B. Chin, the company would consider joint venture arrangements with foreign capital and expertise. The new mill will manufacture line board, medium paper and sack kraft which are the main raw materials for paper packaging products.

APPENDIX A

PRINCIPAL CONTACTS

1. The Malaysian Timber Industry Board	1. Cik Roszehan bte Mohd. Idrus Director Planning & Development 2. Mr. Lim Choon Liat Technical Training Officer 5th Floor, Bangunan Sateras P O Box 10887 Jalan Ampang 50728 Kuala Lumpur Tel: 03 2486233 Fax: 03 2418416
2. Malaysian Industrial Development Authority	Mr. Ooi Seng Hock Deputy Director, Forestry 9th Floor, Wisma Damansara Jalan Semantan P O Box 10618 50720 Kuala Lumpur Tel: 03 2553633
3. Asean Institute of Forest Management	Mr. C. Paul Brett Deputy Director Suite 903, IGB Plaza 6, Jalan Kampar 50400 Kuala Lumpur Tel: 03 4429251/2 03 4413836 (Direct) Fax: 03 4422340
4. Asean Timber Technology Centre	Dr. Ir Lew Wing Hing Director 1st Floor, Wisma DNP Jalan Ampang P O Box 10887 50728 Kuala Lumpur Tel: 03 2486233 03 2484896 (Direct) Fax: 03 2434363

5.	Malaysian Pacific Industries Bhd	Mr. Chin Kon Biau Project Manager 8th Floor, Bangunan Hong Leong 117 Jalan Tun H.S. Lee 50000 Kuala Lumpur Tel: 03 2321511 ext 637 Fax: 03 2388105

APPENDIX B

MALAYSIAN RAIN FOREST - A LIVING RESOURCE

FOREWORD

This publication provides an overview of forest management, conservation and development in Malaysia.

Covering large stretches of the country, the forests have made, and are making, significant contributions to our socio-economic development. At the same time, they are performing a very important role in maintaining environmental stability and ecological balance. Hence, the forests serve the twin purposes of production and protection,both equally important national goals.

From production, Malaysia is able to generate employment from timber-based industries, earn foreign exchange and provide revenue to both Federal and State Governments. At the same time, the Government expends large sums annually on forest management and development, including R&D.

The production forests are managed as a renewable resource in perpetuity, as are large areas of virgin forests which are kept undisturbed as protection forests. Malaysia attaches great importance to the maintenance of the forests for research and recreation and as nature reserves, national parks and wildlife sanctuaries.

Where forest areas have given way to agriculture, they have mainly gone into tree crops such as rubber, oil palm and cocoa. The rubber plantations themselves provide a renewable source of timber and together with plantation forests, they will help complement the supply of timber from the natural forests. The Government places strong emphasis on further processing with the view towards obtaining higher and more value-added products from a smaller volume of timber. This would help conservation whilst enhancing the economic status of forests in relation to other land uses.

This publication gives an insight into the rich flora and fauna Malaysia's forests possess. Readers will also be able to gain an appreciation of the efforts by the Malaysian Government to strike a balance between ecological and environmental needs on the one hand and economic production and development on the other. All in all, both the key roles of protection and production are harmonised so that the sound management and preservation of our forests will help advance our economy and protect our land, climate, habitat and ecology.

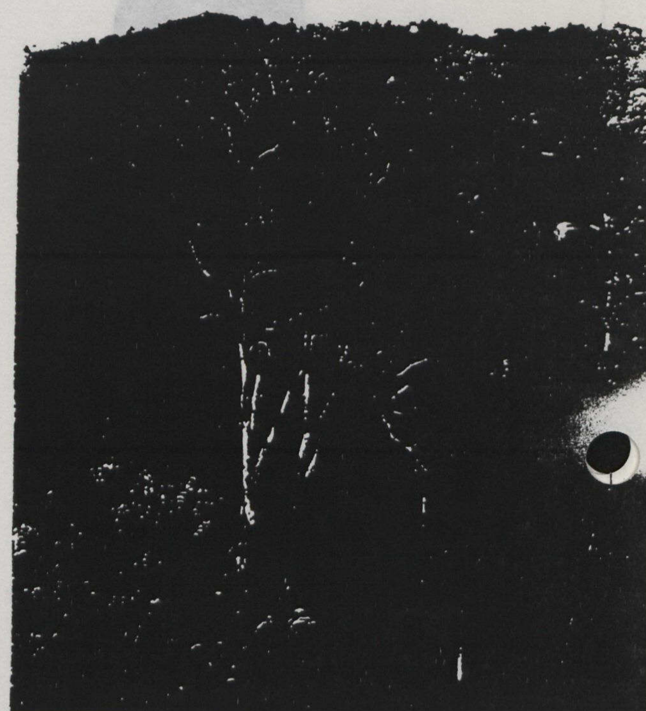
Dato' Seri Dr. Lim Keng Yaik
Minister of Primary Industries, Malaysia.

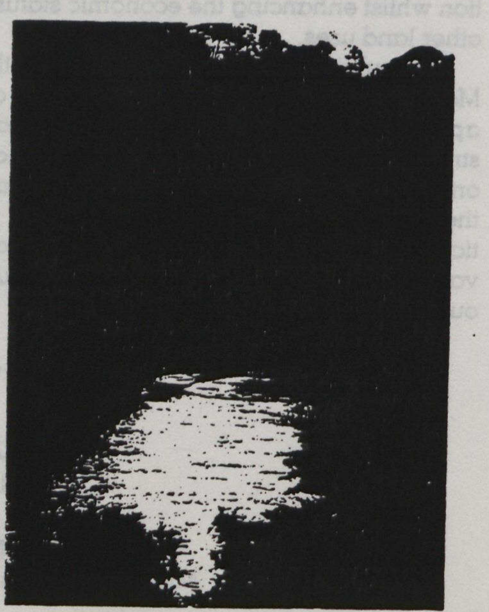
A LIVING HERITAGE

Forests are a living resource. They are recognised for their role in maintaining and protecting the climatic and physical environment.

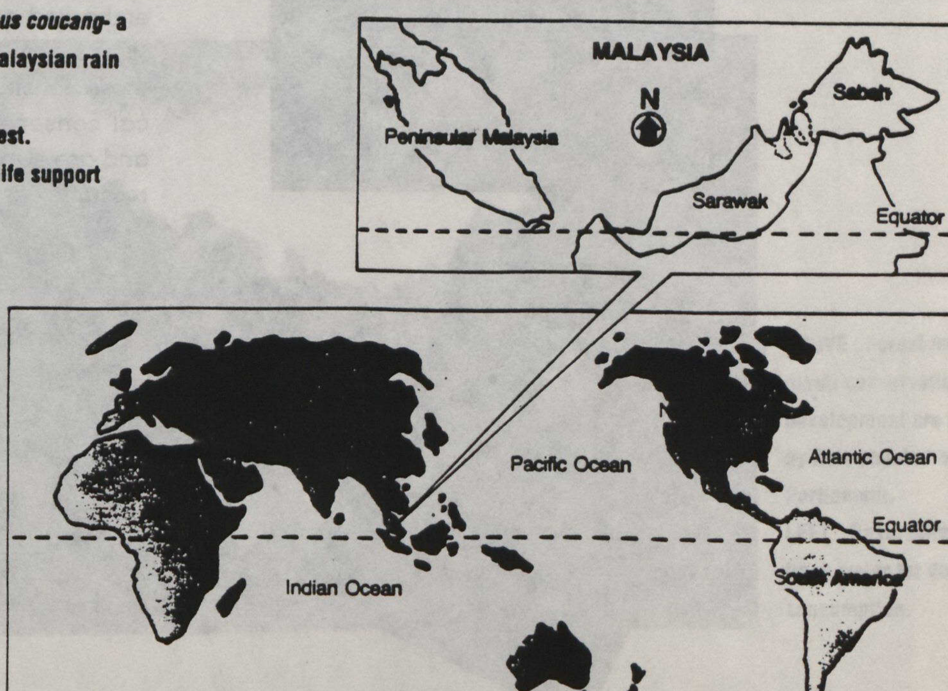
As reservoirs of a country's water supply, forest catchments are the source of fresh water for agriculture, industry, household and recreation. These catchments are conserved and managed to provide clean water supply for the country. Furthermore, Malaysia seldom experiences severe drought, and this is important for ensuring the successful development and production of agricultural crops.

Located just north of the Equator, Malaysia is blessed with abundant sunshine and rainfall, and is home to vast stretches of evergreen tropical rain forests. Out of a total land area of 32.86 million ha (a hectare equals 2.5 acres), some 20.10 million ha or about 61% are under forest cover. Another 4.19 million ha have been planted with tree crops bringing the total area under forest and tree crops to 24.29 million ha or 74% of the total land area of Malaysia.



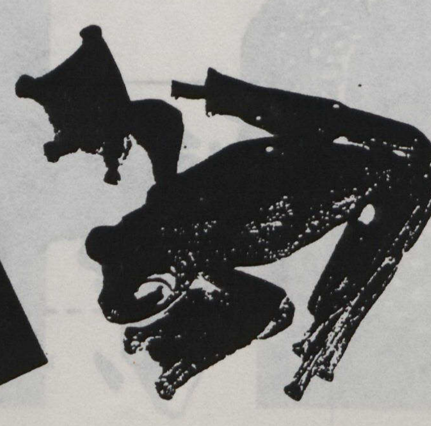


TOP : Slow loris or *nycticebus coucang*- a nocturnal mammal of the Malaysian rain forest.
ABOVE : Malaysia's rain forest.
FAR LEFT : Into Malaysia's life support system.
LEFT : The rare Malaysian *Rafflesia* reputed to be the largest flower in the world and measures 95 cm in diameter.



Species-rich, Malaysia's forests are home to 14,500 species of flowering plants, well over 200 species of mammals, 600 species of birds, 14[illegible] species of snakes, 150 species of frogs and thousands of species of insects, many of which are still being documented. In addition, over 1,300 plant species have been identified as having potential pharmaceutical properties. Traditionally, some of these are being used as herbal medicine.

To avoid the drastic depletion of forests, as occurred in other countries, Malaysia has embarked on policies and plans to manage the forests as a renewable resource. The objective of these policies is to balance the needs for ecolog[illegible] cal conservation and economic developmen[illegible] and are based on rational land use and detailed resource assessment.



TOP: Silver leaf monkeys or *Presbytis cristata* in their natural habitat.
CENTRE : Medicinal plants like the *Goniothalamus* are found in Malaysia's forests.
FAR LEFT : A poisonous forest spider or *Argiope versicolor*.
LEFT: *Rhacophorus nigropalmatus* or Wallace's Flying Frog.

FORESTRY POLICIES

In Malaysia, the State Governments have jurisdiction over their forest resources with the Federal Government providing guidance on management and development, undertaking R&D, and promoting industrialisation and marketing. To achieve better coordination, the National Forestry Council was established in 1971, comprising the Chief Ministers of the thirteen Malaysian states and chaired by the Deputy Prime Minister. In 1978, the Council established a National Forest Policy as an integrated approach to ensure:

- the sound climatic and physical condition of the country; the safe-guarding of water supplies and soil fertility; and the minimisation of damage by floods and erosion to rivers and agricultural land;
- the supply in perpetuity and at reasonable rates of forest produce for further processing, manufacturing and export; and
- the conservation of adequate forest areas for recreation, education, research and protection of the country's flora and fauna.

In 1984, the National Forestry Act was enacted to standardise and strengthen legislation in relation to administration, management, conservation and development of forest in the Malaysian states. This Act is complemented by the National Land Conservation Act of 1960, the National Land Code of 1965, the Protection of Wildlife Act of 1972, the National Parks Act of 1980 and the Environmental Quality Act of 1974.

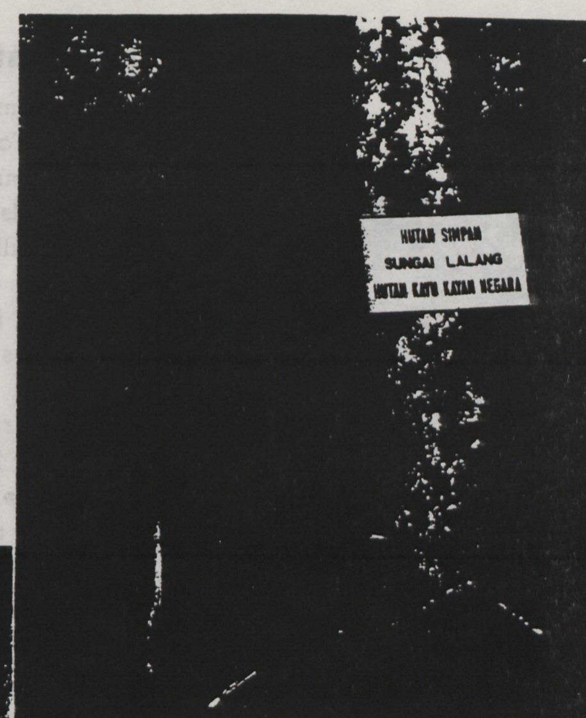
ABOVE : Forest management, conservation and development are guided by Acts enacted by Parliament.
LEFT : Reservoirs provide fresh water for domestic consumption.

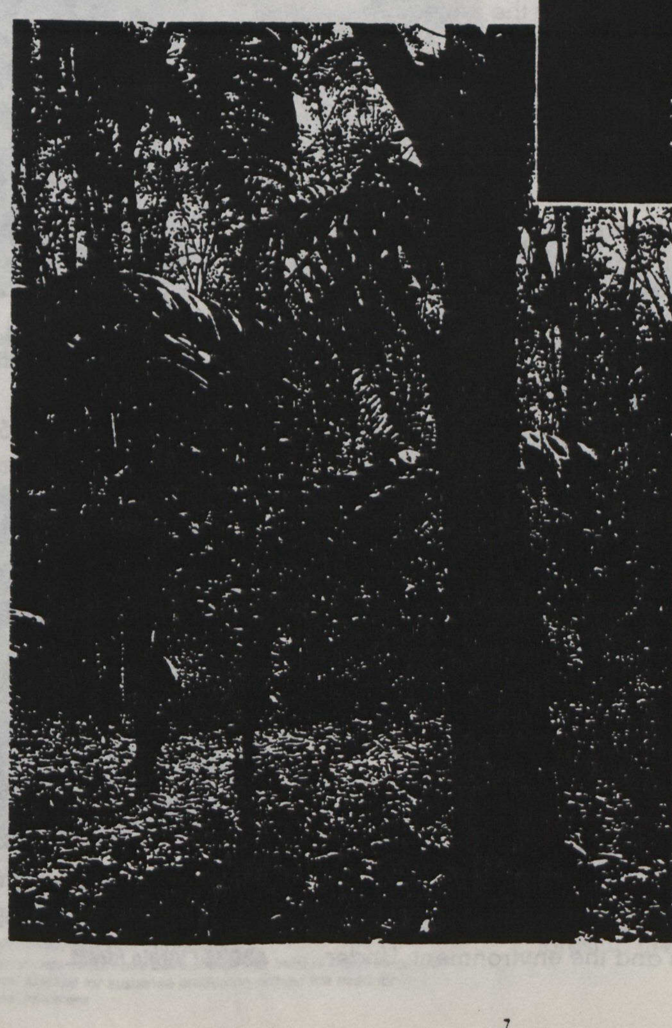
A typical forest scene.

LAND USE

The area under forest totalling 20.10 million ha comprises:

- the Permanent Forest Estate, amounting to 12.74 million ha and classified as Protection Forest and Production Forest;
- the national parks, wildlife sanctuaries and nature reserves covering 1.16 million ha, in a network of protected areas for the conservation of wildlife and biological diversity; and
- the Stateland Forest accounting for 6.20 million ha is managed to serve the economic development needs of the country.

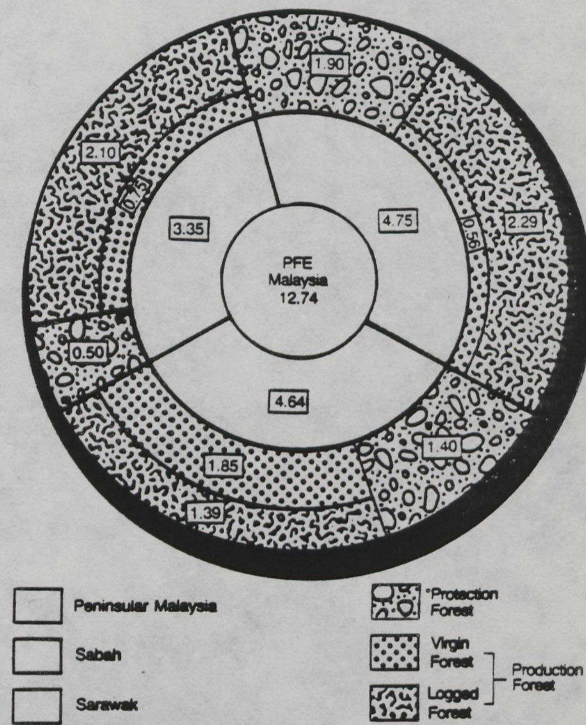




ABOVE : Demarcating the Permanent Forest Estate.
LEFT : Stands of 4-year-old Rotan Manau or *Calamus manan* interplanted under rubber trees.

FOREST MANAGEMENT

Table I: Permanent Forest Estate in Malaysia 1988
(million ha)

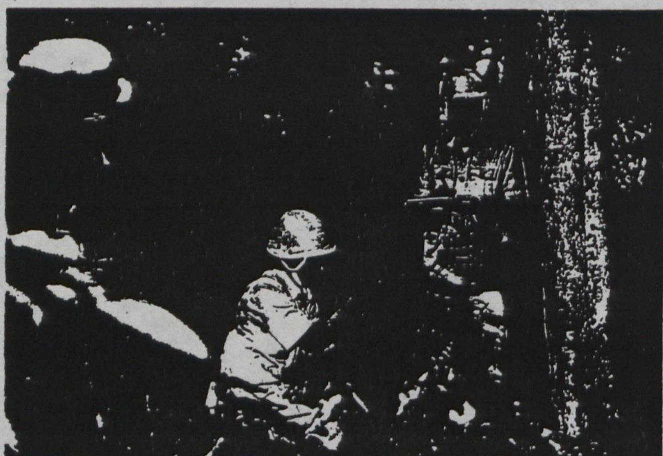


* The Protection Forest is made up of virgin forests, preserved in their natural state.

Permanent Forest Estate

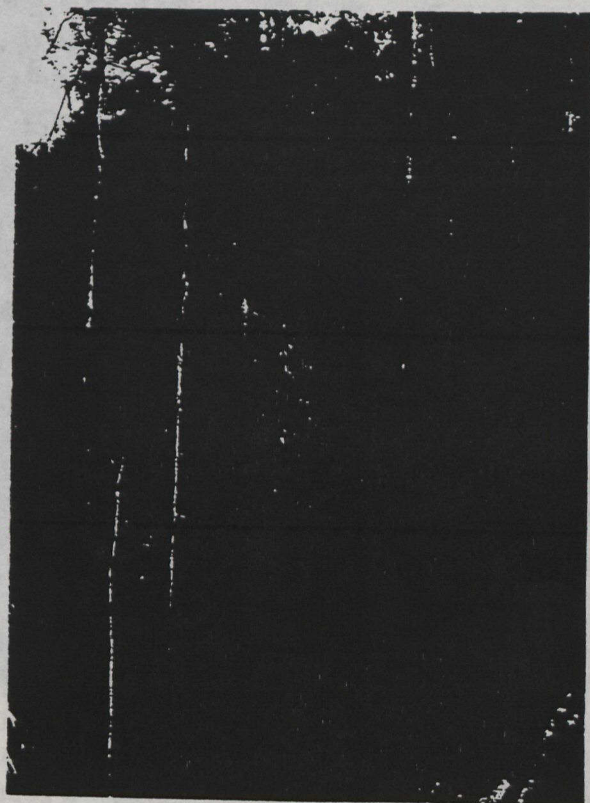
A major part of forest management in Malaysia is the Permanent Forest Estate. The Estate's 3.80 million ha of virgin forest is maintained as Protection Forest. It is preserved in its natural state to protect the hilly areas, watersheds and genetic diversity. The other 8.94 million ha of the Estate is Production Forest, with 3.16 million ha of virgin forest. This is managed for sustained timber harvesting.

In accordance with forestry management plans, such as for Peninsular Malaysia, areas within the Production Forest are managed under renewable cycles of 30-year for the richer forests, and 55-year for the others. These allow, under the current Fifth Malaysia Plan (1986-1990), for 71,200 ha to be harvested per year and assure timber production in perpetuity.



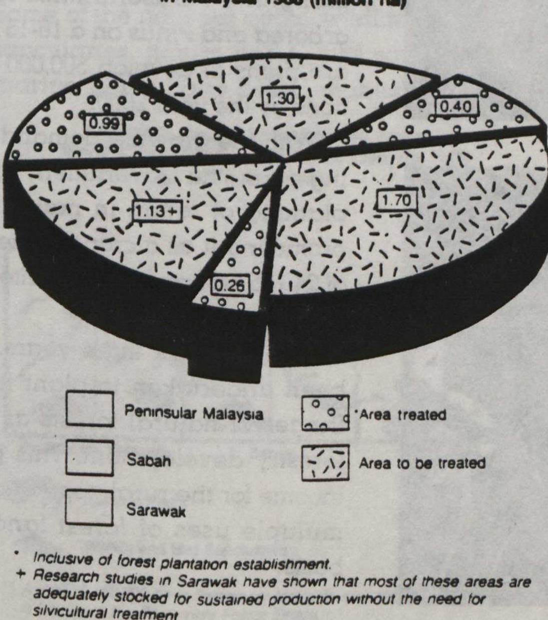
Harvesting is carried out under strict procedures and a pre-felling forest inventory is undertaken. Trees to be harvested are confined to matured and fully grown of at least 45cm at breast height. These are marked and the direction of felling is determined to reduce damage to the remaining trees and the environment. Under the Selective Management System as currently practised, a minimum of 32 trees per ha of at least 30cm in diameter at breast height must be left after harvesting. This permits the harvesting of some 30 to 40 m3 per hectare (or 7 to 12 trees per hectare). The larger trees that remain would reach maturity in 25-30 years to allow for a

LEFT: Growth measurement of seedlings in forest regeneration.
ABOVE : Virgin forest.



LEFT : Forest after logging.
ABOVE : Regeneration of logged-over forest.

Table II: Silvicultural Treatment of Logged-Over Forest (under Production Forest in the PFE) in Malaysia 1988 (million ha)



* Inclusive of forest plantation establishment.
\+ Research studies in Sarawak have shown that most of these areas are adequately stocked for sustained production without the need for silvicultural treatment

second round of harvesting. And the process goes on. Indeed, the harvesting of matured and older trees enable saplings and younger trees to enjoy faster growth.

Where necessary, the logged-over forests are treated to aid their rehabilitation. At the end of 1988, a total of 1.65 million ha in the Permanent Forest Estate had undergone such rehabilitation. On an annual basis, 101,300 ha are being treated.

Other Programmes

The mangrove forests found along the coast are an integral part of Malaysian forest. Malaysia is well-known for the management of these forests. The Matang Reserve has been cited as an example of being the best-managed mangrove forest in the world. The mangroves are managed not only for timber production but also as an ecosystem that sustains marine life - as spawning grounds for shellfish, marine fish and prawns. The trees also protect the coastline from erosion. Production areas go through a 20-30 year renewable cycle with about 1,500 ha being planted and regenerated annually.

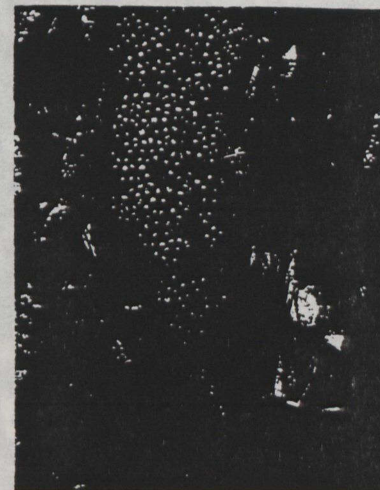
To supplement timber supply from natural forest, plantation programmes have been promoted.

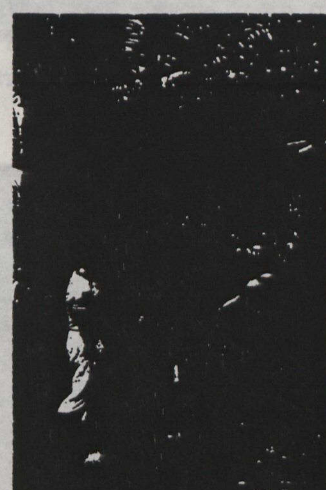
ABOVE : Mangrove forest ecosystem sustains marine life and protects coastal erosion.
RIGHT : Close view of mangrove forest.
TOP RIGHT : Fast-growing plantation forest of *Acacia mangium*.

Currently, a total of 90,000 ha of productive commercial tree plantations have been established mainly with fast growing species such as *Acacia mangium*, *Paraserianthes falcataria*, *Gmelina arborea* and *Pinus* on a 10-15 year rotation. There are plans to develop 500,000 ha of forest plantations by the year 2000.

With the growing demand for rattan, a climbing palm, the Government has embarked on the planting of rattan in natural forests as well as promoting it as a crop. At the end of 1988, a total of 24,155 ha have been planted, largely on a commercial basis.

Over the last three years, a programme has been undertaken to plant fruit trees along the fringes of natural forests as part of community forestry development. This provides additional income for the rural population and promotes the multiple uses of forest land on a sustainable basis.



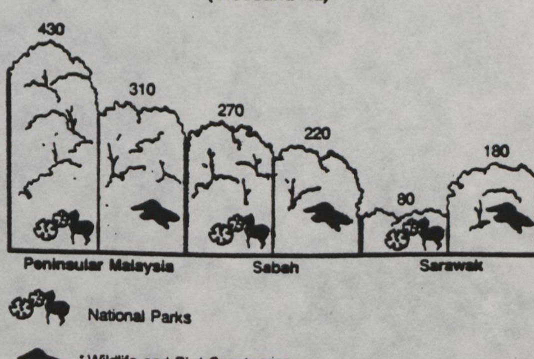


ABOVE LEFT : The Kuala Gula Bird Sanctuary is home to a variety of coastal birds.
ABOVE : Rural communities are encouraged to plant fruit trees along forest fringes.
LEFT : Back-to-nature in Taman Negara (National Park), one of the many nature parks in the country.

Conservation of Wildlife and Biological Diversity

In line with the concept of sustainable natural forest management, Malaysia has over the years been establishing a network of protected areas for the conservation of biological diversity. The idea is to include as many representative natural ecological habitats as possible that will sustain the breeding population of plants and animals. Some of the national parks, wildlife reserves and sanctuaries, nature parks, bird sanctuaries and marine parks have been established since the 1930's, reflecting the importance Malaysia has traditionally placed on the protection of its wildlife.

Table III: Areas Under National Parks, Wildlife and Bird Sanctuaries in Malaysia 1988 (thousand ha)



** A total of 190,000 ha in Peninsular Malaysia and 140,000 ha in Sabah is located in the Permanent Forest Estate.*

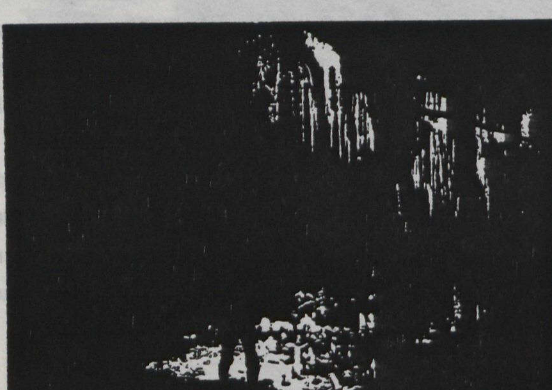
Malaysia currently has 1.49 million ha of conservation areas protected by legislation. Of these, 1.16 million ha are located outside the Permanent Forest Estate, whilst another 330,000 ha are within the Estate. An additional 1.42 million ha are planned for inclusion into this network with priority given to habitats such as wetland areas, open lake ecosystems, quartz-ridge forests and limestone formations.

Among Malaysia's internationally well-known parks are the Taman Negara (National Park), Kinabalu National Park in Sabah and the Gunung Mulu National Park in Sarawak. The Taman Negara, for example, is an expanse of over 434,000 ha of essentially virgin forest comprising varied forest types according to altitudes and soil. Apart from geological formations and clean, unpolluted rivers, the Park is a showcase of Malaysia's flora and fauna.

In addition to these conservation areas. Malaysia has established a network of virgin jungle reserves as permanent nature reserves to conserve the various forest types in their natural state. At present there are a total of 130 reserves covering 107,310 ha.

To provide 'going-back-to-nature' outdoor activities and to conserve some of the more scenic forest areas, 64 forest recreational sites have also been developed with 23 more to be set up.

Care is taken to protect rare and endangered wildlife, and this goes back to the 1950's. There are rehabilitation centres for wild animals with special emphasis on the orang utan (a wild ape) which is otherwise threatened with extinction. Malaysia has also implemented programmes for the conservation of larger mammals such as the tiger, Sumatran rhinoceros, elephant, seladang (a Malaysian wild ox) and deer.

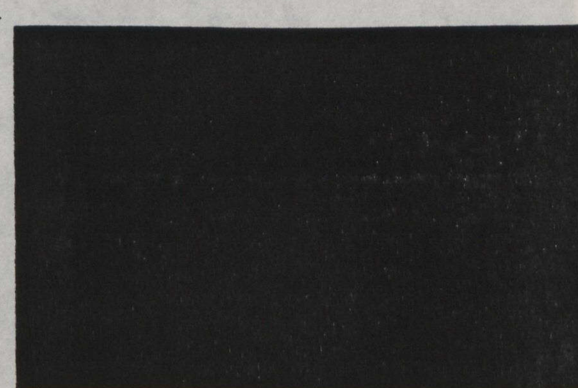


TOP : The protected orang utan at the Sepilok Orang Utan Rehabilitation Centre, Sabah.
ABOVE : An inside panorama of an extensive limestone cave at Gunung Mulu National Park, Sarawak.
RIGHT : Part of a river at Taman Negara (National Park).

Non-governmental organisations are contributing to conservation efforts. The Malaysian Nature Society has several projects where it works with State Governments in the development of nature parks. Another, the World Wide Fund for Nature Malaysia has sponsored a programme to develop conservation strategies in each of the Malaysian states. There are other groups which are also engaged in conservation activities.

Stateland Forest Management

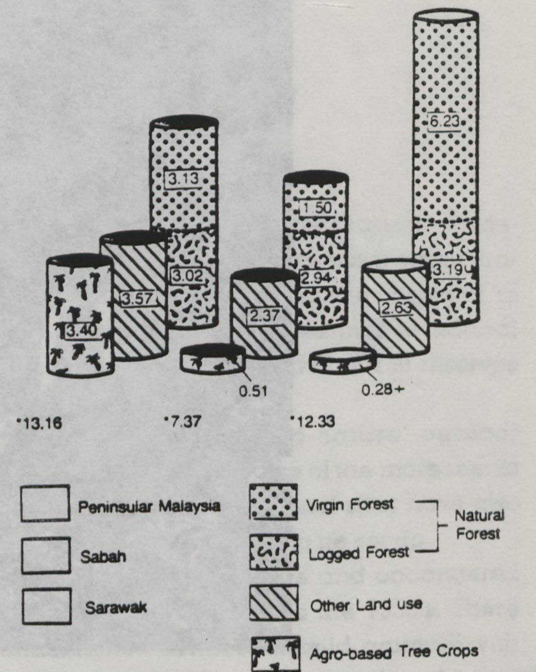
Of the land under forest, 6.20 million ha are managed as Stateland Forest. In response to national development needs, areas under the



TOP : A wild herd of seladang or *Bos gaurus hubbacki*.
ABOVE : Kanching Forest Recreational Park - one of the 64 developed in the country.
RIGHT : Rubber plantation-part of Malaysia's extensive forest and tree cover.

Stateland Forest will be available for conversion to industrial, agricultural and other economic uses. Under the Fifth Malaysia Plan (1986-1990), a total of 195,000 ha will be converted to agriculture to meet the needs of the landless and to provide gainful employment for the country's growing labour force. Much of the land set aside for agricultural conversion has been planted with rubber, oil palm, coconut and cocoa. Plantations of these crops are similar to reafforested land. Increasingly, these crops can be looked upon as alternative sources of wood supplies. Rubberwood is a case in point. In recent years, it has emerged as a popular timber species for furniture and is providing a renewable resource to complement wood from natural forests.

Table IV: Land Use Distribution in Malaysia 1988 (million ha)



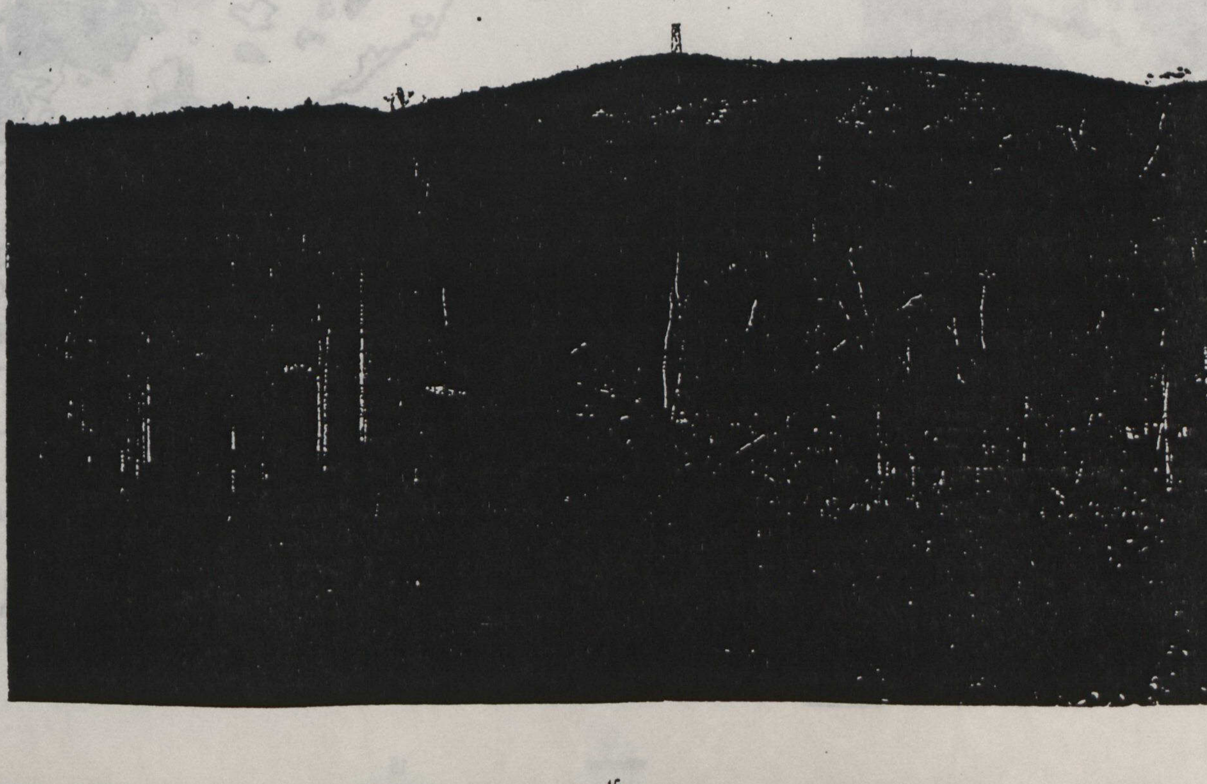
Some 40,000 ha and 50,000 ha of plantation forests have been established in Peninsular Malaysia and Sabah respectively.
+ Exclude secondary forests in shifting cultivated areas
** Total land area*

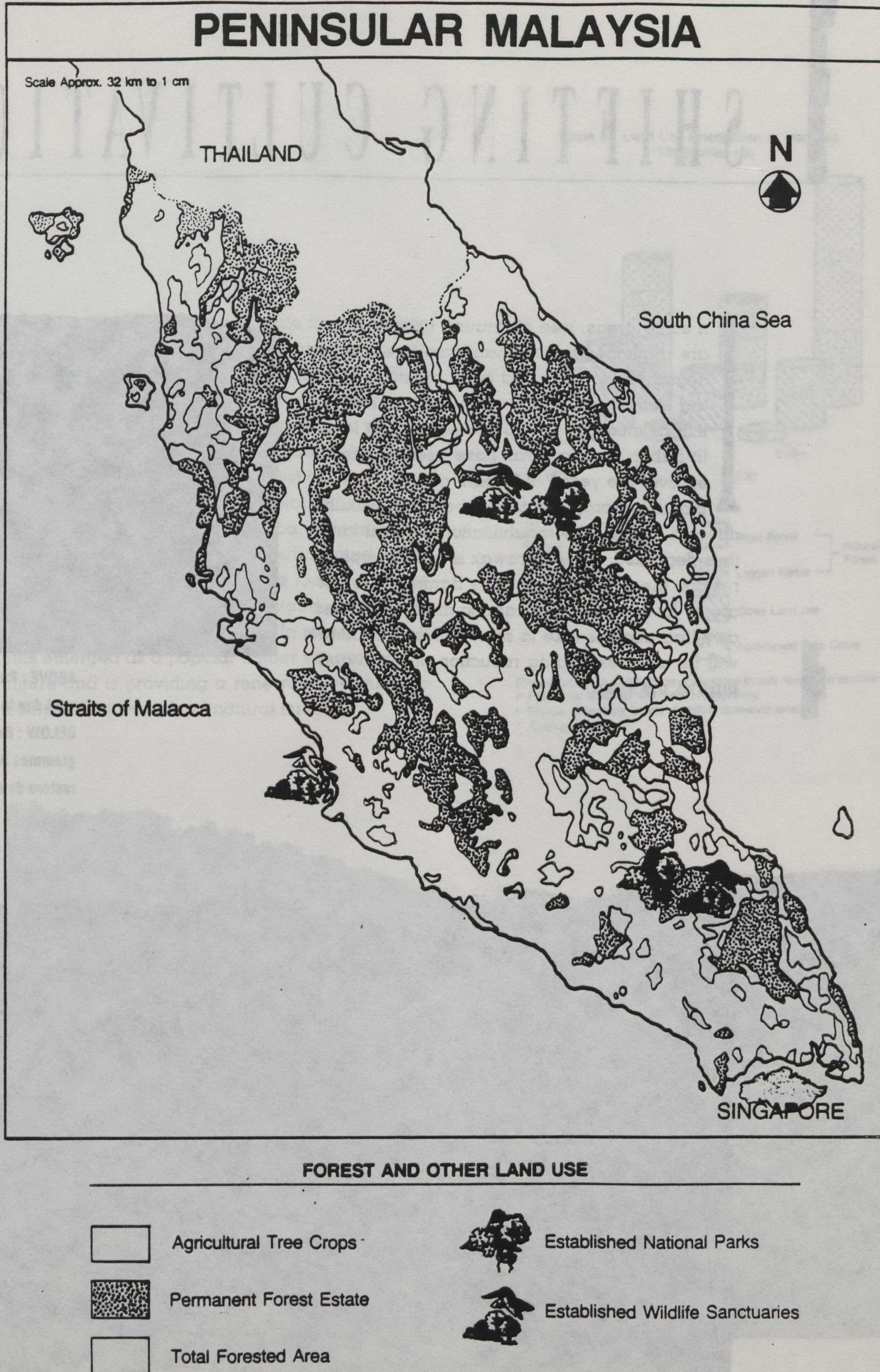
Oil-palm plantation, another important tree crop of Malaysia.

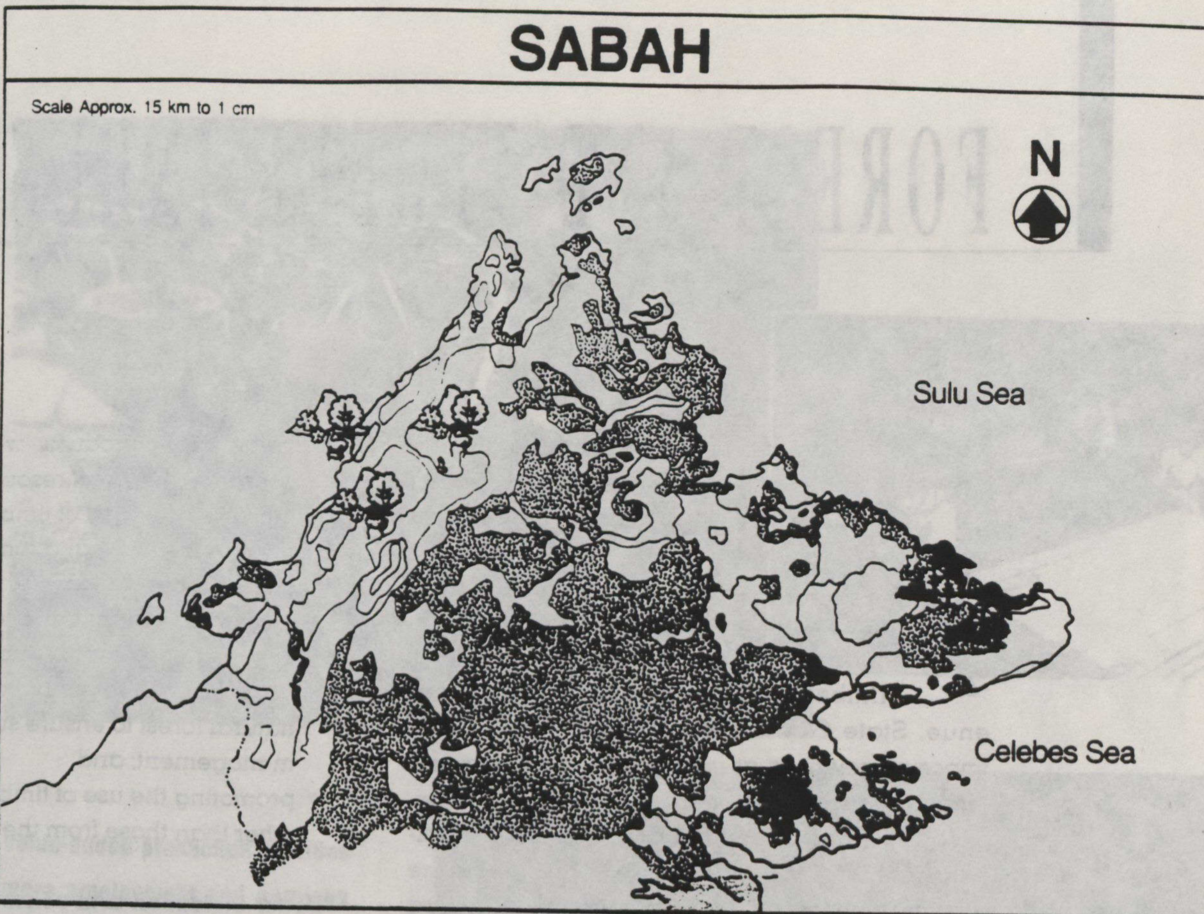
SHIFTING CULTIVATION

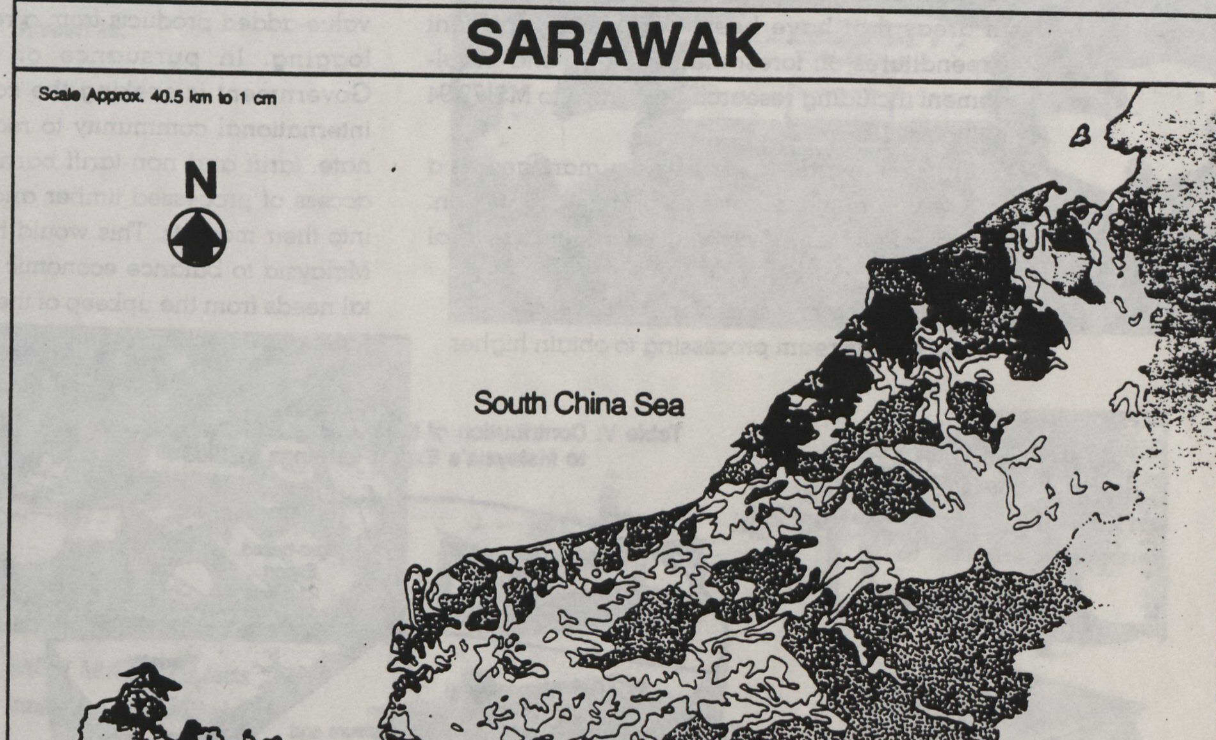
In some areas, tree plantation programmes are implemented to rehabilitate forest land degraded by 'slash and burn' practices arising from shifting cultivation. It is estimated that as much as 4.74 million ha of forest land in Sabah and Sarawak have been so affected over the years. In Sabah, part of the tree plantation programme has been specifically directed towards the rehabilitation of forest land thus degraded, while Sarawak is taking steps to restore the productivity of its damaged forest areas. As more of the remaining migratory forest dwelling peoples take to settled lifestyles, there will be a corresponding reduction of 'slash and burn'of the forest.

ABOVE : Patches of degraded land due to shifting cultivation. BELOW : Rehabilitation programmes are implemented to restore damaged forests.




PENINSULAR MALAYSIA
Scale Approx. 32 km to 1 cm
THAILAND
N
South China Sea
Straits of Malacca
SINGAPORE
FOREST AND OTHER LAND USE
Agricultural Tree Crops
Permanent Forest Estate
Total Forested Area
Established National Parks
Established Wildlife Sanctuaries


SABAH
Scale Approx. 15 km to 1 cm
N
Sulu Sea
Celebes Sea


SARAWAK
Scale Approx. 40.5 km to 1 cm
N
South China Sea

FOREST AND TIMBER INDUSTRIES

The forestry and timber sector plays a major role in the socio-economic development of Malaysia. In 1988, this sector was responsible for 5.1% of the country's GDP, M$7.07 billion (US$2.62 billion) or 12.8% of total export earnings and direct employment of 162,000 people.

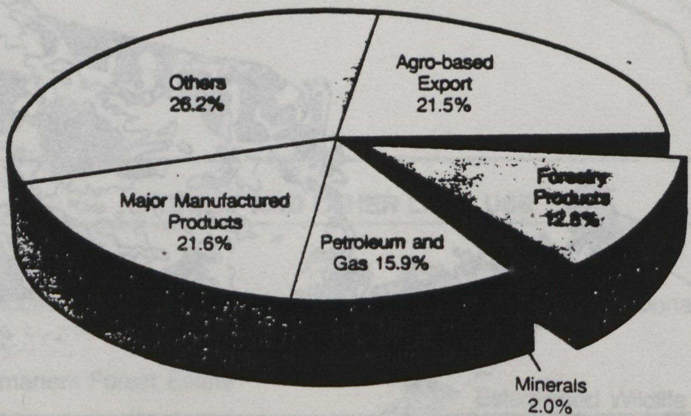
Timber is an important source of revenue. State Governments obtain revenue by imposing royalties at varying rates on logs and forest produce harvested. At the Federal level, export cess and income tax are collected. In addition, cess is being collected for silviculture, the growing of trees, with the revenue being utilised for silviculture and other rehabilitation activities in areas that have been logged. Government expenditures on forest management and development including research amounted to M$172.94 million in 1988.

Unlike minerals, the forests are managed as a renewable resource for sustainable production. In this connection, Malaysia has adopted several strategies:

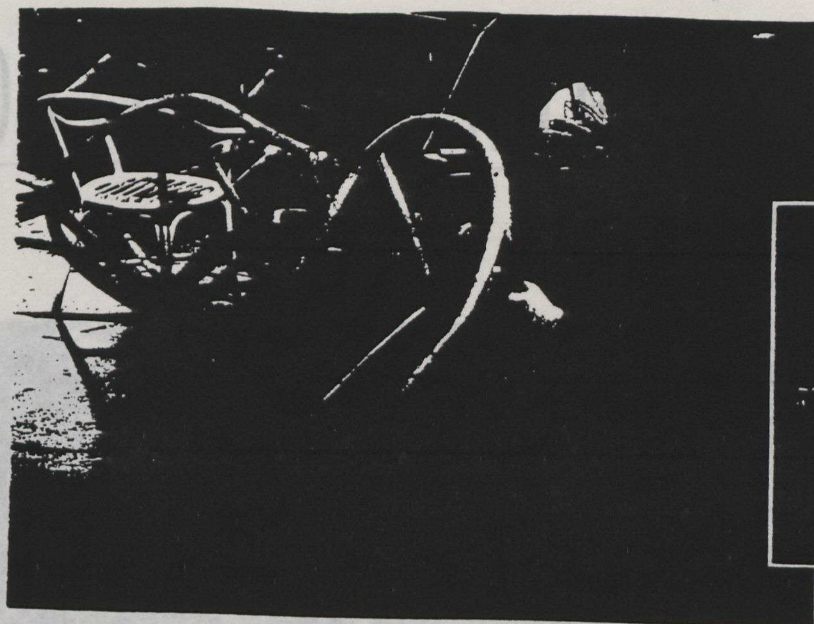
- promoting investment in the development of downstream processing to obtain higher value-added products (which would help conserve the forest resource);
- limiting the export of timber and forest produce in their raw and rudimentary forms as part of conservation;
- promoting the optimal use of a wider range of timber species to reduce wastage;
- rationalising the annual allowable cut from natural forest to ensure sustainable management; and
- promoting the use of timber from tree crops other than those from the natural forests.

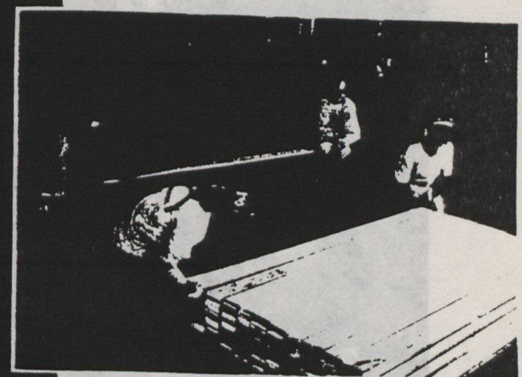
Better utilisation and conservation go hand-in-hand as reflected by the policy to obtain higher value-added products from a reduced volume of logging. In pursuance of this policy, the Government is seeking the cooperation of the international community to reduce, if not eliminate, tariff and non-tariff barriers which inhibit access of processed timber and timber products into their markets. This would help countries like Malaysia to balance economic and environmental needs from the upkeep of the forest for production and protection.

Table V: Contribution of the Forestry and Timber Sector to Malaysia's Export Earnings in 1988

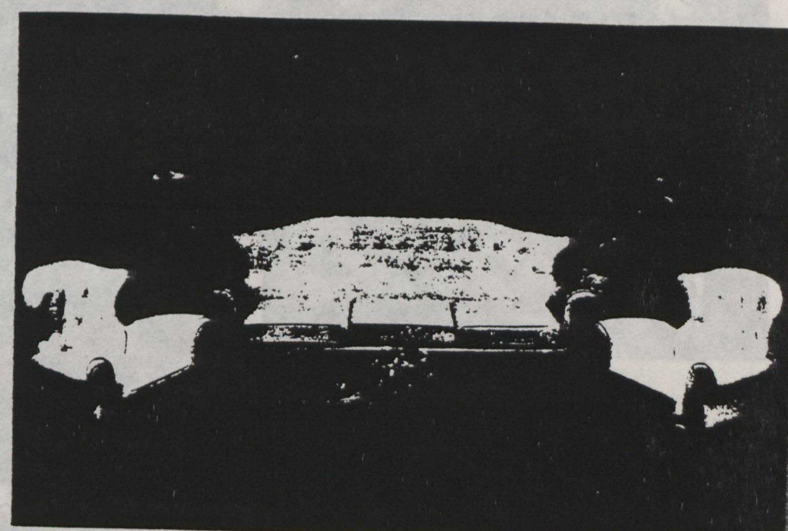


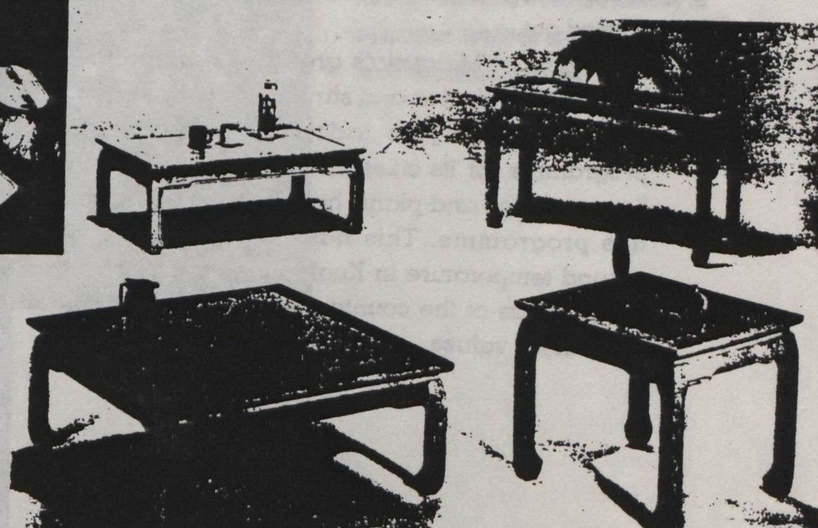
Total Export Earnings in 1988 amounted to M$55.33 billion (US$21.13 billion)





Value-added production provides more employment and earnings as strategy to conserve timber resources.





ABOVE &RIGHT : Products made from Rubberwood.

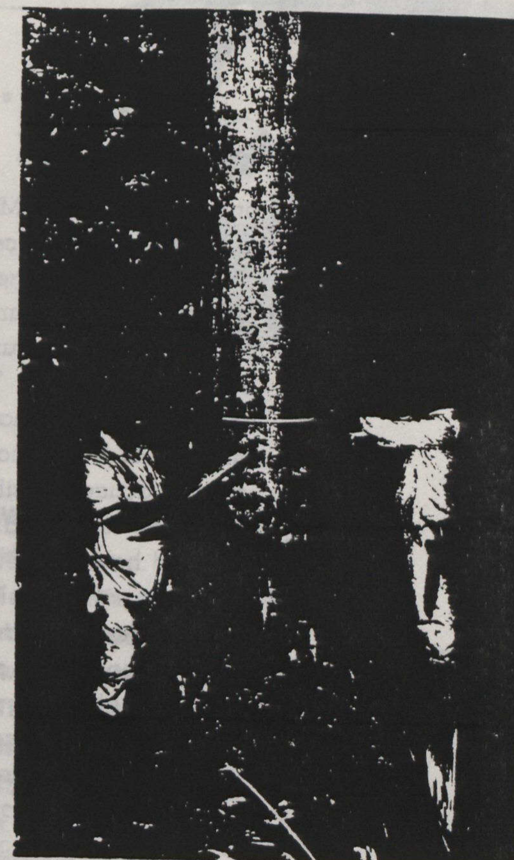
ENVIRONMENTAL PROTECTION

Protection of the environment is important to Malaysia. The aim of sustainable forest management, including the designation of the Permanent Forest Estate, is to assure substantial natural forest cover to maintain the quality of the environment.

Harvesting is carefully controlled to minimise damage. For instance, the effects of harvesting operations on soil erosion and sedimentation of river systems are being reduced by the enforcement of regulations and guidelines for logging operations. These include 'Standard Road Specifications' and 'Forest Harvesting Guidelines'.

All harvesting operations are controlled and monitored. Harvesting is carried out in accordance with the conditions stipulated in the logging permits. These pertain to road alignment and construction, drainage; marking of trees, directional felling and the setting up of log yards. Forest engineers carry out spot checks as well as advise on the implementation of such controls and the development of the infrastructure in logging areas. The Environmental Quality Act provides for environmental impact assessments to be carried out.

As part of Malaysia's greening programme, the planting of trees and shrubs are encouraged. In 1981, Malaysia adopted a greening programme for its cities and towns. Over a million seedlings and plants have been supplied for this programme. This has helped to reduce ground temperature in Kuala Lumpur and other urban areas of the country, besides contributing to aesthetic values.



ABOVE LEFT & FAR LEFT : Malaysia's greening programme is evident in its urban areas.

LEFT : Survey by forest engineers to determine forest extraction roads.

ABOVE : Selected trees are marked to determine direction of felling to minimise forest damage.

RESEARCH AND DEVELOPMENT

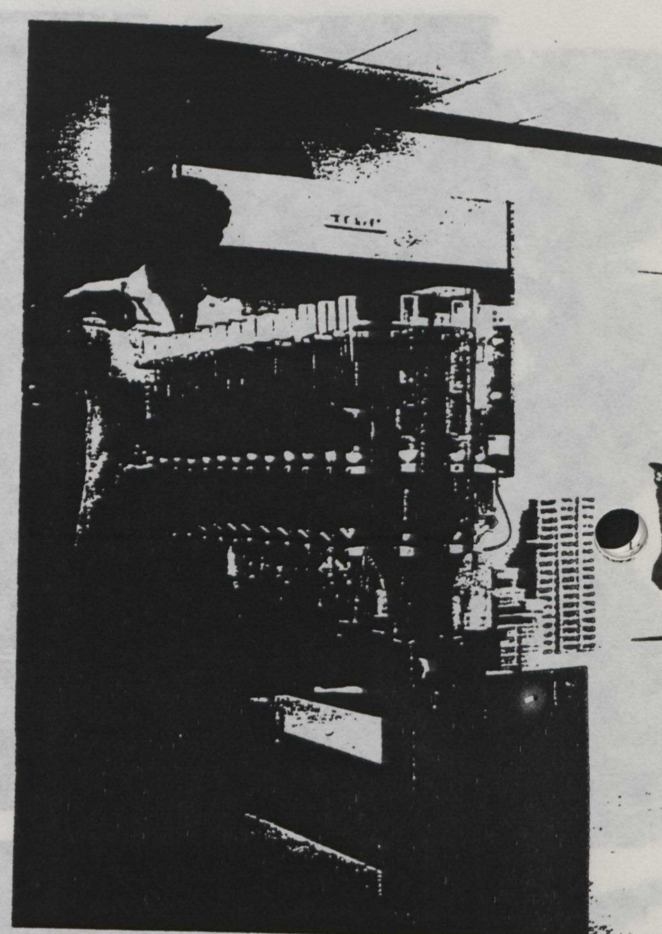
Forestry research in Malaysia dates back to the beginning of the century and has significantly influenced the development of the forestry sector. Research has resulted in the comprehensive documentation of the tree flora and timbers. Years of monitoring growth and performance of trees in established plots of land have provided the basis for current practices in silviculture. These lend support for the forest management policies in Malaysia and have influenced similar practices implemented in some other tropical countries.

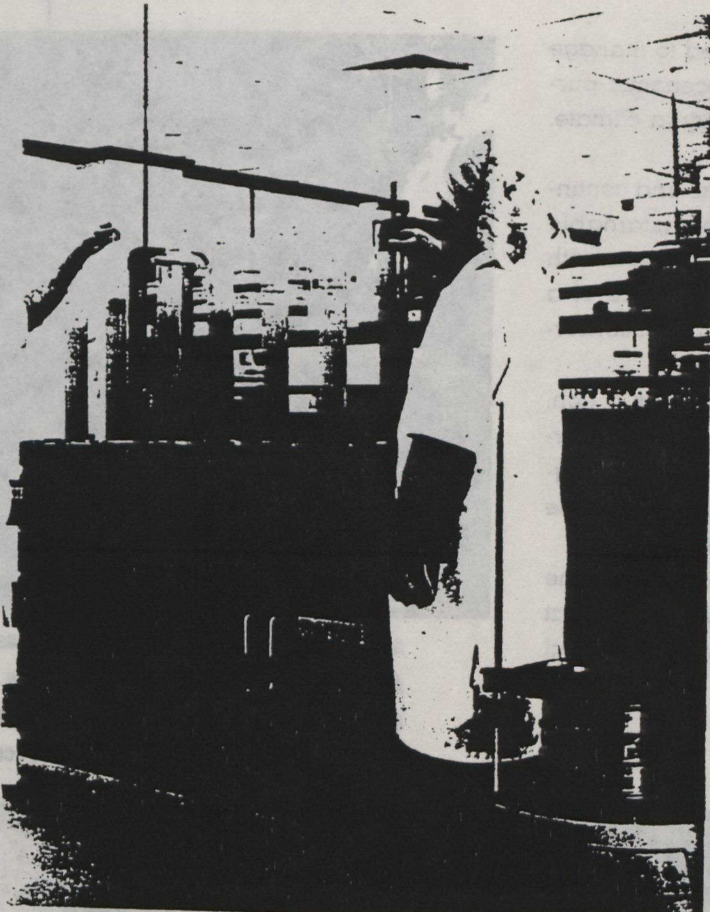
The Forest Research Institute of Malaysia is recognised as the world's premier research institution on tropical forest. The Forest Research Centre in Sabah, the Research Divisions of the Sarawak Forest Department and the Faculty of Forestry of the University of Agriculture, also provide the necessary research inputs on forestry. To support these agencies, the Government has substantially increased their research funding over the past few years.

With sustained yield forestry in mind, research has been focusing on practical and economical, as well as environmentally and ecologically, sound guidelines for the management of the Permanent Forest Estate. This includes developing guidelines for watershed management and the conservation of genetic resources.

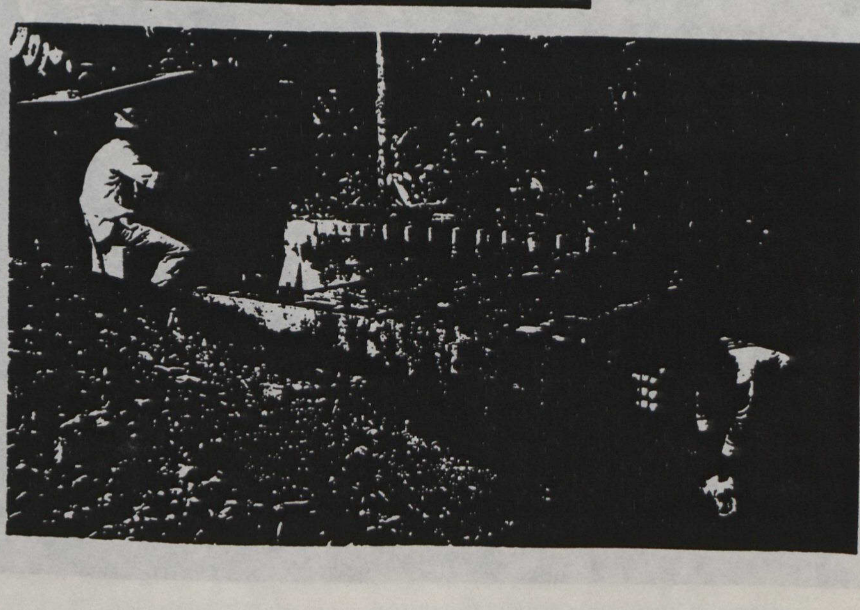
Research activities also cover tree plantations, the selection and breeding of superior clones, protection from pests and diseases and the growth performances of various tree species.

Other research areas of importance are mangrove management and coastal erosion, the rehabilitation of idle and degraded lands to increase forest cover for the country, urban forestry, the development of non-forest wood resources from the agriculture sector and the utilisation of non-wood resources from forests to promote multiple use forest management.





ABOVE : Seed selection to develop superior clones.
LEFT : Soil studies for forest development at the Forest Research Institute of Malaysia.
BOTTOM LEFT : Growth measurements in research plots.
BOTTOM : Data is collected on water quantity and quality to study the impact of logging activities.



FORESTS FOR THE FUTURE

Malaysia is aware of the need to manage its forests, both for socio-economic purposes as well as for stability in climate, ecology and environment.

To this end, Malaysia has and continues to strive towards the sustainable management of its natural forests with commitment to the maintenance of a Permanent Forest Estate and a network of conservation areas.

Malaysia recognises its rain forests as a rich, natural heritage which, besides the economic forest products and timber, provide essential ecological services. They are also nature's storehouse for biological species and genetic resources.

For Malaysia, the long-term viability for the sound management of its forests must be one that balances the needs of economy, environment and ecology.

ABOVE : The very rare crested Argus pheasant or *Rheinardia ocellata* found only in Malaysia.
BELOW : Malaysia's forests are managed to balance the needs of economy, environment and ecology.

Econsult

APPENDIX C

i) Malaysia: Investment in the Manufacturing Sector

ii) Recent Developments

MALAYSIA: INVESTMENT IN THE MANUFACTURING SECTOR – POLICIES, INCENTIVES AND PROCEDURES

Manufacturing Licence

1. The Industrial Co-ordination Act, 1975.

The Industrial Coordination Act, 1975 (ICA) requires person(s) engaging in any manufacturing activity to obtain a licence from the Licensing Officer[1] in respect of such manufacturing activity. The objective of the Act is basically to ensure orderly development and growth in the manufacturing sector. Only manufacturing companies with shareholders' funds of M$2.5 million and above or engaging 75 or more full-time employees need to apply for a licence under the ICA. In this context,

— "shareholders' funds" means the aggregate amount of a company's paid-up capital (in respect of preference shares and ordinary shares and not including any amount in respect of bonus shares to the extent they were issued out of capital reserve created by revaluation of fixed assets), reserves (other than any capital reserve which was created by revaluation of fixed assets and provisions for depreciation, renewals or replacements and diminution in value of assets) balance of share premium account (not including any amount credited therein at the instant of issuing bonus shares at premium out of capital reserve by revaluation of fixed assets) and balance of profit and loss appropriation account.

— "full-time paid employees" means all persons normally working in the establishment for at least six hours a day and at least 20 days a month for 12 months during the year and who receive a salary. Persons such as travelling sales, engineering, maintenance and repair personnel, or who are paid by and are under the control of the establishment are also included. Full-time paid employees also include directors of incorporated enterprises except when paid solely for the attendance at Board of Directors meetings. Family workers who receive regular salaries or allowances and who contribute to the EPF or other superannuation funds are also included in the definition.

Appeal

A manufacturer who is aggrieved by the decisions of the Licensing Officer in respect of a refusal to grant a licence or revocation of a licence, or refusal to grant transfer of a license may lodge an appeal to the Minister of Trade and Industry within the prescribed period and procedures.

2. Conditions for expansion of production capacity and diversification of products

(a) Expansion of production capacity for export

An existing licensed export-oriented[2] company can undertake expansion of production capacity for its approved products. For a company which wants to undertake expansion in order to export 80% or more of its products, no approval from the Licensing Officer is required; the company, however, will have to inform the Ministry of Trade and Industry and MIDA on the details of its expansion plans in the prescribed form.

(b) Undertaking diversification for export

Any existing licensed company can undertake diversification of additional product(s) manufactured under the diversification programme for export, subject to the same conditions and procedures as for expansion of production capacity for export, as stated in the preceding paragraph. However, before the company undertakes the diversification programme, it will have to inform the Ministry of Trade and Industry and MIDA on the details of its diversification plan in the prescribed form in order to facilitate amendments to the manufacturing licence.

(c) Expansion of production capacity for domestic market

Any existing licensed company with shareholders' funds of less than M$2.5 million can undertake expansion of its production capacity of its approved product(s) for the domestic market. An existing licensed company with shareholders' fund of M$2.5 million and above can also undertake expansion of its capacity for the domestic market, provided that 30% of the expanded equity arising from the increased investment must be reserved for bumiputeras. In both cases of expansion of capacity, the licensed companies are required to inform the Ministry of Trade and Industry and MIDA on the details of the expansion plan for the domestic market.

(d) Undertaking diversification for domestic market

Any existing licensed company with shareholders' funds of less than M$2.5 million can undertake a diversification of its production for the domestic market without prior approval from the Licensing Officer. The company, however, is required to submit details of its diversification plan to the Ministry of Trade and Industry and MIDA in order to facilitate amendments to the manufacturing licence. A company with shareholders' funds of M$2.5 million and above which proposes to unde[rtake]

1 The Licensing Officer is the Secretary General of the Ministry of Trade and Industry as gazetted under Gazette Notification P.U. (B) 31/78

2. An export-oriented company is one that exports 80% or more of its production expressed in value terms. Sales to FTZ/LMW are considered as export.

take a diversification is required to submit an application for such diversification in the prescribed form, for the consideration of the Licensing Officer.

3. Exemption from the ICA

Companies exempted from applying for a licence under the ICA are also exempted from having to comply with any condition with regard to equity, employment, distribution network and export. Companies that have been granted Pioneer Status or the Investment Tax Allowance or any other incentives, but are exempted from licensing under the ICA, are also exempted from the said conditions.

Guidelines On Foreign Equity

The Malaysian Government welcomes foreign investment in the manufacturing sector. In keeping with the objective of ensuring increased Malaysian participation in manufacturing activities, it is government policy to encourage projects to be undertaken on a joint-venture basis.

1. Equity policy in relation to new investments

(a) Foreign investors are permitted to hold whatever level of equity of up to 100% if the company exports[3] 80% or more of its production, irrespective of whether or not the company's products compete with products presently being manufactured locally for the domestic market.

(b) Foreign investors whose applications are received by MIDA during the period 1.10.1986 and 31.12.1990 are also permitted to hold whatever level of equity of up to 100% on meeting the following conditions:-

(i) that the company exports 50% or more of its production

or

that the company employs 350 fulltime Malaysian workers and such employment of Malaysians at all levels should reflect approximately the racial composition of the country.

(ii) that the company's products do not compete with products presently being manufactured locally for the domestic market.

(c) The level of equity participation for other export-oriented projects are as follows:-

(i) For projects exporting between 51% to 79% of their production, foreign equity ownership up to 51% will be allowed; however, foreign equity ownership of up to 79% may be allowed, depending on factors such as the level of technology, spin-off effects, size of the investment, location, value-added and the utilisation of local raw materials and components.

(ii) For projects exporting between 20% to 50% of their production, foreign equity ownership of between 30% to 51% will be allowed, depending upon similar factors as mentioned above; however, for projects exporting less than 20% of their production, foreign equity ownership is allowed up to a maximum of 30%.

In both the above cases, the company may manufacture products irrespective of whether or not the products compete with those presently manufactured locally for the domestic market.

(d) For projects producing products that are of high technology or are priority products for the domestic market, foreign equity ownership of up to 51% will be allowed.

2. Distribution of Malaysian equity in respect of new investments

Where foreign equity is less than 100% the balance of the equity to be taken up by Malaysians should be allocated according to the following principles:-

(a) **For projects initiated by foreigners and where no local partners have been identified:-**

(i) If 70% or more of the equity is held by foreigners, the balance of the equity will be reserved for bumiputeras.

(ii) If less than 70% of the equity is held by foreigners, 30% will be reserved for bumiputeras and the balance for non-bumiputeras. If foreigners hold 60% of the equity, 30% will be reserved for bumiputeras and the remaining 10% for non-bumiputeras. If the equity reserved for bumiputeras is not taken up, the Ministry of Trade and Industry will allocate part of the balance to non-bumiputeras.

(b) **For projects initiated by bumiputeras on a joint-ventures basis with foreigners:**

(i) If 70% or more of the equity is held by foreigners, the balance of the equity will be reserved for the bumiputeras concerned.

(ii) If less than 70% of the equity is held by foreigners, the balance will also be reserved for bumiputeras. However, if bumiputeras are unable to take up the entire balance, the Ministry of Trade and Industry will allocate part of the balance to non-bumiputeras.

(c) **For projects initiated by non-bumiputeras on a joint-venture basis with foreigners:-**

(i) If 70% or more of the equity is taken up by foreigners, the balance of the equity will be allocated to the non-bumiputeras concerned.

(ii) If less than 70% of the equity is taken by foreigners, 30% will be allocated to the non-bumiputeras concerned and the balance will be reserved for bumiputeras. However, under special circumstances, the non-bumiputeras may be permitted to take up the entire balance of the equity as decided by the Ministry of Trade and Industry.

3. Equity policy applicable to existing companies

(a) Companies which have been licensed between 1.4.1986 and 30.9.1986, and which have not made any investment in respect of the implementation of the project are also eligible for the same equity guidelines as

[3] Exports include sales to Free Trade Zones (FTZ) and Licensed Manufacturing Warehouses (LMW)

above, subject to fulfilling the same export condition or employment requirement as those applications which are received by MIDA between 1.10.1986 until 31.12.1990.

(b) Companies which have been licensed before 1.10.1986 have to comply with the equity condition as stated in the licence. However, the foreign partner is permitted to own up to 100% of the expanded equity as a result of an expansion of capacity or diversification, if approved under the conditions as mentioned in section 1, and provided that this does not contradict the terms of any legal agreement that may have been entered into among the shareholders.

4. Equity policy in relation to projects involving non-renewable resources

For projects which involve the extraction or mining and processing of mineral ores, majority foreign equity participation of up to 100% is permitted. In determining the percentage, the following criteria will be taken into consideration:-

(a) the level of investments, technology and risk involved in the projects;

(b) the availability of Malaysian expertise in the areas of exploration, mining and processing of the minerals concerned; and

(c) the degree of integration, and level of value-added involved in the projects.

5. Assurance in respect of equity ownership

A company that has been approved under the new equity guidelines will not be required to restructure its equity at any time, even after the year 1990, notwithstanding the fact that the company may have undergone an expansion or diversification, provided that the company continues to comply with the original conditions of approval and retains the original features of the project.

6. Investment Guarantee Agreements

Malaysia's readiness to conclude Investment Guarantee Agreements is a testimony of the Government's desire to increase the confidence of foreign investors in Malaysia.

Malaysia has concluded Investment Guarantee Agreements with 16 countries namely the United States of America, the Federal Republic of Germany, Canada, the Republic of France, Switzerland, Sweden and Belgium/Luxembourg, United Kingdom, Sri Lanka, Rumania, Norway, Austria, Finland, the Netherlands, Italy and Kuwait.

(a) Provisions of the Agreement

An Investment Guarantee Agreement will provide the foreign investor with the following:-

(i) Protection against nationalisation and expropriation.

(ii) Prompt and adequate compensation in the event of nationalisation or expropriation.

(iii) Free transfer of profits or capital and other fees.

(iv) Settlement of investment disputes under the Convention on Settlement of Investment Disputes, of which Malaysia has been a member since 1966.

Malaysia grants foreign investments both national treatment and most-favoured nation treatment.

The Ministry of Trade and Industry issues letters of coverage under the respective Investment Guarantee Agreements to approved projects in Malaysia.

7. Convention on the Settlement of Investment Disputes

In line with the national policy of promoting and protecting foreign investment, the Malaysian Government in 1966 ratified the provisions of the Convention on the Settlement of Investment Disputes established under the auspices of the International Bank for Reconstruction and Development (IBRD).

Facilites for international conciliation or arbitration are established by the convention through the International Centre for Settlement of Investment Disputes which is located at the principal office of the IBRD in Washington.

Incentives For Investment

The principal incentives for the manufacturing, agricultural and tourism sectors are contained in the Promotion of Investments Act, 1986 and the Income Tax Act, 1967. These incentives are designed to grant relief from taxes in various forms. The taxes applied to companies in Malaysia are in the form of income tax of 35% and development tax is to be abolished gradually starting with a reduction of 1% from year [illegible] assessment 1990. Companies given pioneer sta[illegible] incentive are exempted from the payment of the[illegible] taxes. In the case of the other incentives, the benefits are in the form of allowances given.

1. Incentives for the Manufacturing Sector

A. General Incentives

(a) **Pioneer Status**

The period of tax relief under this incentive is five years commencing from the production date as determined by the Minister of Trade and Industry. To encourage expansion and reinvestment, pioneer companies are eligible for a further 5-year tax relief period on meeting certain additional requirements. Thes[illegible] are:-

- the company's fixed assets (excluding land) at the end of the initial 5-year period reaching at least M$25 million; or
- employment level reaching 500 full-time Malaysian workers; or
- other requirements, which in the opinion of the Minister of Trade and Industry, would contribute towards promoting and enhancing the economic or technological development of the country.

(b) **Investment Tax Allowance (ITA)**

A company granted the investment allowance may be given an allowance of up to 100% in respect of qualifying capital expenditure incurred within five years from the date of approval of the project. (Plea[illegible] refer to Annex 1 for the criteria [illegible] awarding Investment Tax Allowance in the manufacturing, agricultural and tourism sectors).

The grant of either Pioneer Status or Investment Tax Allowance will be determined according to priorities termed as promoted activities or promoted products as determined by the Minister of Trade and Industry. The current list of promoted activities and promoted products is to be found in Annex 2.

(c) **An Abatement of 5% of the Adjusted Income** for a minimum period of five years is granted to resident manufacturing companies located in designated promoted industrial areas.

(d) **An Abatement of 5% of the Adjusted Income** is granted to resident small scale[4] manufacturing companies for a period of five consecutive years commencing from the year of commencement of business.

(e) **An Abatement of 5% of the Adjusted Income** is granted to a manufacturing company which complies with the government's policy on capital participation or employment on or after 1.1.1986 (excluding those which had complied before 1.1.1986).

(f) **Accelerated Depreciation Allowance (ADA)** will no longer be available for capital expenditure incurred after 31.12.1988. The expenditure will only qualify for the normal capital allowances rates.

(g) **Reinvestment Allowance (RA)** is granted to companies engaged in manufacturing which incur qualifying capital expenditure for the purpose of approved expansion before 31.12.1990. The RA is in the form of an allowance of 40% of capital expenditure on plant, machinery and factory building incurred on or after 1.1.1988. (For companies which incurred qualifying capital expenditure for the purpose of approved expansion before 1.1.1988, the previous RA rate of 25% will apply.)

B. Incentives for Export

In addition to the above incentives, manufacturers producing for the export market may also be eligible for the following:-

(a) **Export Credit Refinancing Scheme**
In line with the Government's objective to promote the growth of exports of manufactured goods, Malaysia's Central Bank, Bank Negara, has implemented an Export Credit Refinancing (ECR) Scheme which provides Malaysian exporters with short-term credit at preferential rates of interest to enable them to compete more effectively in international markets. The main features of the facility are as follows:-

— The credit is extended by commercial banks to exporters of goods manufactured in Malaysia. The maximum period of refinancing, for all eligible products for preshipment is four months, and for postshipment is six months.

— Eligibility of goods for refinancing under the ECR scheme is determined through a 'negative list' concept, whereby products not listed in the negative list will be eligible for refinancing under the preshipment and postshipment refinancing schemes provided they satisfy the 20% value-added and 30% local content criteria. However, these criteria are being implemented flexibly taking into account special circumstances. Currently crude rubber, vegetable oil products, cocoa products, agricultural food products and textile products are exempted from these requirements. For other products that do not fulfil the local content and value-added criteria, exemption is given by Bank Negara on a case by case basis.

— The current maximum interest rate for exporters under this facility is 4% per annum.

— The maximum amount of refinancing for each firm is M$5 million on an outstanding basis (for both post and preshipment), but higher limits may be given on a case by case basis upon application to Bank Negara; and

— The minimum amount for refinancing, that is, the minimum value of each substitution bill is M$20,000 expressed to the nearest thousand ringgit. Exporters can "bunch" several smaller bills to make M$20,000.

(b) **An Abatement of Adjusted Income for Exports** is granted to resident manufacturing companies exporting directly or through agents, products which are manufactured in Malaysia. The amount of the adjusted income to be abated shall be an amount equal to:-

(i) a rate which is equivalent to 50% of export sales as bears to total sales; and

(ii) 5% of the value of indigenous Malaysian materials[5] which are incorporated in the manufacture of the products exported.

(c) **An Export Allowance of 5%** based on the FOB value of export sales is granted to trading companies which export products manufactured in Malaysia.

(d) **Double Deduction of Export Credit Insurance Premiums**
To encourage exporters to penetrate into non-traditional markets, double deduction is allowed for premium payments in respect of export credit insurance insured with a company approved by the Minister of Finance.

This is effective from year of assessment 1986.

(e) **Double Deduction for Promotion of Exports**
Certain expenses incurred by resident companies for the purpose of seeking opportunities for export of products manufactured in Malaysia are eligible for double deductions. The expenses that qualify are expenses incurred on:-

4 A small scale manufacturing company is defined as one whose shareholders funds is less than M$500,000

5. 'Indigenous Malaysian materials' means plants, animals, fisheries, minerals and any other materials grown, cultured, reared, captured, extracted or the extractions thereof in their raw or semiprocessed form in Malaysia.

— overseas advertising
— supply of free samples abroad
— export market research
— preparation of tenders for supply of goods overseas
— supply of technical information abroad
— exhibits and/or participation required in trade or industrial exhibitions approved by the Ministry of Trade and Industry
— services rendered for public relations work connected with export.
— fares in respect of travel overseas by employees of companies for business.
— accommodation and sustenance expenses incurred by Malaysian businessmen going overseas for business subject to M$200 per day.
— cost of maintaining sales offices overseas for the promotion of exports.

(f) Industrial Building Allowance (IBA)
A company is eligible for IBA in respect of buildings used as warehouses and as bulk storage installations for storing goods for export. The IBA consists of an initial allowance for 10% and an annual allowance of 2%.

C. Incentives for Research and Development

The following incentives are available to companies to encourage research and development in industry:-

(a) Expenses of a revenue nature incurred by a person on scientific research related to his business and directly undertaken by him or on his behalf, is eligible for deduction. Revenue expenditure incurred for research approved by the Minister of Finance is eligible for double deduction.

(b) Industrial building allowance in the form of an initial allowance of 10% and an annual allowance of 2% is available for buildings used for purposes of approved research.

(c) Plant and machinery used for purposes of approved research are eligible for capital allowances.

D. Incentives for Training

In order to upgrade skills and improve productivity the following incentives have been provided:-

(a) Industrial Building Allowance (IBA) is granted to a company which has incurred expenditure on buildings used for approved industrial training. The incentive consists of an initial allowance of 10% and an annual allowance of 2%.

(b) Double Deduction of Operational Expenses is granted to a manufacturing company that has incurred expenditure for approved training. This incentive is effective from the year of assessment 1988.

2. Incentives for the Agricultural Sector

Under the Promotion of Investments Act, 1986, the term "company" in relation to agriculture includes agro-based cooperative societies, agro-based associations and sole proprietorships and partnerships. These are eligible to apply for the incentives which are:-

(a) Pioneer Status

As in manufacturing, companies produc[ing] 'promoted products' or engaged in 'promot[ed] activities' are eligible to apply for pioneer status. The period of tax relief under this incentive is five years[6] commencing from production day as determined by the Minister of Trade and Industry. The tax relief period may be extended for a further five years[6] for a company processing agricultural produce and which fulfils certain criteria as determined by the Minister of Trade and Industry.

(b) Investment Tax Allowance (ITA)

The investment tax allowance (ITA) is granted to companies producing 'promoted products' or engaged in 'promoted activities.' (Please see Appendix I.) The maximum rate that can be granted under ITA is 100% and it is given for qualifying expenditure incurred within five years from the date of approval.

To assist agricultural projects to enjoy greater benefits, the Government has broadened the definition of qualifying capital expenditure to include the following:-

(i) the clearing and preparation of land;

(ii) the planting of crops;

(iii) the provision of irrigation or drainage systems;

(iv) the provision of plant and machinery used in Malaysia for the purposes of crop cultivation, animal farming, aquacult[ure], inland or deep-sea fishing and other ag[ri]cultural or pastoral pursuits;

(v) the construction of access roads including bridges;

(vi) the construction or purchase of buildings (including those provided for the welfare of persons or as living accommodation for persons) and structural improvements on land or other structures which are used for the purposes of crop cultivation, animal farming, aquaculture, inland fishing and other agricultural or pastoral pursuits: provided that for the purposes of paragraphs (v) and (vi) such roads, bridges, buildings, structural improvements on land and other structures are on land forming part of the land used for the purpose of such crop cultivation, animal farming, aquaculture, inland fishing and other agricultural or pastoral pursuits.

In view of the time lag between start up of the agricultural project and processing of the produce, integrated agricultural projects are eligible for ITA for another 5 years for expenditure incurred for their manufacturing.

(c) Export Allowance for Agricultural Produce

An export allowance equivalent to 5% of the FOB value of export sales will be granted to encourage the export of certain agricultural produce as determined by the Ministe[r of] Trade and Industry. This incentive, availa[ble] to resident companies, will be given as a deduction against the gross income of the

6. In respect of an integrated agricultural project, the additional years of tax relief applies only to the manufacturing activity of the project.

company and as such will be available for setoff against income from other sources in the same year and any excess can also be carried forward as part of business loss to be utilized in future years against any business income.

(d) Agricultural Allowance

Under the agricultural allowance, certain capital expenditure incurred in agricultural activities are eligible for deduction as follows:-

(i) expenditure incurred on the clearing and preparation of land, planting of crops and construction of roads for purposes of agriculture, is eligible for a yearly allowance of 50% of the expenditure incurred;

(ii) expenditure incurred on construction of buildings, for the welfare of persons or living accommodation, can be written off at a rate of 20% per annum;

(iii) expenditure incurred on the construction of any other building used for the purposes of working the farm can be written off over a period of 10 years, that is, at the rate of 10% per annum.

As long as companies incur the above qualifying expenditure they will be given this allowance, irrespective of whether or not they have been granted the Pioneer Status or the ITA. As Pioneer Status companies will not benefit from this allowance during their tax holiday period, the allowance will be available for deduction against the post-pioneer income. This could be a substantial benefit and in fact possibly extends the number of years that the company may not be liable to income tax on its business income from agricultural activities.

(e) An Abatement of Adjusted Income for Exports is granted to integrated agricultural projects which export their manufactured products. (Please refer to B(b) on page 379).

(f) An Abatement of 5% of Adjusted Income is granted to a company engaged in processing agricultural produce which complies with Government policy on capital participation or employment in industry on or after 1.1.1986.

(g) Export Credit Refinancing Facility (Refer to B(a) on page 379).

(h) Double deduction for promotion of exports (Refer to B(e) on page 379).

(i) Double deduction of export credit insurance premiums (Refer to B(d) on page 379).

(j) Industrial Building Allowance (IBA) (Refer to B(f) on page 380).

(k) Accelerated Depreciation Allowance (Refer to A(f) on page 379).

(l) Reinvestment Allowance (Refer A(g) on page 379).

(m) Incentives for Research and Development (Refer to C on page 380).

3. Incentives for the Tourism Industry

The following incentives which apply from 1.1.1986 are to be considered for both tourism projects and hotel businesses:-

(a) Pioneer Status (as in the manufacturing secton)

(b) Investment Tax Allowance (as in the manufacturing secton.

(c) Industrial Building Allowance which consists of an initial allowance of 10% and an annual allowance of 2% is granted in respect of capital expenditure incurred on a hotel building which is used for the purpose of a hotel business carried on by a pioneer company, or a company granted Investment Tax Allowance.

(d) Tour operators who bring in at least 500 foreign tourists through group inclusive tours will be exempted from tax in respect of income derived from the business of operating such tours. This incentive effective for the years of assessment 1986 to 1990 inclusive, is given to operators registered and approved by the Tourist Development Corporation of Malaysia.

4. Tariff protection

Tariff protection – policy

It is the policy of the Government to provide tariff protection to deserving industries which are in a position to supply a major portion of the domestic market provided that the product is of acceptable quality and the price to consumers is reasonable.

In the granting of tariff protection, consideration will be given to the degree of utilisation of domestic raw materials, and the level of local value added to be achieved, and the level of technology of the industry.

The long term need for tariff protection of industries already granted tariff protection however, will be reviewed from time to time, in order that protection is granted at an optimum level consistent with the needs of the industry and the welfare of consumers.

Applications for tariff protection should be submitted to MIDA in the prescribed forms.

5. Exemption from customs duty on direct raw materials/components

The level of exemption from customs duty granted on raw material/components depends on whether the finished products are sold in the domestic market or are exported.

(a) Manufacture of goods for export

In the case of companies manufacturing finished products for the export market, exemptions from customs duty on imported direct raw materials are normally granted on the following basis:-

(i) full exemption from import duty provided such direct raw materials/components are not manufactured locally, or where they are manufactured locally, are not of acceptable quality and price.

(ii) full exemption from surtax, where applicable.

(b) Manufacture of goods for the domestic market

An application from a manufacturing company is eligible for consideration if it complies with the equity condition as stipulated in the manufacturing licence or unless an extension of time has been granted for compliance with the equity condition. In addition, where it is established that the raw materials/components are not manufactured locally, treatment of exemptions from custom duties are as follows:-

Full exemption from import duties is normally given under the following circumstances:

(i) The finished product made from dutiable raw materials/components is not subject to any import duty or surtax.

(ii) The manufacturing company has complied with the New Economic Policy in terms of equity participation, management and employment structure in all categories.

In all other cases, partial exemption can be considered in which manufacturers are normally required to pay 2% or 3% surtax or import duty.

For raw materials which are subject to import duty of 3% or less, exemption will not be considered and companies are expected to pay the duty.

Applications should be submitted to MIDA in the prescribed forms.

6. Drawback of excise duty on direct raw materials/components

Under the Excise Duties (Drawback) Order 1977, a drawback of excise duty in respect of raw materials can be claimed if such raw materials on which excise duty has been paid are used in the manufacture of goods and then exported.

Movement of excisable goods from licensed premises for use in the manufacture of goods by a factory in a Free Trade Zone is considered as export of goods from Malaysia.

7. Exemption from customs duty on machinery and equipment

Nearly all machinery and equipment which are not produced locally and which are directly used in the manufacturing process are not subject to import duty, surtax and sales tax. Quantitative controls on imports of these machinery have been removed. Machinery and equipment still subjected to import duty can be considered for tax exemption provided certain conditions and criteria are fulfilled.

8. Drawback of customs duties

(a) **Goods eligible for drawback of customs duty**

All duty-paid goods used as parts or ingredients in the manufactured of other goods, which are subsequently exported, are eligible for drawback of duty in full. Packaging materials are not eligible for drawback.

The conditions for duty drawback as stipulated under Section 99 of the Customs Act, 1967 are as follows:-

(i) the goods exported have been manufactured[7] on premises approved by the Director-General of Customs;

(ii) provision to the satisfaction of the Director-General has been made for the control and supervision on such premises of the deposit and issue for use of the prescribed goods;

(iii) such books of accounts are kept as the Director General may require for the purpose of ascertaining the quantity of the prescribed goods used in such manufacture;

(iv) such prescribed goods have been imported by the manufacturer;

(v) such prescribed goods are re-exported within 12 months of the date upon which import duty was paid;

(vi) such claim in respect thereof is made in the prescribed form;

(vii) duty payment receipts, invoices, and other confirmation of importation shown in the statement of claim; and

(viii) certified statement by the claimant confirming exportation of goods.

If the documents are in order and all their particulars correct, payment is expected to be made within one month of the claims being lodged.

(b) **Claim for duty drawback – procedure**

Application for drawback facility should be made by the manufacturer on a special format. Claim for drawback of customs duty (import duty and surtax) under Section 99 of the Customs Act, 1967 must be made on Form Customs No. 15. The form should contain particulars of the claims including the method or formula for calculating the drawback claim. The claim on Form Customs No. 15 should be supported by the following documents:

(i) Import Form (Customs No. 1) showing the importation of raw materials on which duty has been paid.

(ii) Export Form (Customs No. 2) showing exportation of finished goods.

(iii) Statement of claims signed by an authorised official of the company confirming the exportation of goods on which drawback is claimed.

9. Goods exported to Free Trade Zones, Labuan and Langkawi

Movement of goods from the Principal Customs Area to a Free Trade Zone which are liable for drawback of duty is regarded as export. Therefore, such goods if manufactured in the customs area will be eligible for drawback of duty. Similarly, goods moved to the islands of Labuan and Langkawi from the Customs Area is regarded as an export in so far as drawback of duty is concerned.

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7 Manufacture in the Customs Act, 1967 means:-
in the case of intoxicating liquors, distilling, brewing, fermenting, bottling of intoxicating liquor and includes the addition of any substances (other than water) to any intoxicating liquor and the blending, compounding and varying of intoxicating liquors with intent that the compound so formed shall be sold for human consumption, but excluding any such compound prepared at the order of the purchaser, and for his immediate consumption;

in the case of tobacco, any process converting any raw or leaf tobacco into tobacco fit for smoking, snuffing or chewing, and includes the making of cigarettes from manufactured tobacco;

in the case of petroleum, refining, compounding and includes the addition of any foreign substance; and

in other cases, the conversion by manual or mechanical means of organic or inorganic materials into a new product by changing the size, shape, composition, nature or quality of such materials and includes the assembly of parts into a piece of machinery or other products, but does not include the installation of machinery or equipment for the purposes of construction.

10. Verification of drawback claim

In order not to delay the processing and payment of claims, all verification of factory stock records will be done after payment has been made.

Under the provisions of Section 99 of the Customs Act 1967, the manufacturer is required to maintain such books of accounts as required by Customs for the purpose of ascertaining the quantity of raw materials used in the manufacture. Failure to maintain such records may jeopardize the processing of current and future claims and many result in the withdrawals of the drawback facility originally granted.

11. Double Taxation Agreements

Malaysia has comprehensive bilateral Double Taxation Agreements with Bangladesh, Singapore, Japan, Sweden, Denmark, Finland, Norway, Sri Lanka, United Kingdom, Belgium, Italy, Switzerland, France, Canada, New Zealand, India, China, German Democratic Republic, Federal Republic of Germany, Poland, Australia, Thailand, South Korea, Rumania, Philippines, Pakistan and USSR. Malaysia has initialled agreements with the Netherlands, Indonesia, Yugoslavia and Hungary and negotiated the same with Brazil, Malta, Turkey, Kuwait and Egypt.

Some of the more important provisions of Double Taxation Agreements which are of relevance to foreign investors are:-

(i) The profits of an enterprise of a contracting country are taxed only in that country unless the enterprise has a permanent establishment situated in the other contracting country. If the enterprise carried on business through the permanent establishment in the other contracting country only so much of the profits as are attributable to the permanent establishment can be taxed in the other country. Where tax is levied by the other country, relief from the double taxation is given by the country of residence in respect of that tax.

(ii) Dividends derived from Malaysia by residents of other countries having agreements with Malaysia are exempt from any tax in Malaysia which is chargeable on dividends in addition to the tax chargeable in respect of the income of the company paying the dividend.

(iii) Under most of the agreements interest on approved loans, approved industrial royalties derived from Malaysia by residents of other countries having agreements with Malaysia are exempt from tax in Malaysia.

12. Tax sparing provision

There is provision for credit to be given by the country of residence in respect of tax spared by Malaysia under the repealed Investment Incentives Act, 1968. Countries having agreements with Malaysia will continue to give credit for tax exempt under the Promotion of Investments Act, 1986 where the incentives are substantially similar to those under the repealed law.

Immigration and Labour Laws

In recent years Malaysia has experienced a steady inflow of foreign investors seeking to set up manufacturing projects in the country. While these foreign investors are welcome they must however comply with the immigration laws and requirements.

1. Passport requirements

All persons entering Malaysia must possess valid national passports or other internationally recognized travel documents valid for travel to Malaysia. These passports or travel documents must be valid for at least six months beyond the date of entry into Malaysia.

Those who are in possession of passports which are not recognized by Malaysia, for example a Taiwan passport, must apply for a document in lieu of a passport and visa which is issued by Malaysian missions abroad such as the Malaysia Commission in Hong Kong. The fee for the document in lieu of a passport is M$10.00 and is payable in local currency equivalent to the stipulated fee.

2. Visa requirements

Commonwealth citizens (except for Indian nationals), British Protected Persons and citizens of the Republic of Ireland are not required to have visas for the purpose of entry into Malaysia. All foreigners with the exception of nationals of Albania, the Peoples Republic of China, Cuba, Vietnam, Mongolia, Israel, South Africa, Laos, Cambodia and North Korea are allowed to enter Malaysia for social or business visits without visas for a stay up to two weeks whereas nationals of Bulgaria, Czechoslavakia, Hungary, Rumania, Yugoslavia, Poland, USSR and the Democratic Republic of Germany (East Germany) are allowed a stay of one week only without visas.

However, citizens of countries which have entered into Total or Partial Visa Abolition Agreements with Malaysia will be granted social or business visit passes valid for three months on arrival except that nationals of Asean countries will be granted a period of one month only on arrival. Citizens of Commonwealth countries (with the exception of Indian nationals), British Protected Persons and citizens of the Republic of Ireland will be granted a social or business visit pass of one month on arrival.

If the visitors wish to enter Malaysia and remain for more than two weeks for the purpose of a social or business visit or wish to take up employment, they must obtain visas prior to their arrival in Malaysia. This, however, does not apply to:-

(i) nationals of countries with whom Malaysia has entered into Partial (subject to the conditions stipulated thereof) or Total Visa Abolition Agreements.

(ii) holders of a certificate of identity who require visas in any case to enter Malaysia for whatever purpose.

3. Application for visas

Application for visas for the purpose of entry into Malaysia should be made at the nearest Malaysian mission abroad. In countries where Malaysian missions have not been established, applications should be made to the nearest British High Commission or Embassy.

Application for visas should be made in the Visa Application Form (Imm 47) which is obtainable at the Malaysian missions. Three copies of the application forms are required to be completed and should be submitted with three copies of recent photographs of the applicant. Fees will be charged for the visas issued and the rates applicable can be obtained at the Malaysian missions.

4. Entry into Malaysia

(a) **Passes to be obtained at point of entry**

A visit pass for the purpose of a social or tourist visit or business may be issued at the point of entry if the visitor can satisfy the immigration authority at the point of entry that he has a valid passport and visa (wherever applicable for Malaysia).

In addition, he must be able to prove that he has adequate funds to maintain himself or to pay for his return passage, and if arriving by sea, must not travel as a deck passenger.

The type of passes issued are as follows:-

(i) Visit Pass (Social or Tourist)
This is issued solely for the purpose of a social or tourist visit. A person who has been issued with a social or tourist visit pass is not permitted to take up employment, business or professional work while in Malaysia.

No fee is payable for a pass issued for a social visit of up to three months. A fee of M$5.00 per month is payable for each month's extension beyond the first three months.

(ii) Visit Pass (Business)
These passes are issued to foreign visitors who enter Malaysia for purposes of conducting business negotiations or inspection of business houses. These passes cannot be used for the purposes of employment or for supervising the installation of new machinery or the construction of a factory.

No fee is payable for a Visit Pass (Business) issued for a business visit of up to three months. A fee of M$5.00 is payable for each month's extension.

(iii) Conversion of Passes
Foreign visitors except those from the Republic of Singapore who have entered Malaysia on social or tourist visit passes may apply to the Immigration Department for converting their social or tourist passes into business visit passes. This new ruling is designed to assist foreign visitors who wish to undertake business activities.

All applications for converting social or tourist visit passes into business passes must be submitted to the Immigration Department with a letter of recommendation from the Ministry of Trade and Industry.

However, visitors are strongly advised to obtain a business visit pass at the entry point if their intended visit is for the purpose of business.

(b) **Passes to be obtained prior to arrival in Malaysia**

Other than applications for entry for the purpose of tourist, social or business visits, all applications for passes of the types mentioned below must be made prior to arrival in the country.

All such applications must have sponsorship in Malaysia. The sponsors must agree to be responsible for maintenance and repatriation of the visitors from Malaysia if it should become necessary.

The types of passes issued are as follows:-

(i) Visit Pass (Temporary Employment)
This is issued to persons who enter the country to take up temporary employment. A fee of M$20 per year is payable for each issue or for extension.

(ii) Employment Pass
This is issued to any person who enters the country to take up a contract of employment for a period of not less than two years which carries a salary of not less than M$1,200 per month. The fee is M$100 per year or for any part thereof.

(iii) Visit Pass (Professional)
The fee for a Visit Pass (Professional) is M$45 for each pass issued or each time extended, and for artistes performing in any show business the fee is M$250 for each pass issued or each time extended.

(iv) Dependant's Pass
This is issued to the wife and children of any person who has been issued with an Employment Pass. This pass is not issued to the wife and children of a person who enters the country on any pass other than an Employment Pass. Wife and children of any person who enters the country on a Visa Pass (Temporary Employment or Professional) will be issued a Visit Pass (Social). The fee is M$45 per year or for any part thereof.

(v) Student's Pass
This is issued to any person who enters the country for the purpose of taking up studies in an approved educational institution. The fee is M$20 per year.

5. Application for passes

Other than passes for social, tourist and business visits which are issued at the point of entry, application for passes should be submitted to the Immigration Department in the following prescribed forms:-

(i) Employment Pass in Form Imm. 8
(ii) Dependant's Pass in Form Imm. 10
(iii) Student's Pass in Form Imm. 14
(iv) Other passes including Temporary Employment Pass in Form Imm. 12

6. Employment of expatriate personnel

It is the Government's policy to see that Malaysians are eventually trained and employed at all levels of employment. Notwithstanding this, foreign companies are allowed to bring the required personnel in areas where there is a shortage of trained Malaysians to do the job. In addition to this, foreign companies are also allowed certain "key posts" to be permanently filled by foreigners.

Companies should make every effort to train more Malaysians so that the employment pattern at all levels of the organisation will reflect the multi-racial composition of the country.

7. Guidelines on employment of expatriate personnel

(a) For new investments (that is, applications received between 1.10.1986 and 31.12.1990) where the foreign paid up capital is US$2 million and above.

Any company with foreign paid-up capital of US$2 million and above will automatically be allowed five expatriate posts.

Additional expatriate posts will be given when necessary upon request.

The other conditions relating to expatriate employment are as follows:-

(i) An expatriate officer who is transferred from one post to another post within the same company is not required to obtain a new employment pass. His original employment pass will be amended to reflect the change in post.

(ii) A new expatriate officer replacing another expatriate officer is required to obtain a fresh employment pass.

(iii) All employment passes are valid for the period of time as approved for the post, subject to a maximum of 10 years.

(iv) All holders of employment passes will be issued with multiple entry visas valid for the corresponding period that the employment pass is valid, subject to a maximum of 10 years.

(b) For new investments (that is applications received between 1.10.1986 and 31.12.1990) where the foreign paid up capital is less than US$2 million; and for companies licensed before 1.10. 1986.

The conditions for expatriate employment for the above companies are as follows:-

(i) Key posts (for example, posts which can be held indefinitely by foreigners) can be considered for companies where foreign capital participation is approximately M$500,000. This figure, however, is a guideline only and the number of key posts allowed depends on the merits of each case.

(ii) For executive posts which require professional qualifications and practical experience, expatriates may be employed up to a maximum period of 10 years subject to the condition that Malaysians are trained to eventually take over the posts.

(iii) For non-executive posts which require technical skills and experience, expatriates may be employed up to a maximum period of five years subject to the condition that Malaysians are trained to eventually take over the posts.

(iv) For industries, designated by the Government as priority industries, such as those which are labour-intensive and those manufacturing industries which are wholly export-oriented, the conditions (i), (ii) and (iii) above may be relaxed depending upon the merits of each case; provided that other companies that do not fall within any of the categories mentioned in this clause, may also be accorded similar privileges depending upon the merits of each case.

8. Applications for expatriate posts

Applications for expatriate posts (including key posts, executive and non-executive posts) can be submitted to the Malaysian Industrial Development Authority (MIDA) at the same time as the company's application for approval for its industrial project.

The above procedure applies for expatriate personnel required by the following:-

(i) All companies which propose to establish new projects.

(ii) All existing companies which propose to manufacture additional products (diversification of projects).

(iii) All existing companies which propose to expand their production capacities (expansion of projects).

In the event that an applicant is unable to submit his requirements of expatriate personnel at the time of the submission of his application, he may submit his foreign personnel requirements at a later stage.

Existing companies which are not undergoing any expansion of product diversification but wish to apply for additional expatriate posts or to renew existing posts are to submit their applications to the Standing Committee on Malaysianisation through the Immigration Department as has been the practice in the past.

9. Labour policy and labour laws

It is the Government's policy to promote cordial employer-employee relations and industrial peace based on social justice, equity and good conscience so as to bring about a generally contented and productive labour force thereby ensuring a favourable climate for investment and sustained economic growth. With this objective in view, the provisions of the labour laws set out minimum standards to safeguard the interests and spell out the rights and responsibilities of employers and employees and provide a legal framework for orderly conduct of industrial relations.

10. Employment Act, 1955

The Employment Act, 1955 is the principal employment legislation regulating terms and conditions of employment. Among other things it sets out the minimum conditions of employment which include:

(i) Ten paid gazetted public holidays in any one calendar year;

(ii) Eight days of paid annual leave for employees with less than two years of service. 12 days of paid annual leave for those employees with two or more years of service but less than five years of service, and 16 days for those with over five years service;

(iii) Fourteen to 22 days sick leave in a year depending on length of service and where hospitalisation is necessary, up to an aggregate of 60 days sick leave in each year;

(iv) Normal hours of work shall not exceed eight hours a day or 48 hours a week;

(v) Payment for overtime work at one and a half times the ordinary rate of pay.

(vi) Payment of maternity allowance for female employees on maternity leave for 60 days at the ordinary rate of pay subject to a minimum rate of M$6.00 per day.

11. Trade Unions Act, 1959

The Trade Unions Act, 1959 provides for the registration and administration of trade unions in line with the policy of Government to encourage the growth of democratic, healthy and responsible trade unionism, within the context of public and national interests. A trade union should confine its membership to employees within a particular trade, occupation or industry and should apply for registeration upon its formation.

The Trade Unions Act provides sufficient safeguards against militancy or unlawful activities of trade unions. All trade unions are inspected periodically to ensure compliance with the law.

12. Industrial Relations Act, 1967

The Industrial Relations Act, 1967 provides for the regulations of relations between employers and workmen and their trade unions, and the prevention and settlement of trade disputes. Some of the main features of the Act are:-

(i) Protection of the legitimate right of employers and workmen and their trade unions;

(ii) Exclusion of workmen in managerial, executive, confidential or security capacities from the scope of recognition of trade union, the majority of whose membership are not employed in any of these capacities;

(iii) Procedure relating to submissions of claims for recognition and scope of representation of trade unions and collective bargaining;

(iv) Non-inclusion in union's proposals for collective bargaining on matters relating to promotion, transfer, recruitment, retrenchment, dismissal, reinstatement, and allocation of duties and prohibition of strikes over any of these matters;

(v) Emphasis on direct negotiation between employers and workmen and their trade unions to settle their differences and provision for speedy and just settlement of trade disputes by conciliation or arbitration when direct negotiation fails;

(vi) Provision for the Minister of Labour to intervene and to refer at any stage any trade dispute to the Industrial Court for arbitration;

(vii) Prohibition of strikes and lock-outs after a trade dispute has been referred to the Industrial Court, and on any matter covered by a collective agreement or by an award of the Industrial Court;

(viii) Protection of pioneer industries during the initial years of their establishment against any unreasonable demands from a trade union because trade unions cannot demand better terms of employment than those stipulated under the Employment Act.

13. Employees Provident Fund Act, 1951

The Employees Provident Fund Act, 1951 provides for a compulsory contributory provident fund which is payable to employees in full on reaching the age of 55 years. All employers and employees are required to contribute to the Fund at the rates of 11% and 9% respectively of the employees' monthly wages.

Among the categories of employees precluded from compulsory contributions are:

(i) Expatriates

(ii) Domestic Servants – Persons who are employed to work in or connected with work in a private dwelling house including a valet, gardener, and who are paid from the private account of the employers.

However, expatriate employees, domestic servants and self employed persons can opt to contribute to the Fund.

14. Employees' Social Security Act, 1969

All industries throughout the country with five or more employees whose wages do not exceed M$1,000 a month, are required to insure their employees under the two schemes of the Social Security Organisation, namely, the Employment Injury Insurance Scheme and the Invalidity Pension Scheme.

(i) The Employment Injury Insurance Scheme provides employees with coverage in the event of any disablement or death due to employment injury by way of cash benefits and medical care. The contribution is borne solely by the employer and is about one and one quarter per cent of the wages of an employee.

(ii) The Invalidity Pension Scheme provides a 24-hour coverage to employees against invalidity and death due to any cause before the age of 55 years. The total contribution is about one per cent of the wages of an employee and shared by the employer and the employee equally.

15. Workmen's Compensation Act, 1952

Employers who are not required to contribute under the Social Security Act, are required to insure with a locally registered insurance company in respect of any liability which they may incur under the Workmen's Compensation Act, 1952. This Act, which covers all manual workers irrespective of their wages and non-manual workers whose earnings do not exceed M$500 a month, prescribes the amount of compensation payable to employees or their dependants for injury or death suffered in the course of employment:

(i) In fatal cases, the maximum compensation payable is 45 months' earnings or M$14,400, whichever is the less.

(ii) In permanent total disablement cases, the maximum compensation is 60 months' earnings or M$19,200, whichever is the less;

(iii) In permanent partial disablement cases compensation is based on the percentage disablement sustained;

(iv) In temporary total disablement cases amount payable is by way of half-monthly payments of one-third of the monthly earnings or M$135, whichever is the less.

Exchange Control Administrative Practices

The present exchange control regime is liberal and applies uniformly to transactions with all countries except South Africa and Israel, against which special restrictive rules apply. The main exchange control rules which are of direct relevance to foreign investors, are as follows:-

1. Direct and portfolio investment

No permission is required from the Controller of Foreign Exchange (hereinafter referred to as "the Controller") for a non-resident to undertake direct or portfolio investment in Malaysia.

2. Remittance abroad

Payments to countries outside Malaysia may be made in any foreign currency other than the currencies of South Africa and Israel. Payments within Malaysia must be made in ringgit, the Malaysian unit of currency.

All payments to non-residents for any purpose, including repatriation of capital and profits, are freely permitted, subject only to the completion of a simple statistical form for remittances of more than M$10,000 each or its equivalent in foreign currency. The authorised banks are authorised to approve such payments, irrespective of amount. The authorised banks are required to refer to the Controller for approval only payments made for the purpose of investing in securities or immovable property abroad and for extending credit to, or placement of deposits with non-residents, whenever such transactions are financed by any credit facility in Malaysia. The use of domestic borrowing to finance investments abroad is generally not encouraged.

3. Export proceeds

A simple form (KPW X) must be completed for all exports, the value of which exceeds M$20,000 f.o.b per shipment. This form does not require any authorisation and is given to the customs authorities at the time of shipment.

Export proceeds which may be in any foreign currency (other than the currencies of South Africa and Israel) or in ringgit from an external account must be repatriated to Malaysia within the period of payment specified in the export contract. The period should not exceed a maximum period of six months from the date of export.

4. Inter-company accounts

No permission is required from the Controller for a company in Malaysia to maintain inter-company accounts with associated companies, branches or other companies outside Malaysia, provided monthly returns as specified by the Controller are submitted to the Controller and the following are excluded from the inter-company accounts:-

(a) proceeds from the export of Malaysian goods; and

(b) proceeds from loans extended to the Malaysian companies.

With the prior written permission of the Controller, companies located in a free trade zone or licensed manufacturing warehouses are allowed to offset the export proceeds through inter-company accounts against payables to their affiliated or parent companies overseas for the supply of raw materials, parts, components, and other items. This would enable the companies concerned to repatriate to Malaysia only the value added in the form of services performed by the Malaysian companies.

Where the companies have been given permission for the above off-setting arrangements, they are required to observe certain procedures in reporting and lodging monthly returns to enable the Controller to monitor their inter-company accounts and to ensure that the value added in their exports are repatriated to Malaysia in the prescribed manner.

5. Domestic borrowing by Non-resident Controlled Companies (NRCC) operating in Malaysia

A Non-resident Controlled Company (NRCC) in Malaysia may borrow up to a total of M$10 million from all sources in Malaysia without the permission of the Controller provided it obtains at least 60% of its credit facilities from financial institutions which are incorporated in Malaysia. The limit for exchange control approval applies to all forms of credit, including trade financing facilities.

For borrowing in Malaysia in excess of M$10 million, the permission of the Controller is required and such approval will be given based on the genuine needs of these NRCCs, the credit situation in the country and the amount of net shareholders' funds and long-term loans from abroad with an original maturity of at least five years, obtained by the NRCCs.

NRCCs are encouraged not to resort to the maximum use of borrowed funds in Malaysia, while bringing in only a nominal amount of capital of their own for their projects in Malaysia. This is to ensure that a NRCC brings in a relatively significant amount of funds of its own to finance its project in Malaysia as a long-term proposition and not merely as a venture for quick profits without any semblance of permanence.

6. Borrowing in foreign currency from banks in Malaysia

Residents may borrow in foreign currency from banks in Malaysia to supplement their financial requirements for business and productive purposes in Malaysia. The foreign currency borrowed may be used to finance payments for imports, or it may be sold for ringgit to a bank in Malaysia and the proceeds used for similar purposes. The foreign currency may not be retained for temporary investment abroad except with the permission of the Controller.

7. Borrowing from non-residents

The permission of the Controller is required for borrowing from abroad where the total foreign borrowing exceeds the equivalent of M$1 million. Foreign borrowing in ringgit, regardless of the amount, requires the prior approval of the Controller and such approval is generally not granted.

Approval for remittances of loan repayments and interest on previously approved foreign borrowing may be given by authorised banks on behalf of the Controller, provided such repayments and interest payments are in accordance with the terms approved for the borrowing.

Transfer of Technology

1. Policy

All manufacturing projects licensed by the Ministry of Trade and Industry should obtain the prior written approval of the Ministry before entering into any agreement involving foreign partners.

This is done to ensure that:

(i) the agreement will not impose unfair and unjustifiable restrictions or handicaps on the local party

(ii) the agreement will not be prejudicial to national interest; and

(iii) the payment of fees (if applicable) will commensurate with the level of technology to be transferred.

2. Type and nature of agreements

Technology transfer agreements cover licence rights over specific processes, formulae or manufacturing technology (may be patented or unpatented); other knowledge and expertise necessary for the setting up of a plant; and provision of various technical assistance and supporting services.

Under these arrangements, specific agreements entered could be in the form of:-

(i) **Joint Venture Agreement –** An agreement to set up a joint venture company between two or more parties involving local and foreigners.

(ii) **Technical Assistance –** An agreement between two or more parties where one party will provide the technical assistance and know-how for the manufacture of certain products for a certain amount of fee/royalty.

(iii) **Know-how Agreement –** Basically the same as in (ii) above.

(iv) **Licence Agreement –** An agreement between Licensee and Licensor where the latter grants licence/right to the Licensee to use it patents, trademarks and other industrial/intellectual properties for the manufacture of certain products for a certain amount of fee/royalty.

(v) Patent and Trademark Agreement –
An agreement between two or more parties where one party gives the right to the other to use its patents and trademarks for the manufacture of certain products for a certain amount of fee.

(vi) Sales Commission Agreement –
An aggreement between two or more parties where one party will provide marketing assistance services to the other for a certain amount of sales commission fee.

(vii) Turnkey Contract –
A contract between two or more parties where the contract is awarded to one of the parties to perform all stages from initial to final stages inclusive of consultancy, managerial, technical services and others until the contractual project is ready for immediate commercial production or final use.

(viii) Management Agreement –
An agreement between two or more parties where one party will provide the management services to the other in return for payment of management fee. This normally exists in the management of international class hotels and to some extent in manufacturing.

3. Guidelines on transfer of technology

Agreements on transfer of technology must define in detail the following:-

(i) technological content and principal features of technology or process.

(ii) anticipated production.

(iii) quality and specification of products.

(iv) particulars of technical assistance, services and manner in which they are to be provided.

The transfer of technology must be effected through the following:-

(a) Access to improvements
The technology to be supplied should incorporate:-

(i) the latest development known to the supplier

(ii) access to innovations/breakthrough in technology, including new patents applied for or registered.

(b) Remuneration for technology
Payment for technology can be in the form of a 'fixed lump sum fee' or 'a running royalty' or a combination of lump sum fee and running royalty for a specified period of time. Lump sum payments are usually allowed in cases where the know-how can be fully and completely transferred and absorbed within a specified period of time. The method of payment that is preferable is the running royalty based on net sales. Initial lump sum payments in addition to royalties are not encouraged by the Ministry. Where such payments are requested it should be only for the recovery of **actual** expenses incurred by the Licensor for preliminary services provided to the Licensee.

(c) Method of payment

(i) Royalty is imputed in relation to the level of technology and principal elements of transfer. Depending upon the merits of each case, a rate of 1% to 5% of net sales can be considered. Where technology transferred is not highly sophisticated, the rate allowed by the Ministry is usually around 2% of net sales.
[net sales is defined as gross sales less sales discounts or returns, transport costs (including freight), insurance, duties, taxes and other charges, and where applicable, cost of raw materials, parts and components imported from the foreign Licensor concerned or its subsidiaries].

(ii) Practice of itemisation of service under separate agreements are discouraged.

(iii) Capitalisation of know-how fees/royalty is not encouraged.

(iv) For the motor vehicle assembly, heavy machinery, construction machinery and related industries where basically assembly operations are involved, royalty payment is not allowed.

(d) Duration and renewal

(i) Duration of agreement should be adequate for full absorption of technology. The life of any patent relating to the technology is also taken into consideration.

(ii) An initial period of five years is normally approved and any renewal is subject to prior approval of the Ministry.

(e) Training
A provision for adequate training for the local company's personnel in the technology supplier's plant facilities as well as in-plant training in the local company's plant should be incorporated and clearly specified. In the case of the former, the number of personnel to be trained, the areas of training and its duration, together with arrangements and the facilities to be made available for the training should also be defined.

The costs of training should be borne by the technology supplier but all expenses related to salaries, wages, living and travelling allowances should be borne by the local company.

(f) Patents and Trade Marks
Patents and trade marks may come as one of the components of the whole technology transfer package. In the case of patents, it is of utmost importance that those patents involved in any process know-how be explicitly defined in the agreements and the local company is granted the user rights over all such patents. Where the life of the patent extends beyond the duration of the agreement concerned, an arrangement should be made for continued use of the patent after the expiry of the agreement.

(g) Confidentiality/Secrecy
Confidentiality of information should be confined to the duration of the agreement only.

(h) Guarantee/Warranty
The agreement should define guarantee with respect to the production capacity, product quality and specifications and other features of the manufacturing process.

(i) Taxes
A withholding tax of 15% is levied on payments made to foreign suppliers of technology and this tax has to be borne by the foreign receipient. Exemption under Double

Taxation Agreement where applicable has to be made to the Ministry of Finance separately.

(j) **Sales Territory**

The local company should be free to sell its produce (manufactured with the licensed technology) in the whole of Malaysia and all other countries except where the foreign technology supplier is manufacturing directly or where he has given exclusive rights to others or where he is legally not empowered to allow sales based on his technology.

(k) **Governing Laws and Arbitration**

The governing laws for any technology transfer arrangement should be **Malaysian** laws and arbitration proceedings must be conducted in Malaysia in accordance with either the Malaysian Arbitration Act. 1952 (Revised 1972) or the United Nations Commission on International Trade Law (UNCITRAL) Arbitration Rules and conducted at Asian African Legal Consultative Committee (AALCC) Regional Centre for Arbitration. Kuala Lumpur.

4. Industrial and intellectual property protection in Malaysia

(a) Patents Act. 1983

Malaysia provides adequate protection in the field of industrial property for local and foreign investors. Patent protection in Malaysia will be governed by the Patents Act 1983 and the Patents Regulations 1986. which came into force on 1st October. 1986.

Under the said Act and Regulations. an application for a patent can be made directly in Malaysia and registration is effective for the whole of Malaysia as opposed to territorial registrations under the repealed legislations relating thereto. Similar to the provisions in the legislations of other countries. an invention is patentable if it is new. non-obvious and is industrially applicable. The Act provides that a patent shall expire 15 years after the date of its grant. The owner of a patent has the right to exploit the patented invention; to assign or transmit the patent and to conclude licence contracts; Malaysia will also take steps in the very near future to accede to the Paris Convention thus providing further safeguards in the field of industrial property in the country. Malaysia's industrial property laws accord the same treatment for both nationals and foreigners.

(b) **Trade Marks Act. 1976**

Trade mark protection in Malaysia is governed by the Trade Marks Act. 1976 and the Trade Marks Regulations 1983. The above Act modelled along the Acts of some of the industrialised countries provides effective and adequate protection for registered trade marks in this country. If a trade mark is registered. then no person or enterprise other than its owner or authorised users may use it. otherwise infringement actions can be taken against them. The protection of a trade mark is not limited in time. provided its registration is periodically renewed and its use continues.

(c) Copyright Act. 1987

Copyright protection in Malaysia is governed by the Copyright Act. 1987 (Act 332) which replaced and repealed the Copyright Act 1969. The 1987 Act came into force on 1st December. 1987. The Copyright Act 1987 not only provides for a better and more comprehensive protection of copyrightable works but also many peripheral issues pertaining to copyright. The Act outlines the nature of works eligible for copyright. which include computer software. the scope of protection and the manner in which the protection is accorded. Duration of copyright protection has been increased from 25 to 50 years under the new act. A unique feature of the Act is the inclusion of provisions for enforcing the Act which include such power to enter premises suspected of having infringing copies. power to search and seize infringing copies and contrivances. and a special team of officers to be appointed to enforce the Act. Foreign works are also protected if they are made in Malaysia and are published in Malaysia within thirty days of their first publication in the country of origin. Protection accorded to foreign works is similar to national works. The Copyright Act. 1987 also provides provisions for Malaysia to extend the use of the Act internationally.

Facilities for Investment

1. Industrial estates

There are now 105 developed industrial estates in Malaysia which have been established throughout the country specifically for the needs of industry. These estates provide basic infrastructure such as roads. water. power and telecommunication facilities.

2. Free Trade Zones (FTZ)

These are areas specially designed for manufacturing establishments producing or assembling products essentially for export. The objective of providing FTZ facilities to export-oriented industries is to enable them to enjoy minimum customs control and formalities in their import of raw materials. parts. machinery and equipment.

Todate. nine FTZ's have been established viz. in Bayan Lepas. Prai. Mukim Pringgit. Bukit Baru. Tanjong Kling. Sungei Way. Ulu Klang. Telok Panglima Garang and Pasir Gudang in the States of Penang. Melaka. Selangor and Johor.

(a) Eligibility

Companies which can be considered for location in Free Trade Zones are those:-

(i) whose entire products are meant for export. In exceptional circumstances companies exporting not less than 80 per cent of their products can also be considered for location in the Free Trade Zone.

(ii) whose raw materials/components have to be imported. The Government encourages FTZ companies to use local raw materials/components wherever possible. The companies are however. given the flexibility to choose their best sources of supply of raw material components.

(b) **Payment of duty**

Goods exported abroad from the Free Trade

Zone are not liable to customs duty.

If they are allowed to be imported into the Principal Customs Area (PCA) for home consumption they are subject to the prevailing customs duty as is applicable to foreign imports. However, companies in Free Trade Zones may apply to the Treasury for exemption on import duty for products which they wish to sell in the domestic market.

If the goods imported into the PCA are to be used as direct raw materials or components by manufacturers in the PCA, the importing company may apply for duty exemption in respect of imports from the FTZ in the same manner as if the goods are imported from abroad.

Since the Free Trade Zone lies outside the Principal Customs Area, goods exported thereto are eligible for duty drawback.

3. Licensed Manufacturing Warehouses (LMW)

In order to encourage the dispersal of industries and to enable companies to establish factories for the manufacture of products mainly for the export market, where the establishment of a Free Trade Zone is neither practical nor desirable, the Government has allowed the setting up of Licensed Manufacturing Warehouses. These establishments are accorded similar facilites to those of factories operating in the Free Trade Zone.

(a) Eligibility

The companies normally approved for Licensed Manufacturing Warehouses are those:-

(i) whose entire products are meant for export. Companies exporting not less than 80% of their product are also considered for approval.

(ii) whose raw materials/components are mainly imported as such goods are not available locally.

Application for a License Manufacturing Warehouse is to be made in specified proforma available from the Royal Customs & Excise Department.

4. Water and energy supplies

The Malaysian Government realises the need of industry for competitively priced power and water supplies and reviews these rates from time to time.

5. Communications

Malaysia has 16,000 miles of some of the finest roads in Asia and an efficient rail and air system. Malaysia's communications system has also been designated by the World Bank as being of the 'A' Category, that is, comparable to the developed countries. International air and sea ports assure efficient handling and transport of cargo whether liquid, bulk or containerized.

6. Facilities for training in industry

A National Apprenticeship Scheme provides for a voluntary scheme whereby employers sponsor apprentices to undergo apprenticeship training usually over a period of three years sandwiched between periods of training at the Industrial Training Institute and the employers' work place. The apprenticeable trades covered include Mechanical, Electrical Engineering, Printing and Construction.

There are at present five Industrial Training Institutes and five more are planned for construction in the near future. A unit to provide training for trade instructors, trade skilled workers and supervisors is made available at the Centre for Instructor and Advanced Skill Training under the Manpower Department.

A considerable number of various other types of skill upgrading and skill preparation courses are also available at many public and private training institutions all of which are available to employers at nominal cost. The Manpower Department also provides advisory services to industrial establishments on training.

The National Industrial Training and Trade Certification Board establishes national trade standards and develops training syllabi and implements a national programme in trade skill testing and awarding of certificates for 36 recognised skills or trades.

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Guidelines on Foreign Equity Ownership

Domestically Oriented Industries

1. For manufacturing and agricultural projects where local participation cannot be found, foreign investors are allowed to hold up to 100% equity for a period of 5 years from the date of production, with the following conditions:

a) The company must export at least 20% of its products;

b) The foreign investor must negotiate with the Ministry of Trade and Industry if they cannot find local partners; and

c) For agricultural projects, foreign investors are subject to State Government approval with regard to land ownership.

2. After 5 years, the foreign equity level must be reduced to the level that is allowed under the present guidelines, which is based on the quantum of export.

3. These guideline cover new projects licensed or approved between 1 October 1986 and 31 December 1990.

4. These guidelines do not apply to products and activities reserved for small scale industries and for industries where foreign participation is not allowed.

The Co-Ordination Centre on Investment to The Malaysian Industrial Development Authority (MIDA)

Effective October 1, 1988, MIDA will function as the Coordination Centre for Investments (COI). Investors need only approach MIDA to obtain most of the approvals required at the Federal level in respect of manufacturing; and for the granting of tax incentives in respect of integrated agriculture, hotels and tourist projects. This measure is aimed at further streamlining the administrative procedures in respect of investments at the Federal level.

With the Government decision to make MIDA the Coordinating Centre for Investments, its present role will be more encompassing, thus reducing the number of agencies and departments that investors have to go to, and the time taken to get the relevant approvals.

The main functions of the Coordination Centre on Investment (COI) in MIDA will be to receive, process and convey decisions on the following matters:

i) Application for manufacturing licences under the Industrial Coordination Act, 1975 and for all matters relating to the conditions of the manufacturing licences. The Ministry of Trade and Industry will, however, continue to consider applications relating to the conditions of licence pertaining to the NEP, such as the restructuring of companies, the issuance of clearance letters on the postponement of compliance with NEP conditions, amendments to the equity condition and the allocation of Bumiputera shares;

ii) Applications for tax incentives under the Promotion of Investments Act 1986;

iii) Application for expatriate posts;

iv) Application for double deduction for approved training in the manufacturing sector;

v) Applications for double deduction for research and development;

vi) Applications for exemption from import duty and surtax on raw materials and component parts;

vii) Applications for Customs duties exemption on machinery and equipment;

viii) Applications for approval to install and operate machinery;

ix) Applications for approval to import used plant and machinery;

x) Verification on the local availability of spare and replacement parts for the purpose of considering import duty exemption on these items;

xi) Applications for extension of business visit passes (not exceeding three months) and the conversion of business visit passes, temporary employment passes (not exceeding 3 months) relating to manufacturing projects only;

xii) Applications for approval to employ women workers for the night shift; and applications for approval for overtime work not exceeding 64 hours per month;

xiii) Request for verification/amendment of tariff codes.

Apart from the above functions, the Co-ordination Centre on Investments will also act as a referral and monitoring centre, assisting investors in following through their project implementation.

In taking upon the functions as the Co-ordination Centre for Investments, senior officers from the following Ministries and Departments will be seconded to MIDA;

i) Ministry of Finance;

ii) Ministry of Labour;

iii) Immigration Department;

iv) Royal Customs and Excise Department;

v) Factories and Machinery Department

The Department of Environment of the Ministry of Science, Technology and Environment will second a senior officer in MIDA to advise and assist investors on matters relating to the implementation of the Environmental Quality Act 1974.

At the State level, Investment Coordination Centres similar in function and structure to the COI at the Federal level will also be formed. The State Governments are currently identifying the appropriate agency to be the Coordination Centre and its future scope of activities.

At the apex of all these structures, a Referral Unit will be formed in the Office of the Minister of Trade and Industry. This Unit will receive representations from the COI, as well as from local and foreign investors in respect of issues and problems which require communication between Ministries at the Federal level as well as requiring communication between the Minister of Trade and Industry with the Menteri Besar/Ketua Menteri of the State. The Ministry of Trade and Industry is now working on the guidelines with respect to matters and issues which can be dealt with by this Unit.

ANNEX 1

CRITERIA FOR AWARDING INVESTMENT TAX ALLOWANCE (ITA)

MANUFACTURING SECTOR

Criteria	Basis	%ITA	Maximum
a) Export	50% - <80% 80% - 100%	15% 30%	30%
b) (i) Value - Added*	Minimum 25%	20%	20%
(ii) Local - Content*	Minimum 50%	20%	20%
c) Employment	Employ at least 100 full-time paid Malaysian workers	25%	25%
d) Location	Location in promoted industrial areas as gazetted under section 32(4) of the Promotion of Investments Act, 1986	5%	5%

* Definition of:

Value added - Defined as gross sales less raw material costs

Local content - Defined as cost of Malaysian raw materials and/or parts and components manufactured in Malaysia, excluding wages, salaries, water, electricity and other domestic inputs, as a percentage of total cost of raw materials and/or parts and components

LIST OF PROMOTED ACTIVITIES AND PROMOTED PRODUCTS

Agricultural Production

(1) Cultivation of cocoa, coffee or tea
(2) Cultivation of fruits
(3) Cultivation of vegetables, tubers or roots
(4) Cultivation of cereals
(5) Cultivation of herbs or spices
(6) Cultivation of essential oil crops
(7) Production of planting materials
(8) Cultivation of medicinal plants
(9) Cultivation of fodder crops or animal feed ingredients
(10) Cultivation of tobacco
(11) Floriculture
(12) Sericulture
(13) Apiculture
(14) Livestock farming
(15) Spawning, breeding or culturing of aquatic products
(16) Off-shore fishing
(17) Any other agricultural activity, except planting of rubber, oil palm and coconut

Integrated Agriculture

(1) Cultivation and processing of cocoa, coffee or tea
(2) Cultivation and processing of fruits
(3) Cultivation and processing of vegetables, tubers or roots
(4) Cultivation and processing of cereals
(5) Cultivation and processing of herbs or spices
(6) Cultivation and processing of essential oil crops
(7) Cultivation and processing of medicinal plants
(8) Cultivation and processing of fodder crops or animal feed ingredients
(9) Cultivation of tobacco and curing of tobacco
(10) Floriculture and packaging or processing of its produce
(11) Sericulture and processing of its produce
(12) Apiculture and processing of its produce
(13) Breeding and rearing of livestock and processing of livestock and livestock products
(14) Spawning, breeding or culturing and processing of aquatic products
(15) Off-shore fishing and processing of its produce

Agricultural Processing

(1) Cocoa and cocoa products
(2) Coffee
(3) Tea
(4) High fructose syrup
(5) Coconut products except copra and crude coconut oil
(6) Fruits
(7) Vegetables
(8) Cereal products
(9) Starch and proteins
(10) Herbs or spices
(11) Essential oils
(12) Fodder or other animals feed ingredients
(13) Tobacco
(14) Flowers or ornamental foliages
(15) Honey
(16) Meat
(17) Livestock products
(18) Aquatic products, including seaweed
(19) Agricultural waste and by products
(20) Sugar
(21) Aquaculture feed

Forestry and Forestry Products

(1) Reafforestation
(2) Forestry products
(3) Rattan processing
(4) Basketware and other rattan products
(5) Bamboo products

Manufacture of Rubber Products

(1) Tyres, all types
(2) Retreading of aircraft tyres
(3) Tubes
(4) Precured retreads
(5) Moulded rubber products
(6) Latex dipped products
(7) Extruded rubber products
(8) General rubber goods
(9) Foam rubber products
(10) Rubberised fabrics
(11) Inflatable rubber products
(12) Conveyor belts, transmission belts, V-type belts and other rubber belting
(13) Engineering components of rubber (e.g. building mounts, anti-vibration mounts)
(14) Reclaimed rubber
(15) Rubber compound
(16) Rubber-based (elastomeric) specialty coating

Manufacture of Palm and Palm Kernel Oil Products and their Derivatives

(1) Fatty acids and their derivatives, fatty esters and their derivatives inclusive of metallic esters, fatty alcohols and their derivatives, fatty amines and their derivatives and glycerine (crude and refined)
(2) Cocoa butter replacers (such as cocoa butter substitutes, cocoa butter alternatives, cocoa butter modifiers, cocoa butter equivalents), palm oil mid fraction, special olein II and special olein III
(3) Margarine, vanaspati, shortening and other manufactured fat products
(4) Crude palm kernel olein and stearin, neutralised or refined and bleached palm kernel olein and stearin and neutralised or refined, bleached and deodorised palm kernel olein and stearin
(5) Hydrogenated and/or interesterified oils and oil blends, all types

(6) Crude palm kernel oil
(7) Refined palm oil
(8) Neutralised palm kernel oil
(9) Refined, bleached and deodorised palm kernel oil
(10) Palm kernel meal

Manufacture of Chemicals and Pharmaceuticals

(1) Chemical derivatives obtained from methyl and ethyl alcohol
(2) Plant and vegetable extracts for pharmaceutical, perfumery, cosmetics and food flavouring industries
(3) Antibiotics
(4) Basic manufacture of pharmaceutical
(5) Basic manufacture of fertilisers
(6) Basic manufacture of pesticides
(7) Chemical intermediates derived from petroleum, natural gas or coal
(8) Fine chemicals
(9) Animal vaccine and clinical diagnostic reagents
(10) 2, 4-DiChloro Pheyln Acetic Acids, Methyl Chloro Phenyl Acetic Acids
(11) Synthesised raw materials for advanced ceramic
(12) Specialised paints and coatings
(13) Common salt
(14) Soap, cleaning preparations, cosmetics and other toilet preparations
(15) Chemical derivatives from inorganic sources
(16) Recycling of chemicals and plastic wastes
(17) Injections, sterile solutions and gelatin capsules
(18) Carbon black master batch
(19) Industrial gases, whether compressed, liquified or in solid state
(20) Chemical for fire extinguishers
(21) Fertilizers

Manufacture of Leather and Leather Products

(1) Tannery
(2) Leather products

Manufacture of Wood and Wood Products

(1) Integrated timber complex
(2) Plywood, fancy plywood, prefinished and printed plywood
(3) Building and insulating boards, such as blockboards, laminated board, batten board, medium density board, soft board, hard board, wafer board, lamin board, particle board and chipboard
(4) Timber mouldings, all type
(5) Prefabricated housing units and components
(6) Wooden cabinets for electrical or electronic products
(7) Builders carpentry and joinery, assembled parquet flooring panels
(8) Wooden staircases
(9) Wooden doors and windows
(10) Products derived from utilisation of wood waste (e.g. activated charcoal, wooden briquettes, wood wool)
(11) Wood pellets
(12) Article of turned wood
(13) Rubberwood veneer

Manufacture of Pulp, Paper and Paperboard

(1) Pulp
(2) Newsprint
(3) Printing and writing paper
(4) Security paper
(5) Household and sanitary paper
(6) Wrapping and packaging paper and board
(7) Linerboard
(8) Kraft liner
(9) Fluting medium
(10) Sack kraft
(11) Folding boxboard
(12) Other paper and paper board

Manufacture of Textiles and Textiles Products

(1) Man-made fibre, all types excluding polyster staple fibre
(2) Silk, silk yarn and fabrics of silk
(3) Continuous yarn or filament yarn of man-made fibres
(4) Woven fabrics of higher counts
(5) Special fabrics for upholstery and furnishing fabrics
(6) Commission dyeing, bleaching, printing and finishing facilities of high standard for yarn and fibre
(7) Cord fabrics including tyre-cord fabrics
(8) High quality made-up garments and made-up textile articles
(9) Made-up garments
(10) Natural fibre
(11) Batik printing
(12) Knitted fabrics
(13) Accessories for the textile industry

Manufacture of Clay and Sand-Based Products and other Non-Metallic Mineral Products

(1) High grade processed kaolin
(2) High grade processed ball clay
(3) High alumina and basic refractories
(4) Kiln furniture refractories
(5) Laboratory, chemical or industrial wares
(6) Ceramic artware, ornaments and articles for adornment
(7) Medium and high tension porcelain insulators
(8) High grade silica sand and powder
(9) Glass inners for vacuum flasks or for other vacuum vessels
(10) Decorative glass and glassware
(11) Glass ornaments and articles of adornment
(12) High tension electrical glass insulators
(13) Bricks, tiles, slabs, paving block, squares and other articles of pressed or moulded glass used in building
(14) Mirrors
(15) Glass envelopes (including bulbs and tubes) for electrical lamps, electric valves or the like
(16) Glass fittings for lighting purpose
(17) Sand lime bricks
(18) Glass pellets
(19) Glass fibres (staples and continuous) for reinforcement and textiles, produced from basic raw materials.

(20) Polished slabs of locally sourced marbles and granite
(21) Panels, boards, tiles, blocks and similar articles of vegetable fibre, wood fibre, straw, wood shavings or wood wastes, agglomerated with cement plaster or with other mineral binding substance
(22) Cellular concrete blocks and panels
(23) Rice-husk ash cement
(24) High quality calcium carbonate powder
(25) Advanced ceramics and its derivatives
(26) Ceramic floor tiles
(27) Abrasive products for grinding, polishing and sharpening
(28) Bricks
(29) Prestressed spun concrete piles
(30) Ceramic wall tiles
(31) Vitrified clay pipes

Manufacture of Iron and Steel and their Products

(1) Pig iron, sponge iron and hot briquetted iron
(2) Ingot, billet, bloom and slabs of all grades of steel
(3) Bars and wire rods (except those of mild steel), angles, shapes and sections of all grades of steel either hot-rolled, cold-rolled of cold-finished.
(4) Plates, sheets, coils, hoops and strips of all grades of steel either hot-rolled, cold-rolled, cold-finished, coated, or plated
(5) Welded pipe, seamless pipe and pipe fittings of iron and steel including hydro-electric conduits
(6) Wire and wire products of iron and steel
(7) Cans and drums of iron and steel
(8) Steel fabricated products
(9) Steel structures
(10) Gas Cookers

Manufacture of Non-Ferrous Metals and their Products

(1) Dressing and smelting of non-ferrous metals
(2) Ingots, billet and slabs of non-ferrous metals
(3) Bars, rods, shapes and sections of non-ferrous metal
(4) Plates, sheets, coils, hoops and strips of non-ferrous metals
(5) Pipes and tubes of non-ferrous metals
(6) Wire and wire products of non-ferrous metals
(7) Cans and drums of non-ferrous metals
(8) Fabricated products of non-ferrous metals
(9) Powder of non-ferrous metals

Manufacture of Machinery and Machinery Components

(1) Industrial processing machinery
(2) Agricultural machinery and equipment
(3) Mining and mineral processing machinery including equipment for oil and gas exploration and extraction
(4) Power generation machinery
(5) Material handling equipment
(6) Industrial machinery and equipment including engines, motors, generators, compressors, welding equipment, fans and blowers
(7) Machine tools
(8) Machinery components including ball bearings, valves, pumps, gears and gear boxes, couplings and mechanical seals
(9) Duplicating machines
(10) Typewriters, all types
(11) Construction machinery and parts thereof
(12) Automatic gate systems, burglar alarm systems and parts thereof

Supporting Products/Services

(1) Iron and steel castings
(2) Iron and steel forgings
(3) Precision machining
(4) Precision stamping
(5) Precision electroplating
(6) Moulds, tools and dies
(7) Non-ferrous metal castings
(8) Non-Ferrous metal forgings
(9) Galvanising shearing and slitting of metal sheets and other related engineering services

Manufacture of Handtools

(1) Handtools, all types (such as axes, pliers, spanners, screwdrivers, wrenches, hammers, pincers, riveting tools and other handtools).

Manufacture of Motor Vehicles, Components and Accessories

(1) Manufacture of motorised vehicles
(2) Engines of all types and their parts
(3) Transmissions, final drives and wheels all types, including their parts
(4) Chassis bodies including fuel tanks and their parts
(5) Suspension systems, stabilising system and their parts
(6) Electrical or electronics systems, instrumentation and their parts
(7) Fuel systems, braking systems, ignition systems, Steering systems, cooling systems, air-inlet systems, exhaust systems, and engine-starting systems and their parts
(8) Any other automotive component and accessories.

Manufacture of Other Transport Equipment

(1) Non-motorised vehicles such as bicycles, tricycles and gliders
(2) Locomotives, coaches, wagons and their parts
(3) Pleasure crafts, hydrofoils, hovercrafts and their parts
(4) Aeroplanes, helicopters and their parts
(5) Any other type of transport equipment

Manufacture of Electrical and Electronic Products and Components and Parts Thereof

(1) Colour television receivers and parts thereof
(2) Audio or video cassette recorders or players and parts thereof
(3) Tuners
(4) Computers, computer peripherals and parts thereof
(5) CAD, CAM or CAE equipment and parts thereof
(6) Controllers, all types
(7) Modems
(8) Telephones including cellular rados, walkie-talkies

(9) Telecommunications equipment and parts thereof
(10) Intercoms
(11) Optical fibre products and parts thereof
(12) Counters
(13) Piezoelectric frequency units
(14) Voice and data synthesis equipment
(15) Earphones
(16) Hearing aids
(17) Microphones
(18) Smoke detectors, fire alarms, electronic counters
(19) Automatic fare collection machines
(20) Automatic traffic control equipment
(21) Automatic vending machines
(22) Automatic parking meters
(23) Automatic teller machines
(24) Computing scales
(25) Cash registers
(26) Telemetering requipment
(27) Telex machines
(28) Photocopying machines and parts thereof
(29) Robots and robotics
(30) Electrical lawn mowers
(31) Ovens
(32) Washing machines and parts thereof
(33) Vacuum cleaners and parts thereof
(34) Floor polishers
(35) Shavers
(36) Hair dryers
(37) Decorative lights
(38) Industrial furnace and parts thereof
(39) Button cells
(40) Rechargeable cells or batteries
(41) Dischargeable tubes
(42) Antennae
(43) Speakers
(44) Microswitches
(45) Power supplies
(46) Quartz crystals
(47) Sensors and transducers
(48) Solar cells
(49) Motors, all types
(50) Relays
(51) Resistors
(52) Capacitors
(53) Printed circuit boards
(54) Printed circuit board connectors and parts thereof
(55) Charge-couple devices
(56) Displays – electroluminescent plasma, liquid crystal
(57) Ceramic substrates or packages
(58) High density memory storage media
(59) Gold and aluminium bonding wires
(60) Headers and cans
(61) Lead-frames
(62) Magnets or ferrite cores
(63) Semiconductor, wafer fabrication integrated circuit design
(64) Semiconductor, all types
(65) Semiconductor testings, all types
(66) Electronic modules
(67) Magnetic heads
(68) Magnetic webs and pancakes
(69) Static convertors
(70) Compressors for refrigerators
(71) Wire harnesses
(72) Timer switches
(73) Thermostat
(74) Power tools
(75) Electric door bell
(76) Protective switchgear and parts thereof
(77) Electric cookers
(78) Electric rice cookers
(79) Video cassette tapes and cassette casings
(80) Quartz blanks
(81) Silicon wafers
(82) Computer diskettes
(83) Electric fans
(84) Air conditioners, components, parts and accessories
(85) Transistor radio
(86) Compressors for air conditioners
(87) Wireless coded door bell
(88) Solar powered outdoor lights
(89) Digital encoder
(90) Digital decoder
(91) Audio casette tapes
(92) Jigs and fixtures
(93) Compact disc players and parts thereof
(94) Silicon elastomer switches (key pads) for electrical and electronic instruments/appliances
(95) Steam iron
(96) Flat type PVC elevator cables
(97) Fire resistant cables

Manufacture of Professional, Medical, Scientific, Measuring Equipment and Components and Parts Thereof

(1) Medical, surgical, dental, veterinary instruments and equipment and parts thereof, all types
(2) Scientific gauges and measuring apparatus, all types
(3) Surveying, hydrographic, navigational, meteorological, hydrological, geophysical instruments and parts thereof, all types
(4) Testing equipment and parts thereof, all types
(5) Meters – gas, liquid or electric measuring

Manufacture of Photographic, Cinematographic, Video and Optical Goods and Components

(1) Cameras and accessories, all types
(2) Projectors, all types
(3) Sound recorders and reproducers
(4) Lenses
(5) Films-unexposed
(6) Binoculars
(7) Telescopes, magnifying glasses and microscopes
(8) Cinematographic and video equipment
(9) Any other photography apparatus and accessories
(10) Semiconductor photolithographic equipment

Film Industry

(1) Film and video production
(2) Expansion/modernisation of film and video production

(3) Post production for film and video
(4) Expansion/Modernisation of post-production for film and video

Manufacture of Clocks, Watches and Components

(1) Clocks and watches, all types
(2) Parts for clocks and watches

Manufacture of Musical Instruments and Components

(1) Musical instruments and parts, all types

Manufacture of Kitchenware

(1) Kitchenware, all types
(2) Cutlery
(3) Tableware

Manufacture of Furniture

(1) Furniture, all types

Manufacture of Souvenirs and Handicrafts

(1) Souvenirs, handicrafts and giftware, all types

Manufacture of Educational Objects

(1) Educational objects, all types

Manufacture of Toys

(1) Toys, all types

Manufacture of Footwear

Footwear, all types

Manufacture of Sports Goods and Equipment

Sports goods and equipment, all types

Manufacture of Jewellery and Related Products

(1) Jewellery
(2) Processed gems

Hotel Business and Tourist Industry

(1) Establishment of hotel
(2) Expansion/Modernisation/Renovation of hotel
(3) Establishment of tourist project
(4) Expansion/Modernisation of tourist project

Miscellaneous

(1) Photo album
(2) Stationery
(3) Wax products
(4) Barbecue charcoal set
(5) Arms and ammunition and parts thereof
(6) Name plate and sign plate, all types
(7) Art and design apparatus, all types

Manufacture of Fire Fighting and Detection Systems and Parts Thereof

(1) Fire fighting and detection systems and parts thereof

Manufacture of Plastic Products

(1) Expanded polystyrene sheets
(2) Plastic products for building and construction
(3) Plastic products for electric, electronics and telecommunication industry
(4) Plastic products for medical and veterinary use
(5) Plastic products for engineering use
(6) Magnetic and non-magnetic cards
(7) Plastic pellets
(8) PU foam mattresses and cushions
(9) Plastic tarpaulin
(10) Plastic packing products

Source: Malaysian Industrial Development Authority (MIDA)

APPENDIX D

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