
**MID-TERM REVIEW
OF THE
EIGHTH MALAYSIA PLAN
2001–2005**

RUKUNEGARA

DECLARATION

OUR NATION, MALAYSIA, being dedicated

to achieving a greater unity of all her peoples;

to maintaining a democratic way of life;

to creating a just society in which the wealth of the nation shall be equitably shared;

to ensuring a liberal approach to her rich and diverse cultural traditions;

to building a progressive society which shall be oriented to modern science and technology;

WE, her peoples, pledge our united efforts to attain these ends guided by these principles:

Belief in God

Loyalty to King and Country

Upholding the Constitution

Rule of Law

Good Behaviour and Morality



**PRIME MINISTER
MALAYSIA**

Foreword

The Mid-Term Review of the Eighth Malaysia Plan marks another milestone in our journey towards national development. The Eighth Malaysia Plan, launched in 2001 as the first phase of the Third Outline Perspective Plan (2001-2010), translates into action the National Vision Policy that aims at enhancing competitiveness and strengthening economic resilience.

The last three years were extremely challenging in view of the adverse global situation and its attendant effects on economic growth. Although the Malaysian economy grew at a lower rate than was targeted, it achieved creditable growth given its openness and high exposure to electronics exports and particularly in comparison with the performance of other economies in the region. More importantly, growth occurred in an environment of stable prices, low unemployment rate and strong surplus in the current account of the balance of payments. The economic base has become broader with increased contribution from the promoted services sectors and the shift of the manufacturing sector into high technology and knowledge-intensive activities. Although the fiscal deficit increased due to counter-cyclical measures introduced by the Government, it remained within prudent limits. We also made good progress towards creating a more equitable society in terms of poverty eradication, income distribution, and Bumiputera employment in strategic and modern economic sectors.

The experience of the past three years underscores the importance of being constantly prepared to face challenges that come our way. The rapid globalisation of the world economy together with the emergence of other players on the global scene makes it imperative to strengthen the nation by increasing its resilience, competitiveness and innovative capability. Greater efforts will have to be made to reduce the cost of doing business, raise productivity and increase the knowledge content of products, services and internal processes. We must make the acquisition of knowledge a life-long pursuit and develop our indigenous technological and innovative capabilities. This is necessary for the Malaysian economy to deal better with the changing global economic landscape and accelerate its transformation to a high technology and knowledge-based economy.

While pursuing higher economic growth, we must also ensure that the ethical and moral basis of our actions is not eroded. Any diminution of our value system will negate the economic gains and render our success hollow. We need to reinforce and practise values that demonstrate our abiding concern for fellow members of society, particularly those who are disadvantaged and in the greatest need. Civic consciousness must entail consideration and protection of the environment.

National development cannot be the sole responsibility of the Government, more so in a society of free enterprise and parliamentary democracy like ours. The Government can only set the broad parameters of national policy and make available the necessary funds for the public sector to discharge its responsibilities and implement its programmes. The private sector as a key component of society has a crucial role in providing the economic dynamism so that growth targets are met. The private sector should take advantage of the incentives provided by the Government to expand existing investments and pioneer into niche areas and new sources of growth. In the face of increased competition, the private sector has to relentlessly enhance its competitiveness, become more resourceful and innovative, and benchmark itself against the best performers to benefit from the dynamics in the global market place.

Individual Malaysians have also a major role to play. We must all realise that the country's rapid development and the billions of ringgit in investments by the Government and private sector have raised the quality of and accessibility to infrastructure and amenities that we now enjoy. Public property should be properly used and well maintained. Malaysians must accept that a higher quality of public services must come with a price. Paying for such a service would not

in any way burden anyone as income has risen faster than the rate of inflation, which is low. In fact, by paying for the services they utilise, Malaysians will be able to enjoy an even better quality of service without straining public resources for their installation and operation.

The last two decades of development, witnessed the tremendous rate of transformation. I am convinced that our success is not due to any fortuitous act but the result of the collective efforts of all those entrusted with the responsibility of planning and managing the nation's economy. To them and the people of Malaysia who have demonstrated the highest sense of responsibility even during very trying times, I would like to express my gratitude. I am in no doubt that if the same commitment continues to be displayed by all, we will make the grade whatever the challenges may be.

I want to record my appreciation as well as that of the Government to the National Development Planning Committee chaired by the Chief Secretary to the Government, the Economic Planning Unit and others who have contributed to the planning process for having worked diligently to produce the Mid-Term Review.



DR. MAHATHIR BIN MOHAMAD
Prime Minister, Malaysia

Putrajaya
30 October 2003

Chapter 8

Infrastructure and Utilities

8

INFRASTRUCTURE AND UTILITIES

I. INTRODUCTION

8.01 During the review period, infrastructure and utility projects continued to contribute to economic growth through linkages and spillover benefits. Additional new projects, which supported tourism and trade, were also implemented. In addition, measures were taken to improve the efficiency of the delivery system of transportation and utility services. These efforts increased the capacity and improved the efficiency of infrastructure and utilities, which facilitated business activities and enhanced quality of life.

8.02 For the remaining Plan period, focus will be given towards improving service delivery and increasing capacity to further enhance the competitiveness and resilience of the economy. Measures will be taken to integrate transport services to ensure the seamless operation of a multimodal system. Priority will be given towards enhancing quality and reliability in the supply of water and electricity to meet the increasing demands from both domestic consumers and industries. New environmentally sustainable technologies will be studied and adopted to improve quality of life.

II. PROGRESS, 2001-2003

8.03 During the review period, the value added of infrastructure and utilities grew by 4.6 per cent per annum, lower than the Plan target of 8.6 per cent. However, the implementation of infrastructure and utility projects contributed to the growth of the economy and constituted 12.6 per cent of Gross Domestic Product in 2003. The expansion in capacity of roads, rail, ports and airports was achieved with active participation of the private sector. The design and build method was used to shorten processing time while financing of projects was

facilitated by development financial institutions through privatisation and the deferred payment scheme. To enhance the reliability of supply of utilities, distribution networks were upgraded and expanded.

Roads

8.04 During the review period, the implementation of road and bridge projects was accelerated with expenditure of RM10.3 billion, representing 73.6 per cent of the total allocation for this subsector under the Plan period. In addition, the private sector invested about RM1.3 billion under the privatisation programme to construct toll highways. Consequently, the national road network increased by 2,140 km to 75,160 km.

8.05 The completion of several roads and bridges such as the Titi Karangan - Kupang section of the Second East-West Link Road and the Pos Blau - Kampung Kuala Betis section of the Simpang Pulai - Gua Musang - Kuala Berang Road enhanced the development of new areas. Accessibility to the new airports at Tawau and Bintulu was improved with the upgrading of the access roads. In addition, two privatised road projects were completed, namely, the New North Klang Straits Bypass and the Western Kuala Lumpur Traffic Dispersal Scheme (SPRINT Highway) Package A & B. The New North Klang Straits Bypass provided an alternative access road to the North Port, Port Klang, while the completion of the SPRINT Highway Package A & B provided a better linkage between Damansara and the western part of Kuala Lumpur. The list of major road projects implemented during the review period is as shown in *Table 8-1*.

8.06 In line with efforts to improve safety and driving comfort, several road-upgrading projects were completed during the review period. Among the major roads upgraded were the Brinchang - Lojing Road, the Beaufort - Sindumin Road and the Betong - Kayu Malam Road. The upgrading of Brinchang - Lojing Road improved driving conditions within the Cameron Highlands area. The upgrading of Beaufort - Sindumin Road in Sabah and the Betong - Kayu Malam Road in Sarawak provided better road connections between the major towns in the two states. Under the road safety programme, 85 kilometres of motorcycle lanes were constructed to reduce the accident rate among this class of vehicles. Safety campaigns and nation-wide enforcement of traffic rules during long holidays also contributed to the reduction in the number of accidents. The fatality rate declined from 5.7 deaths per 10,000 registered vehicles in 2000 to 4.9 deaths in 2002, as shown in *Table 8-2*.

TABLE 8-1

**MAJOR ROAD PROJECTS IMPLEMENTED,
2001-2005**

<i>Project</i>	<i>Length (km)</i>	<i>Completion (Year)</i>
Completed Projects		
i. Government-Funded Projects		
Upgrading of Brinchang - Lojing Road	22	2001
Upgrading of Beaufort - Sindumin Road	65	2001
Upgrading of Beluran - Spur Road	31	2001
Upgrading of Kuala Kangsar - Grik Road (Phase 3)	21	2002
Access Road to Proton City Industrial Park (Phase 1 & 2)	9	2002
Middle Ring Road II (Phase II)	6	2002
Rehabilitation of Sandakan - Tawau Road	29	2002
Upgrading of Keningau - Nabawan Road (Phase I)	45	2002
Upgrading of Merotai - Kalabakan Road (Phase I)	20	2002
Sayong Bridge, Kuala Kangsar	0.4	2002
Tanjung Manis - Rejang - Belawai Road	18	2003
ii. Privatised Projects		
New North Klang Straits Bypass	18	2001
Western Kuala Lumpur Traffic Dispersal Scheme (SPRINT) (Package A & B)	20	2001
Under Construction		
i. Government-Funded Projects		
Upgrading of Pitas - Kanibongan Road	28	2004
Kunak - Semporna Road	42	2004
Triso - Melebu - Pusa Road	51	2004
East Coast Expressway	169	2004
Upgrading of Merotai - Kalabakan Road (Phase 2)	59	2004
Upgrading of Muar - Melaka - Alor Gajah - Simpang Ampat Road	70	2004
Upgrading of Batu Pahat - Ayer Hitam - Kluang Road	47	2004
Upgrading of Kapar - Sabak Bernam and Klang - Banting Road	118	2004
Sungai Rejang Bridge	7	2004
Upgrading of Kuching - Serian Road	34	2005
Kanibongan - Nangoh Road	150	2005
Pusa - Sesang Coastal Road	46	2005
Tanjung Kidurong - Bakam Coastal Road	178	2005
Upgrading of Gemas Baru - Ayer Hitam Road	120	2005
Trans Eastern Kedah Hinterland Highway	116	2005
Sepulut - Kalabakan Road	145	2005
Sipitang - Tenom Road	54	2005
Keningau - Kimanis Road	59	2005
ii. Privatised Projects		
New Pantai Highway	20	2004
Kajang Ring Road	36	2004
Butterworth Outer Ring Road	14	2004
Shah Alam - Kuang Highway (Guthrie Corridor Expressway)	25	2004
Western Kuala Lumpur Traffic Dispersal Scheme (SPRINT) Package C	6	2004
Kajang - Seremban Highway	46	2005

TABLE 8-2

ROAD ACCIDENTS AND FATALITY RATE, 2000-2002

	<i>Number of accidents</i>					
	<i>2000</i>		<i>2001</i>		<i>2002</i>	
	<i>Accidents</i>	<i>Fatality</i>	<i>Accidents</i>	<i>Fatality</i>	<i>Accidents</i>	<i>Fatality</i>
Type of Vehicle						
Motorcycle	79,816	3,205	85,761	3,369	86,834	3,426
Car	268,881	1,023	300,910	1,044	320,719	1,015
Bus	9,660	49	9,275	68	9,258	46
Lorry	35,076	183	36,448	175	37,803	198
Others	47,953	1,575	50,957	1,193	53,381	1,200
Total	441,386	6,035	483,351	5,849	507,995	5,885
Type of Road						
Expressways		408		376		330
Federal Roads		2,089		1,957		1,716
State Roads		1,365		1,273		1,038
Municipal Roads		718		926		673
Other		1,455		1,317		2,128
Total		6,035		5,849		5,885
Accidents per 10,000 registered vehicles	237.40		234.62		232.68	
Death per 10,000 registered vehicles		5.72		5.17		4.89

8.07 Emphasis was also given to improve the accessibility of rural areas, particularly in Sabah and Sarawak. During the review period, RM5.9 billion was spent on the construction of roads, with a minimum of JKR-R3 standard. In addition, RM1.5 billion was spent to construct and maintain village roads, which added 14,488 km of roads that provided access to about 2.6 million population.

8.08 Road development indicators were revised to take into account lanes added to existing roads through upgrading projects. The revised road development indicators are as shown in *Table 8-3*. The Road Service Level increased from 2.98 km per thousand population in 2000 to 3.17 in 2003 reflecting improved road connectivity.

TABLE 8-3

ROAD DEVELOPMENT INDICATORS, 2000-2005

<i>Indicator</i>	<i>2000</i>	<i>2003</i>	<i>2005</i>
Road Density ¹	0.20	0.22	0.23
Road Development Index ²	0.75	0.85	0.86
Road Service Level ³	2.98	3.17	3.18

*Notes:*¹ Measures road lane length over the total area.² Measures the level of road development taking into account both area and population size of the country.³ Measures total road lane length per 1,000 population.

8.09 The rapid development of road works in the country provided the opportunity for local companies to gain vast experience, which enabled them to venture into international markets. The Government, through the Construction Industry Development Board Malaysia, facilitated the participation of local contractors in 26 road projects overseas. In 2002, the Professional Services Development Corporation Sdn. Bhd. (PSDC), a Government owned company was established. The PSDC provided a common platform for local professional service providers to improve their capacity and capability to meet the challenges of globalisation.

Urban Transport

8.10 Traffic in major urban centres, particularly the Kuala Lumpur conurbation, continued to grow rapidly during the review period. Efforts were intensified to create a more integrated, efficient and multimodal urban transport system. Efficient traffic management systems were instituted to improve traffic flows. Various measures were also taken to promote the use of public transport.

8.11 The urban rail system connecting Kuala Lumpur Sentral (KL Sentral) to KL International Airport (KLIA) began commercial operations in 2002. The KLIA Express provided a fast, reliable and comfortable mode of transport to KLIA. The KLIA Transit enabled access to KLIA from KL Sentral to Bandar Tasik Selatan, Putrajaya and Salak Tinggi. The 8.6 kilometre intra-city light rail network, the KL Monorail, commenced operations in August 2003. With the operation of KLIA Express, KLIA Transit and KL Monorail, the role of KL

Sentral as a major public transport hub integrating intra- and inter-city rail systems was achieved. During the review period, daily ridership on the light rail mass transit services in Kuala Lumpur, namely, Light Rail Transit System I (LRT STAR) and Light Rail Transit System II (LRT PUTRA) as well as KLIA Express and KLIA Transit increased, as shown in *Table 8-4*.

TABLE 8-4				
PASSENGER RIDERSHIP PER DAY ON LRT STAR, LRT PUTRA, KLIA EXPRESS AND KLIA TRANSIT, 2000-2003				
	2000	2001	2002	2003
LRT STAR	77,803	88,508	91,300	94,480
LRT PUTRA	121,950	143,777	147,802	150,494
KLIA Express and KLIA Transit	–	–	5,135	6,014
KL Monorail	–	–	–	27,000

8.12 Works on a monorail system was undertaken to provide an efficient mass transit system in Putrajaya. These works included soil investigations, alignment surveys and casting of guide beams. The Study On The Implementation Of An Integrated Transportation System In Putrajaya And Cyberjaya was conducted to formulate an integrated, multimodal system aimed at achieving a modal split of 70:30 between public transport and private vehicle usage in the core areas of Putrajaya and Cyberjaya.

8.13 Efforts were undertaken to improve traffic management and reduce traffic congestion, which included the application of an Integrated Transport Information System (ITIS) in Kuala Lumpur and the Klang Valley. Closed circuit television cameras were installed at strategic locations to monitor traffic flows, which enabled remedial actions to be taken quickly to address traffic obstructions such as accidents, stalled vehicles and road works. This information was also made available to the public through the ITIS website, which was launched in 2003.

8.14 Emphasis continued to be given to the promotion of public transport as an efficient, convenient and reliable mode of transport. Measures were also taken to enhance the use of multimodal public transport to facilitate intra- and inter-city transport services. Works on integrated transport terminals at Bandar Tasik Selatan and Gombak in the Klang Valley commenced during the review period.

Rail Transport

8.15 During the review period, the focus of railway development was to improve quality, efficiency and safety to enhance the competitiveness of passenger and freight services. Among the measures taken were double tracking, rehabilitation and strengthening of the main line, refurbishment of coaches and the upgrading of bridges, halts and stations. To upgrade the freight services, efforts were geared towards improving fleet operations, control systems as well as maintenance and overhaul programmes.

8.16 For passenger services, *Keretapi Tanah Melayu Berhad* (KTMB) operated 24 inter-city services along the west coast, 12 services on the east coast and two services transversing from west to east of the Peninsular. Air-conditioned buffet and first class coaches were added to increase the comfort and service levels. Commuter traffic between Rawang - Kuala Lumpur - Seremban and Sentul - Port Klang increased from 19.3 million passengers in 2000 to 25 million in 2003. Inter-city passenger traffic decreased from 1.23 billion passenger-kilometres in 2000 to 1.20 billion in 2003 due to the temporary reduction in services caused by double tracking works from Rawang to Ipoh. Similarly, total freight traffic, mainly container cargo and cement recorded a decrease from 5.5 million tonnes in 2000 to 5.0 million in 2003.

8.17 Infrastructural works including double tracking, strengthening and electrification of tracks as well as modernisation of signalling and communications systems were implemented to further improve the railway system. The construction of the 180 kilometre Rawang - Ipoh electrified double tracking project attained 72 per cent completion during the review period. Other major infrastructure projects included the rehabilitation of 69 bridges between Gemas, Negeri Sembilan to Kuala Lipis, Pahang and seven bridges between Merapoh, Pahang to Wakaf Baru, Kelantan.

Ports

8.18 During the review period, focus was given to expanding capacity, upgrading and increasing facilities of ports as well as improving other supporting maritime-related services. Emphasis was also directed towards enhancing efficiency and productivity of port operations and management as well as strengthening related ancillary services to increase the usage of local ports, especially Port Klang and Port of Tanjung Pelepas (PTP). In the shipping subsector, efforts were continued to increase the volume of cargo transported by locally registered ships.

8.19 A number of port-related projects were completed, including additional berths of 720 metre length at PTP, new basin at Kuantan Port, and additional container berths and yards at West Port, Port Klang. In Sarawak, the construction of a third Liquefied Natural Gas Jetty (LNG3) at Bintulu Port was completed in the middle of 2002 and began its operations in July 2003. In Sabah, several port-related projects were implemented including the construction of a container terminal at Sepangar Bay, the upgrading of port handling facilities and the construction of a barter trade centre and a ferry terminal at Tawau. In addition, the ferry terminal building and jetty repair works at Menumbok were completed in 2003.

8.20 Total port capacity increased from 324.9 million tonnes in 2000 to 443.4 million tonnes in 2003, as shown in *Table 8-5*. The volume of cargo handled increased by 13.2 per cent per annum, from 223.9 million tonnes to 338.8 million tonnes during the same period. This was higher than the targeted growth of 11.6 per cent per annum for the Plan period. Containerised cargo increased from 4.9 million twenty-foot equivalent units (TEUs) to 10.6 million TEUs, registering the fastest growth rate at 19.8 per cent per annum during the review period. Despite the global economic slowdown, the number of ship calls at ports increased from 81,313 in 2000 to 92,900 in 2003.

8.21 Efforts were also intensified to promote Port Klang and PTP as a hub and cargo transshipment centre, respectively. These included the establishment of business partnerships such as West Port, Port Klang with Hutchinson International Terminal and PTP with Maersk Sealand as well as the provision of rebates and other incentives. The Container Security Initiative, which required pre-screening of US-bound cargo, was implemented at Port Klang and PTP to facilitate clearance of goods to the United States. Containerised cargo handled at Port Klang increased from 3.2 million TEUs in 2000 to 5.1 million TEUs in 2003, registering a growth of 14.5 per cent per annum. Ship turnaround time at port in Westport, Port Klang reduced from 16.4 hours in 2000 to 13.6 hours in 2003. In the same period, the volume of cargo at PTP increased eight fold from 413,000 TEUs to 3.5 million TEUs. Performance at PTP also improved with average container handling rates per hour increasing from 84.4 to 90.2 containers.

8.22 Other measures to enhance the efficiency of port management and supporting services included the introduction of compulsory training on port operations and customs procedures for forwarding agents, increased automation and computerisation as well as improved interfacing capabilities of electronic data interchange.

TABLE 8-5

**PORT CAPACITY, NUMBER OF BERTHS, CRANES, SHIP CALLS AND
VOLUME OF CARGO HANDLED AT PORTS¹, 2000-2005**

	2000	2003	2005
Port Capacity (million tonnes)	324.9	443.4	481.3
Number of Berths	221	230	237
Number of Cranes ²	131	210	251
Number of Ship Calls	81,313	92,900	100,950
Volume of Cargo Handled (million tonnes)	223.9	338.8	414.1
General	23.3	27.6	30.5
Liquid Bulk	87.5	126.3	158.5
Dry Bulk	28.6	33.9	37.1
Container	84.5	151.0	188.0
Containerised cargo (million TEUs)	4.9	10.6	14.2

Notes:

¹ Includes Port Klang, Penang, Pasir Gudang, Tanjung Pelepas, Kuantan, Kemaman, Bintulu, Kota Kinabalu, Lahad Datu, Sandakan, Tawau, Kuching, Miri, Rajang, Lumut, Teluk Ewa, Kuala Perlis, Kuala Kedah, Tg. Bruas, Port Dickson, Kerteh, Sungai Udang and Labuan.

² Includes gantry and multipurpose cranes.

The commencement of a sea-air cargo programme using simplified documentation for cargo utilising both sea and air modes of transport facilitated customs clearance.

8.23 Jetty facilities on islands, particularly Pulau Ketam, Pulau Langkawi, Pulau Pangkor and Pulau Tioman, were upgraded to improve cargo and passenger services. In addition, to encourage the development of yachting, recreational and other tourism activities, marina facilities at Kuala Kedah and Batu Uban, Pulau Pinang began operations in 2003. Other suitable and strategic sites for marinas were also identified for development. The Langkawi International Yacht Registry Act was enacted in October 2003 to establish Langkawi as a one-stop centre for registration of yachts to further promote yachting and related activities.

8.24 Measures continued to be taken to promote the growth of the local shipping industry. The Cabotage Policy was reviewed in January 2001 to further encourage the use of local ships to ferry passengers and cargo between two or more destinations in the country. Rationalisation and greater investment through leasing, joint ventures, chartering business and other strategic alliances further strengthened the Malaysian shipping industry. The number of ships registered in Malaysia increased at an average of 4.5 per cent per annum from 3,126 ships or 6.8 million gross registered tonnage (GRT) in 2000 to 3,540 ships or 7.2 million GRT in

2003. Major local shipping lines including Malaysia International Shipping Corporation (MISC) and Halim Mazmin Berhad increased their capacity during the review period. MISC's fleet increased from 120 vessels in 2000 to 151 in 2003 while that of Halim Mazmin Berhad increased from six vessels to nine. Nepline Berhad, however, reduced its fleet from nine vessels to six in 2003 due to new regulation on double-hull requirement.

8.25 During the review period, about RM500 million was spent on dredging and reclamation works. In 2002, two dredging companies were given long-term contracts for fifteen years to carry out all dredging and reclamation works at ports and river mouths. These companies were required to increase their capacities by acquiring additional equipment.

8.26 Efforts were continued to improve navigational safety and to enhance enforcement and rescue operation capabilities of the Marine Department. Additional enforcement and rescue vessels were purchased to contain oil spills and pollution as well as to conduct rescue operations. Marine Police also purchased additional patrol boats to assist in surveillance to enhance safety. Ship incidents such as collision, running aground and fire increased from 16 in 2000 to 28 in 2002, mainly due to the increasing number of vessels plying in Malaysian waters. The number of oil spills decreased from 18 to 11 in the same period. Other measures included the implementation of the Vessel Traffic System and Traffic Separation Scheme in the Straits of Malacca. These systems monitored vessel movements and provided information on polluting ships and other incidents, thus increasing maritime safety and reducing threats to the marine environment.

Airports

8.27 During the review period, airport capacity expanded with the commercial operation of two new airports and completion of upgrading works on existing airports. Flight safety was enhanced with the installation of navigational aids. Rationalisation as well as productivity and efficiency improvements of air services were undertaken.

8.28 Air travel was affected by the occurrence of global crisis, particularly the advent of Severe Acute Respiratory Syndrome at the beginning of 2003. Passenger traffic contracted by 8.2 per cent in the first half of 2003 but recovered to record 32.9 million passengers in 2003. Air cargo traffic increased to about 914,000 tonnes in 2003 from 773,892 tonnes in 2000.

8.29 Capacity and accessibility were enhanced with the completion of several airport projects in Sabah and Sarawak. In Sabah, the new Tawau Airport, which can handle wide-body, medium haul aircraft, commenced operations in December 2001. The new Bintulu Airport in Sarawak with the capacity to handle wide-body, medium haul aircraft, began operations in March 2003, replacing the old airport which could handle 50-seater turbo prop aircraft. Upgrading works on the Miri Airport, Sarawak to handle wide-body, medium haul aircraft were completed in June 2003. It also included a new 16,110 square metre passenger terminal building with a modern baggage handling system and three aerobridges to enhance passenger traffic flow and comfort.

8.30 Accessibility to the rural areas of Sarawak was improved with the implementation of several projects. The new Limbang Airport enabled the use of 50-seater turbo prop aircraft, more than doubling the availability of seats on the Miri - Limbang route, from the existing 19-seater turbo prop aircraft. The new Long Akah airstrip provided air access to the surrounding villages, which enabled the locals to reach Miri within an hour. Facilities at the existing airstrips of Bakelalan, Bario, Long Lellang, Long Seridan and Mulu were improved.

8.31 Focus was also given to improving air traffic management and flight safety. A new radar was installed in Miri to improve surveillance of the air space of central Sarawak. This radar complemented the existing radars in Kuching, Sarawak and Kota Kinabalu, Sabah.

8.32 Malaysia Airlines (MAS), the national carrier, was restructured in 2001 under which its aircraft fleet was sold to and leased back from *Penerbangan Malaysia Berhad*. MAS also undertook various turnaround programmes including improvements in cost control as well as increasing productivity and efficiency. To rationalise its network, services to several cities were terminated. New services were introduced to Mumbai, Bangalore, Hyderabad and Colombo. Several cities in Scandinavia were served under the MAS-KLM code-share arrangements. Frequencies to Guangzhou, Beijing, Shanghai, Ho Chi Minh City, Phnom Penh, Tokyo, Bangkok, Phuket and Denpasar were increased. As at March 2003, the MAS network spanned 109 destinations of which 77 were international. MAS operated flights to 32 domestic and 61 international destinations while code-share partners served 16 destinations.

8.33 Another scheduled airline, Air Asia, under a new management, introduced no-frills low-fare domestic flights in December 2001. Operating a fleet of seven

B737-300 aircraft, Air Asia provided point to point services to 13 destinations and carried more than one million passengers within the first year of service. The low fares, direct services and convenience of on-line booking and payment contributed to the high load factor of the airline.

Energy

8.34 In line with the growth of economy, the peak demand for *electricity* registered a steady growth during the review period. Peak demand grew at a rate of 5.8 per cent per annum reaching 12,637 megawatts (MW) in 2003, as shown in *Table 8-6*. To meet the growth in peak demand, the *electricity generation capacity* was increased from 14,291 MW in 2000 to 18,562 MW in 2003. The bulk of the capacity expansion was in Peninsular Malaysia, from 12,645 MW in 2000 to 17,015 MW in 2003.

TABLE 8-6				
INSTALLED CAPACITY, PEAK DEMAND AND RESERVE MARGIN, 2000 - 2005				
	<i>Generation By System¹</i>	<i>Accumulated Installed Capacity (MW)</i>	<i>Peak Demand² (MW)</i>	<i>Reserve Margin³ (%)</i>
2000	TNB	12,645	9,712	30.2
	SESB	785	391	100.8
	SESCo	861	554	55.4
	Total	14,291	10,657	34.1
2003	TNB	17,015	11,462	48.4
	SESB	678	472	43.6
	SESCo	869	703	23.6
	Total	18,562	12,637	46.9
2005	TNB	18,465	13,172	40.2
	SESB	733	543	35.0
	SESCo	1,069	816	31.0
	Total	20,267	14,531	39.5
Notes:				
¹ Refers to utilities and the respective IPPs.				
² Refers to the maximum power demand registered by the system in a stated period of time.				
³ Equals to the accumulated installed capacity minus peak demand divided by peak demand multiplied by 100.				

8.35 Two new gas-based Independent Power Producers (IPPs) plants at Kuala Sanglang, Perlis and Prai, Penang with a combined installed capacity of 1,000 MW were commissioned. The conversions of IPPs plants at Lumut, Perak (640 MW) and Telok Gong, Melaka (720 MW) from open cycle to combined cycle were also completed. The utilisation of coal in power generation was further increased with the commissioning of the 1,000 MW *Tenaga Nasional Berhad* (TNB) plant in Kapar and two units of 700 MW plant in Manjung. These plants utilised clean-coal technology to meet environmental standards. Several originally planned plant-up had been deferred due to the lower than expected electricity demand in the Peninsular. Meanwhile, the implementation of the Bakun Hydroelectric Project in Sarawak was continued. The construction of the coffer dam was completed in August 2001 and works on the main dam started in October 2002.

8.36 In line with the Fuel Diversification Policy to reduce dependency on a single fuel, emphasis was given to increase the use of coal as a source of fuel. During the review period, usage of coal increased from 8.8 per cent in 2000 to 16.5 per cent in 2003, as shown in *Table 8-7*. Although natural gas remained a major contributor in the *fuel mix*, its share was reduced from 77.0 per cent in 2000 to 73.2 per cent in 2003.

TABLE 8-7							
FUEL MIX IN ELECTRICITY GENERATION, 2000 - 2005							
(%)							
		<i>Oil</i>	<i>Coal</i>	<i>Gas</i>	<i>Hydro</i>	<i>Others</i>	<i>Total (GWh)</i>
Malaysia	2000	4.2	8.8	77.0	10.0	0.0	69,280
	2003	2.6	16.5	73.2	7.0	0.7	81,488
	2005	2.4	26.8	64.3	5.9	0.6	96,087
TNB	2000	2.3	8.7	79.6	9.4	0.0	63,634
	2003	0.9	17.2	74.8	6.3	0.8	74,539
	2005	0.9	28.2	64.9	5.4	0.6	87,800
SESB	2000	47.3	—	31.4	21.3	—	2,299
	2003	37.6	—	44.6	17.8	—	2,701
	2005	33.0	—	52.4	14.6	—	3,289
SESCo	2000	11.2	15.1	59.4	14.3	—	3,347
	2003	9.4	15.4	63.6	11.6	—	4,248
	2005	8.0	20.6	61.6	9.8	—	4,998

8.37 The electricity *transmission system* was further upgraded with the completion of several major transmission projects. In Peninsular Malaysia, the transmission line from Manjung power station to Ayer Tawar, Perak was completed in August 2001. In Sabah, the 275 kilovolt (kV) transmission lines connecting Kota Kinabalu and Kudat as well as the East Coast Grid project was completed at the end of 2003 while the construction of the East - West Interconnection Grid was started. To facilitate the transmission of electricity between Malaysia and Thailand, the existing interconnection was upgraded to a 300 MW High Voltage Direct Current line.

8.38 The *distribution network* was expanded to meet the increased demand from the consumers and to enhance quality of the system. The bulk of the expansion was in Peninsular Malaysia, which increased from 182,000 circuit-kilometres (cct-km) in 2000 to 200,000 cct-km in 2003. In addition, TNB's distribution network was further strengthened with the completion of 71 main intake substations and 62 main distribution stations. By the end of the review period, the distribution networks totaled 5,500 cct-km in Sabah and 8,800 cct-km in Sarawak.

8.39 The *productivity and performance* of the electricity supply services was improved, as shown in *Table 8-8*. During the review period, the three utilities, namely TNB, Sabah Electricity Sdn. Bhd. (SESB) and Sarawak Electricity Supply Corporation (SESCo) recorded improved performance in terms of units sold per employee and a continuous reduction in the number of interruption incidences. The System Average Interruption Duration Index also improved with the efforts of the utilities in enhancing work practices, utilisation of information and communications technology as well as ensuring better coordination of system operation and maintenance.

TABLE 8-8						
PERFORMANCE INDICATORS OF THE ELECTRICITY SUPPLY SYSTEMS ¹ , 2001 AND 2002						
Indicator	2001			2002		
	TNB	SESB	SESCo	TNB	SESB	SESCo
System Losses ² (%)	12.2	17.8	13.7	12.9	18.4	14.5
Unit Sold per Employee ³ (GWh)	2.49	0.99	1.51	2.55	1.04	1.60
Interruption Incidences (number)	47,296	10,426	6,004	31,333	9,457	4,167
SAIDI (minute/customer/year)	281.0	2,279.8	731.3	149.0	1,779.1	610.6
Notes:						
¹ Comprises utilities only.						
² Refers to losses in generation, transmission and distribution stages as well as own-use.						
³ Refers to the total unit of electricity sold divided by the total number of employees.						

8.40 The supply of electricity to rural areas was improved. A total of 805 *rural electrification* projects benefiting 45,747 housing units, mainly in Sabah and Sarawak was implemented. As a result, rural electricity coverage for Sabah increased from 67.1 per cent in 2000 to 69.8 per cent in 2003, while that of Sarawak from 66.9 per cent to 77.3 per cent, as shown in *Table 8-9*.

TABLE 8-9			
RURAL ELECTRIFICATION COVERAGE ¹ BY REGION, 2000-2005			
(%)			
<i>Region</i>	<i>2000²</i>	<i>2003</i>	<i>2005</i>
Peninsular Malaysia	97.5	98.0	98.6
Sabah	67.1	69.8	72.8
Sarawak	66.9	77.3	80.8
Malaysia	89.5	91.5	92.8
<i>Notes:</i>			
¹ Refers to rural housing units served as a percentage of total rural housing units.			
² Refers to Census 2000 data excluding housing units served with private individual generators.			

8.41 During the review period, efforts were taken to promote the utilisation of *renewable energy* (RE) as a fifth fuel. The Small Renewable Energy Programme (SREP) was launched in 2001 to encourage and intensify the utilisation of RE. By end of May 2003, a total of 48 projects was approved with a grid connected capacity of 267.3 MW. Of these, 28 were biomass projects, 16 mini-hydro and four landfill gas. Apart from the SREP projects, the non-grid connected facilities of palm oil mills produced for their own consumption about 1,065 gigawatt-hour (GWh) or 1.3 per cent of the total electricity generated in 2003. To encourage the utilisation of RE, the 2001 Budget provided fiscal incentives for companies which utilised biomass as a source of energy and these incentives were extended for another three years until December 2005.

8.42 In Peninsular Malaysia, the power sector continued to be the main consumer of natural gas, accounting for about 70 per cent of total *gas utilisation* in 2003. The consumption of gas by the power sector grew at 5.0 per cent per annum from 1,179 million standard cubic feet per day (mmscfd) in 2000 to 1,332 mmscfd in 2003 with the commissioning of new gas-based power plants. The consumption

of gas by the non-power sector also increased from 338 mmscfd in 2000 to 572 mmscfd in 2003. As part of the efforts to promote the usage of natural gas by the small and medium industrial, commercial and residential consumers, the Natural Gas Reticulation System network was expanded by 28 per cent per annum from 462 kilometres in 2000 to 912 kilometres in 2003. To support the growth of the petrochemical industry, Centralised Utility Facilities were developed to supply utilities such as electricity, steam, demineralised water, oxygen and nitrogen to the integrated petrochemical complexes in Kertih, Terengganu and Gebeng, Pahang.

8.43 During the review period, 23 *natural gas for vehicles* (NGV) outlets were built in Johor Bahru, the Klang Valley and Prai, bringing the total to 44 by the end of 2003. As part of the efforts to increase the utilisation of NGV, *Petroliam Nasional Berhad* also provided price concession on conversion kits for taxis. As a result, about 7,500 vehicles, mostly taxis, were converted to run on dual fuel.

8.44 In line with the commitment to moderate the trend of increasing energy consumption, efforts were undertaken to encourage *efficient utilisation of energy*, particularly in the industrial and commercial sectors. Under the Malaysian Industrial Energy Efficiency Improvement Programme (MIEEIP), a total of 43 energy audits was conducted in eight manufacturing subsectors, namely, wood, pulp and paper, iron and steel, cement, rubber, glass, ceramics and food. The findings indicated potential energy savings of 5.6 per cent in electricity and 26.7 per cent in fuel with the implementation of energy efficiency (EE) measures by the audited companies. The energy audits also facilitated the establishment of an on-line Energy-use Benchmarking System at the National Productivity Corporation. The system enabled companies to effectively implement EE measures and improve their productivity.

8.45 In the commercial sector, efforts were focused to promote EE in buildings. A new Code of Practice in EE and RE for Non-residential Buildings was formulated as part of the Malaysian Standard MS 1525:2001. The new office building of the Ministry of Energy, Communications and Multimedia in Putrajaya, was designed with energy saving features in the architecture as well as the mechanical and electrical systems to demonstrate the technical and economic feasibilities of the Code. The new office building was also targeted to achieve an annual energy consumption of 100 kilowatt-hour (kWh) per sq. metre.

8.46 An energy audit programme was also launched to develop the energy service industry. Energy service companies were appointed to conduct energy audits involving 12 government buildings to establish a benchmark database on energy consumption as well as EE measures for reference by architects and engineers in designing new and retrofitting buildings. These energy audits recorded a range of energy consumption from 77.9 to 246.8 kWh per sq. metre per year and indicated a potential energy savings of 20 to 30 per cent annually with the implementation of recommended EE measures. In 2003, one of the audited government buildings was selected for implementation to demonstrate the practicality of the recommended measures.

8.47 The implementation of the EE initiatives increased the awareness of energy savings, particularly in the industrial sector. However, the implementation of the EE measures by industries was limited due to lack of financing and expertise. To encourage adoption of EE measures, the 2001 Budget provided fiscal incentives, which were subsequently extended to December 2005. In addition, the 2003 Budget reduced the write-off period from three years to one year for the accelerated capital allowance on EE-related equipment.

Water Supply

8.48 The water supply subsector focused on the construction of new infrastructure as well as the upgrading and rehabilitation of existing systems with the main objectives of meeting the water needs of the domestic and industrial sectors and improving the efficiency of water supply distribution. During the review period, measures were taken to reduce water loss and wastage of water. Efforts were also taken to expand supply of potable water to rural areas.

8.49 The supply of water increased with the construction of water treatment plants (WTPs) and modernisation of water supply systems. The Teluk Bahang/Batu Feringhi Water Supply Project in Pulau Pinang as well as Kuala Jelai Phase II WTP and Sungai Terip Phase III WTP in Negeri Sembilan were completed during the review period. The completion of Rasa Stage 1 WTP in 2002 and Sungai Selangor Dam as well as Bukit Badong Stage 1 WTP in 2003, which formed part of the Sungai Selangor Phase III Project (SSP3), increased potential water storage capacity by 235 million m³ and water treatment capacity by 525 million litres per day (Mld) in Selangor. The completion of source work projects increased the total national production capacity from 11,917 Mld in 2000 to

13,603 Mld in 2003. This ensured that water supply could meet demand which grew from 9,655 Mld to 11,317 Mld in the same period, as shown in *Table 8-10*. In addition, the national water supply coverage increased to 93 per cent in 2003, as shown in *Table 8-11*.

8.50 Water demand management and conservation strategies continued to be adopted to improve the efficiency and reliability of water supply systems. Water supply operators, related government agencies and non-governmental organisations also promoted public awareness on water conservation. State water supply authorities reduced non-revenue water (NRW) through replacing old asbestos cement pipes and faulty water meters, improved the capacity for leak detection and repairs, and prevented illegal connections. The NRW level was reduced from 40.0 per cent in 2000 to 37.0 per cent in 2003, as shown in *Table 8-12*.

TABLE 8-10						
PRODUCTION CAPACITY AND QUANTITY OF WATER SUPPLIED, 2000-2005 (mld)						
State	2000		2003		2005	
	Production Capacity	Quantity of Water Supplied	Production Capacity	Quantity of Water Supplied	Production Capacity	Quantity of Water Supplied
Johor	1,285	1,158	1,929	1,334	2,380	1,482
Kedah	988	804	1,004	935	1,239	1,038
Kelantan	214	212	238	236	264	262
Melaka	386	324	386	360	476	400
Negeri Sembilan	528	490	528	520	652	605
Pahang	762	500	905	696	1,117	773
Perak	969	812	1,158	961	1,429	1,067
Perlis	91	84	91	94	113	104
Pulau Pinang	1,050	741	1,166	847	1,439	941
Sabah	718	706	718	783	887	870
Sarawak	918	602	935	700	1,154	778
Selangor ¹	3,437	2,858	3,962	3,425	4,487	3,527
Terengganu	511	334	523	388	645	431
Labuan	60	30	60	38	75	42
Malaysia	11,917	9,655	13,603	11,317	16,357	12,320

Note: ¹ Includes Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya.

TABLE 8-11

URBAN AND RURAL WATER SUPPLY COVERAGE, 2000-2005
(% of population)

State	2000			2003			2005		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Johor	100.0	98.0	99.0	100.0	98.5	99.3	100.0	99.0	99.5
Kedah	100.0	97.0	98.0	100.0	98.0	99.0	100.0	99.0	99.5
Kelantan	63.0	48.0	53.0	70.0	55.0	62.5	72.0	58.0	65.0
Melaka	100.0	99.0	99.0	100.0	99.0	99.5	100.0	99.5	99.8
Negeri Sembilan	100.0	99.0	99.0	100.0	99.0	99.5	100.0	92.0	99.8
Pahang	98.0	89.0	93.0	98.0	89.0	93.5	99.0	92.0	95.5
Perak	100.0	99.0	99.0	100.0	99.0	99.5	100.0	99.5	99.8
Perlis	100.0	97.0	98.0	100.0	98.0	99.0	100.0	99.0	99.5
Pulau Pinang	100.0	99.0	99.0	100.0	99.0	99.5	100.0	99.5	99.8
Sabah	89.0	60.0	74.0	89.0	60.0	74.5	90.0	64.0	77.0
Sarawak	100.0	92.0	96.0	100.0	92.0	96.0	100.0	92.0	96.0
Selangor ¹	100.0	98.0	99.0	100.0	99.0	99.5	100.0	99.5	99.8
Terengganu	84.0	78.0	81.0	86.0	80.0	83.0	90.0	83.0	86.5
Labuan	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Malaysia	97.0	85.0	92.0	97.0	86.0	93.0	97.5	87.0	94.0

Note: ¹ Includes Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya.

8.51 A pilot project was undertaken in Labuan to further reduce NRW through the application of Geographical Information System (GIS). The GIS mapped out the water supply system infrastructure such as the routes of the pipe networks and locations of valves, reservoirs and WTPs. The Supervisory Control And Data Acquisition and telemetry systems were also applied in leak detection and automatic valve closure consequent to pipe burst. NRW in Labuan was reduced from 32.0 per cent in 2000 to 30.0 per cent in 2003, as shown in *Table 8-12*.

8.52 Preliminary works for the Inter-State Raw Water Transfer Project From Pahang To Selangor (ISRWT) project were undertaken. The Detailed Environmental Impact Assessment for the ISRWT project was approved by the Department of Environment in 2001. A socio-economic survey on the settlers at Felda Lembah Kelau and *Rancangan Tanah Pemuda Kelau* was also undertaken in 2002. In addition, two studies were completed in 2003, namely, the Additional Survey Of Flora And Fauna In The Lakum Forest Reserve (Additional Survey) including a survey of riverine fishery at Sungai Kelau and Sungai Semantan, Pahang and

TABLE 8-12

NON-REVENUE WATER, 2000-2005

<i>State</i>	<i>2000</i>		<i>2003</i>		<i>2005</i>	
	<i>%</i>	<i>Mld</i>	<i>%</i>	<i>Mld</i>	<i>%</i>	<i>Mld</i>
Johor	32	371	32	427	23	341
Kedah	46	370	43	402	42	436
Kelantan	44	93	43	101	38	100
Melaka	31	100	28	101	24	96
Negeri Sembilan	45	221	44	229	43	260
Pahang	38	190	38	264	37	286
Perak	38	309	34	327	32	341
Perlis	44	37	40	38	35	36
Pulau Pinang	23	170	20	169	18	169
Sabah	72	508	62	485	58	505
Sarawak	30	181	30	210	28	218
Selangor ¹	42	1,200	39	1,336	36	1,270
Terengganu	39	130	31	120	30	129
Labuan	32	10	30	11	28	12
Malaysia	40	3,890	37	4,221	34	4,199

Note: ¹ Includes Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya.

Environmental Impact Assessment (EIA) Study for the proposed conversion of 600 acres of Kelau Forest Reserve at Sungai Bilut for the resettlement of the Sungai Temir Orang Asli, Pahang. The Additional Survey provided inputs to the preparation of the Environmental Management Plan for the construction of ISRWT project while the EIA Study covered the environmental and social issues related to the resettlement of Orang Asli Sungai Temir to Sungai Bilut.

8.53 Efforts were made to reduce the wasteful use of treated water. In this regard, property developers were required to install 6-litre toilet flushing systems in buildings. Studies on the practicalities, economics and health aspects of rainwater harvesting and utilisation were also conducted.

8.54 To meet the increasing demand for water in rural areas, a total of 293 projects was implemented under the Alternative System Of The Rural Water Supply Programme (BALB) nation-wide, mostly in Sabah and Sarawak. A total of RM12 million was spent for the implementation of BALB that included the construction of 141 gravity flow, 140 tube well and 12 rainwater harvesting

projects. BALB benefited about 43,000 people in Sabah and 10,000 people in Sarawak.

8.55 Groundwater sources continued to be given emphasis as an alternative to supplement surface water. The major groundwater supply system completed was the Chicha WTP in Kelantan, with a capacity of 60 Mld, which sourced its water from 38 wells. The capacity of the existing Kg. Puteh groundwater supply system was increased to 45 Mld from 30 Mld with the construction of a production well in 2003. The Study On The Sustainable Groundwater Resources And Environmental Management For The Langat Basin was completed in 2002. The Study estimated the volume of annual groundwater recharge in Langat Basin at 139 million m³ and the sustainable groundwater yield at 45 Mld. The development of groundwater quality monitoring networks for Sabah and Sarawak were also completed. Under the National Groundwater Resources Study, a total of 22 exploratory wells was constructed in Johor, Kedah, Negeri Sembilan, Sabah, Sarawak and Selangor.

8.56 The corporatisation of state water supply authorities and privatisation of water supply continued during the review period. The corporatisation of Selangor Waterworks was completed in 2002 with the establishment of *Perbadanan Urus Air Selangor* (PUAS). PUAS was given the responsibility for water supply management and distribution, billing and revenue collection as well as the implementation of future capital works including the reduction of NRW in Selangor and the Federal Territories of Kuala Lumpur and Putrajaya.

Sewerage

8.57 The sewerage subsector focused on improving services through the construction of new infrastructure as well as the upgrading and rehabilitation of existing systems. The studies on engineering services and detailed designs of the 13 National Sewerage Projects were divided into Phase 1 and Phase 2 and completed in 2001 and 2002, respectively. The tendering process for the construction of Phase 1 was completed in 2003.

8.58 Capital and refurbishment works were carried out to improve the quality of effluent discharged into surface water bodies, thereby improving the environment. Land reclamation works for Jelutong sewerage treatment plant (STP) and the construction of the sludge drying bed at Bayan Baru, Pulau Pinang were completed in 2002. The construction of Bayan Baru STP commenced in 2003. To improve

the conditions of beaches, the Port Dickson Pumping Station, a part of the overall sewerage improvement works in Port Dickson, was completed in 2002. The construction of STPs and sewerage networks at Padang Matsirat and Pantai Tengah to improve the sanitation conditions in Langkawi were undertaken in 2002.

8.59 The catchment study for Pulau Tioman, which covered both sewerage and sludge management strategies, was completed in 2002. Based on topography, natural drainage systems as well as existing and future land use patterns, the study identified seven catchment areas for the construction of sewerage infrastructure. As an interim measure to improve the sanitation condition on Pulau Tioman, communal septic tanks serving four to five households were installed in Kg. Tekek and Kg. Salang catchments.

III. PROSPECTS, 2004-2005

8.60 Infrastructure and utilities development will continue to be implemented with the objective of enhancing the competitiveness of the economy. In this regard, measures to increase efficiency of the multimodal transport chain will be given emphasis. The use of public transport will be further encouraged to reduce traffic congestion, especially in urban centres. Efforts will also be undertaken to minimise damage to the environment by encouraging the use of cleaner fuels, renewable energy as well as good construction practices in the implementation of infrastructure projects.

Roads

8.61 During the remaining Plan period, implementation of road and bridge projects will be undertaken with emphasis on improving accessibility to less developed, recreational and potential economic growth areas. Road construction through privatisation will be promoted in line with efforts to expand required infrastructure by utilising private sector expertise and funding. In addition, efforts will also be continued to improve road safety.

8.62 Allocation on road development will be increased from RM14.0 billion to RM18.6 billion. The additional fund will be utilised to expedite completion of major road projects. These projects include the Simpang Pulai - Gua Musang - Kuala Berang Road, Bentong - Kuala Lipis Road, Trans Eastern Kedah Hinterland

Highway, Kuching - Serian Road, Nangoh - Kanibongan Road, Sepulut - Kalabakan Road and Sipitang - Tenom Road. The Trans Eastern Kedah Hinterland Highway will open up the eastern corridor of Kedah for development, while the completion of Simpang Pulai - Gua Musang - Kuala Berang Road and the upgrading of Bentong - Kuala Lipis Road will enable better access to the hinterland of Pahang, Kelantan and Terengganu. The new road connecting Nangoh and Kanibongan in Sabah will provide a new linkage between Kudat and Sandakan as well as provide access to the large plantations along the road corridor. The completion of Sepulut - Kalabakan Road and Sipitang - Tenom Road will provide improved linkage to the hinterland of Sabah. The list of major road projects that are scheduled to be completed within the Plan period is as shown in *Table 8-1*.

8.63 Implementation of various privatised road projects, which were affected by the financial crisis in 1997, will be reviewed. The list of privatised road projects that are expected to be completed is as shown in *Table 8-1*. The New Pantai Highway when completed will reduce traffic congestion between Kuala Lumpur and Subang Jaya while the completion of Shah Alam - Kuang Highway will open up a new corridor for development.

8.64 Efforts will be continued to improve accessibility to less developed areas in order to support the development of the rural areas. Roads will be built to further improve mobility of the rural population as well as facilitating the transport of their produce to the markets.

8.65 Various studies will be undertaken to provide the direction for future road development. A Study To Review The Highway Network Development Plan will be conducted in 2004 to update the original plan, which was completed in 1983. The Study will identify potential road projects to be implemented up to the year 2020. In addition, the ITS Master Plan Study will be completed to provide the framework for future implementation of intelligent transport systems (ITS) nationwide, which aims to promote efficient transportation of goods and passengers. A common architecture will be formulated to enable inter-operability among ITS systems that will be implemented in various urban centres.

8.66 The Government will continue to promote road safety programmes in order to reduce accident rates to less than 4 deaths per 10,000 registered vehicles by the year 2010. Studies will be undertaken to identify further measures to reduce accidents, especially those involving motorcyclists. Efforts will be made to improve the skills of driving instructors, particularly on safety aspects to enable them to impart this knowledge to learner drivers.

8.67 Measures will continue to be undertaken to encourage local contractors and professional service providers to participate in projects abroad. CIDB will continue to provide assistance to enable local construction firms venture overseas. In view of the liberalisation of the services sector, the PSDC will undertake a study to map out the strategy for the export of professional services. The PSDC will also provide linkages for these service providers to enable them to compete in international markets.

Urban Transport

8.68 During the remaining Plan period, priority will be given to ensure accessibility and seamless transfer between the various modes of public transport, particularly in the Klang Valley. Traffic management will focus on uninterrupted right of way for mainline journey and efficient traffic dispersal to ease traffic congestion. In other urban centres such as Putrajaya, Pulau Pinang and Johor Bahru, rail-based transportation networks will be introduced.

8.69 Multimodal public transportation will be enhanced with the operation of integrated transport terminals. KL Sentral will continue to be the hub of public transportation in central Kuala Lumpur. Construction of the integrated terminals at Bandar Tasik Selatan and Gombak at the fringes of Kuala Lumpur will commence. The Sentul Integrated Station will be built with private sector participation.

8.70 To enhance public transportation in Putrajaya, the Putrajaya Monorail Line 1 is scheduled to be completed by the end of the Plan period. The 13.2 kilometre east-west alignment will link Precinct 7 in the west to Precinct 14 in the east. When completed, there will be 18 stations of which seven will be underground, one at grade and 10 elevated. In addition to car parks, these stations will be served by feeder buses and taxis.

8.71 The restructuring of the public transportation system in urban centres will be continued to improve the quality of public transport. The first phase of the current restructuring exercise will involve the takeover of the two major bus companies operating in the Klang Valley. The Government will lease the assets to a single operating company that will reroute buses with emphasis on feeder services to commuter and LRT stations, thereby providing a seamless multimodal and efficient public transport service in the Klang Valley. A Public Transport Authority will be established by the end of the Plan period, which will, among others regulate the restructured public transport system in the Klang Valley. The functions of this authority will be expanded to plan, coordinate and implement

public transport programmes in other major cities as well as ferry and other riverine transportation.

8.72 Studies will be undertaken to address the problem of traffic congestion in the Klang Valley. These studies will include re-routing, accessibility and frequency of public transport as well as convenience to the users. The Study On The Integrated Plan For The Development Of Public Transportation System And Land Use Development In The Klang Valley will be completed in 2004. This study will provide the strategy for the future development of the public transportation system in the Klang Valley until the year 2020.

8.73 The ITIS project will be fully implemented in Kuala Lumpur in 2005. The Klang Valley Advanced Traffic Management System with its control centre at Technology Park Malaysia will become the Transport Management Centre of the ITIS. With the operation of ITIS, road users will be able to obtain real time information on traffic situations and plan their journey to avoid traffic congestions.

Rail Transport

8.74 The rail subsector will continue to focus on increasing the competitiveness of rail services. Passenger services will be increased and improved to enhance rail transport as an efficient people-mover system. Modernisation of equipment will include the purchase of new coaches and locomotives. Skills upgrading will be provided to enhance the capability and productivity of KTMB personnel.

8.75 The Rawang - Ipoh Double Tracking Project, which will increase capacity and enhance services between Kuala Lumpur and Ipoh, will be completed in 2005. Passenger train travel time will be reduced from three and a half hours to two. In addition, works in double tracking the railway line from Ipoh to Padang Besar and Seremban to Johor Bahru will be undertaken. The KTM Commuter service will be extended from Rawang to Tanjung Malim. With the completion of double tracking of the seven kilometre stretch from Sentul to Batu Caves by the end of the Plan period, the commuter service will be extended to Batu Caves. In addition, KTMB will purchase 10 coaches and 40 locomotives to increase its services.

8.76 KTMB will take measures to enhance its operations and maintenance standards to remain competitive in carrying freight. Focus will be given to high yield cargo, vessel concept operation, heavier haul for conventional bulk, long distance cargo and e-freight. This will enable KTMB to become a major regional intermodal transporter with land, sea and air connectivity.

8.77 A new Central Workshop and Training Centre will be established at Batu Gajah, Perak to replace the existing Depot and Training Centre at Sentul, Kuala Lumpur. The Central Workshop will be equipped with modern equipment to provide quality maintenance for locomotives and coaches. The training centre will provide training to KTMB staff to upgrade and enhance their skills and knowledge to improve productivity.

Ports

8.78 During the remaining Plan period, capacity, efficiency and productivity of port-related services will continue to be improved. The promotion of Port Klang as a mega hub and distripark as well as PTP as a cargo transshipment centre will be intensified. In addition, efforts will continue to be undertaken to ensure the integrated development of all service providers in the logistics and transportation chain. This will enhance the usage of other local ports, marinas and related facilities as well as to further promote the development of the local shipping industry.

8.79 In an effort to increase capacity, improve competitiveness and enhance utilisation of national ports, emphasis will be given to the completion of on-going projects. These projects include additional berths at West Port, Port Klang and PTP, Second Inner Harbour Development at Bintulu Port, redevelopment of Swettenham Jetty at Penang Port, and additional infrastructure works at Kuantan Port. The major port expansion programmes under implementation will increase the capacity from 443.4 million tonnes in 2003 to 481.3 million tonnes in 2005. Demand for port and related facilities during the same period is expected to grow at an annual rate of 13.2 per cent per annum, from 338.8 million tonnes to 414.1 million tonnes, as shown in *Table 8-5*. In terms of containerised cargo, it is expected to increase from 10.6 million TEUs to 14.2 million TEUs.

8.80 The complete implementation of electronic documentation and paperless port operations will enhance the performance of Port Klang, PTP and other local ports. Closer cooperation will be fostered between port operators, port authorities and Government agencies. The formation of a single port authority will be expedited to regulate and monitor the performance of all port operators. Port operators are encouraged to undertake more innovative and creative strategies to improve their operations. Procedures and practices relating to traffic handling and clearance will be further simplified and automated. In line with the recommendations of the Inter-Agency Study On Integrated Logistics And Supply

Chain Management, a comprehensive master plan will be formulated to promote total supply chain management in exports and imports as well as in domestic freight transport. This will further enhance Malaysia's competitiveness and stimulate economic growth.

8.81 Inland water transport for both passengers and freight will continue to be promoted as an alternative mode to land transport, particularly in Sarawak and Sabah. Efforts will be undertaken to improve and upgrade passenger and cargo facilities, including the construction and upgrading of passenger terminals. The formulation of regulations and performance standards for ferry and other riverine transport services will be included in the functions of the proposed Public Transport Authority to ensure systematic and orderly development of the whole public transportation subsector.

8.82 For the remaining Plan period, local participation in sea-related transport services, which include passenger and cargo as well as dredging services is expected to increase. The shipping industry is expected to consolidate and focus on LNG and petroleum businesses. To further strengthen the shipping industry, better fleet programming and asset reliability will be pursued. In addition, shipyard activities such as maintenance, repair and overhaul of ships will be promoted. Strategic measures will be taken including long-term charter and global alliances to gain economies of scale, lower operating costs and increase opportunities. In addition, the Government will convert the Shipping Fund into a revolving fund and facilitate greater usage and distribution of the Fund to potential Malaysian shipping companies.

8.83 MISC will acquire additional vessels, including 27 petroleum tankers and will have a total fleet of 165 vessels by 2005. The activities of local shipping companies will be diversified to cover both domestic and international shipping, particularly in the high-growth route of Asia-Pacific. With the increased investments by local shipping companies, the number of vessels registered in Malaysia is expected to increase from 3,622 ships in 2003 to 3,800 in 2005.

8.84 For the remaining Plan period, dredging and reclamation works at ports and river mouths will be carried out by local dredging companies, thus saving the outflow of foreign exchange. As part of the capacity expansion programmes, the two long-term dredging contractors will acquire, own and operate additional equipment such as dredgers, barges and tug-boats. With the increased capacity, these companies will also be able to compete in international tenders for dredging and reclamation works.

8.85 Emphasis will also be given to enhance the safety of maritime navigation and reduce marine pollution. In this regard, a Malaysian Maritime Enforcement Agency will be established to assist in surveillance and intelligence works in Malaysian waters. The Marine Department will continue to enhance the enforcement role and upgrade its training programmes. In addition to the privatised Malaysian Maritime Academy, a Maritime Training Centre will be constructed at Pulau Indah, Port Klang. Other measures include the implementation of the Automatic Identification System to monitor vessel movements in the Straits of Melaka as well as exchange information between ships and maritime authorities. This is in line with the conventions recommended by the International Maritime Organisation.

Airports

8.86 The airport subsector will focus on measures to increase the usage of existing facilities, expand capacities in specific areas as well as improve the efficiency of services. KLIA will continue its promotional efforts in its bid to become a regional aviation hub. Efficiency and productivity of air services will also be improved.

8.87 Efforts to attract more international airlines to KLIA as well as encourage existing airlines to increase frequencies will be continued. Other measures will include strategic alliances with tourism-related industries and marketing campaigns overseas. Services in the airport such as ground handling, baggage handling and retail shopping will be continuously monitored and improved.

8.88 Facilities at other airports will be upgraded to cater to passenger comfort and convenience. Kuching International Airport, which handles about 2.5 million passengers annually will be upgraded to cater for wide-body, long haul aircraft operations. Its terminal building will be extended and renovated to provide more holding lounges, shopping arcades and other facilities. Upgrading works on Alor Setar Airport will be completed by the end of the Plan period. Facilities at Kota Kinabalu and Labuan airports will also be upgraded. The runway at Pulau Pangkor Airport will be extended to enable turbo prop aircraft and executive jets to operate there. The airport at Batu Berendam, Melaka will be upgraded to mainly facilitate medical tourism while Senai Airport, Johor will be developed into an air cargo centre.

8.89 A new airport will be built in Pulau Tioman to support its development as a duty free island resort. The airport situated at Kampung Paya will be able to handle narrow-body jet aircraft and will replace the existing airport in Kampong Tekek which can only handle up to 50-seater turbo prop aircraft. To ensure obstacle-free flight operations, the runway will be built on the sea while landside facilities will be on the island. Pulau Redang, another island resort, will also have an airstrip by 2004, which will improve access to the island.

8.90 During the remaining Plan period, MAS will continue to focus on strengthening its operations. Measures to be taken include productivity improvements by shortening aircraft turnaround time, improving ticketing systems, refurbishing cabins for better seat configurations, better scheduling of flights as well as increasing frequencies and destinations to high-yield sectors. Air Asia will expand its network by adding new routes, both domestic and regional as well as increasing frequencies. In addition to KLIA, the airline will operate from Johor Bahru and Kota Kinabalu.

8.91 The Government will continue to adopt a liberal policy on Air Services Agreements, including open sky agreements, to assist the airlines to expand their networks. The Government will negotiate with relevant authorities to enable the airlines to operate additional frequencies and destinations on a reciprocal basis. In this regard, additional Air Services Agreements will enhance connectivity and capacity of airlines, thereby improving convenience to passengers and facilitate tourism.

Energy

8.92 In line with the positive outlook of the national economy, peak demand for *electricity* is expected to grow at a higher rate of 7.2 per cent per annum from 12,637 MW in 2003 to 14,531 MW in 2005, as shown in *Table 8-6*. By the end of the Plan period, the accumulated installed capacity is expected to increase to 20,267 MW. The reserve margin is expected to decline to 39.5 per cent, which is more than adequate to meet the demand of the country. In the longer term to enable a more effective utilisation of resources, the reserve margin will be reduced gradually to 20 percent. In this regard, the focus will be on phased implementation of current committed power generation projects as well as imposing a freeze on approvals for future IPPs. In addition, the concept of demand risk sharing will be introduced in new power purchasing agreements to facilitate the sharing of the costs of maintaining the reserve margin.

8.93 The 2,100 MW Manjung coal plant will be fully commissioned during this period with the completion of its final plant unit. With the operation of the TNB plant in Manjung, the share of coal in the *fuel mix* will increase from 16.5 per cent in 2003 to 26.8 per cent in 2005, as shown in *Table 8-7*. The contribution of gas in the fuel mix will be reduced to 64.3 per cent, while those of oil and hydro are expected to remain below 10.0 per cent. The gas supply situation will be further improved by the end of the Plan period with the commencement of production from the new offshore fields.

8.94 Utilisation of *RE* as the fifth fuel will be continued to supplement the supply from conventional fuel sources. In this regard, to enhance the implementation of the SREP, studies will be conducted on the availability and competitive uses of biomass, particularly oil palm residues as well as the cost structure of producing electricity from the various sources of RE. In addition, the biomass-based industrial boilers for the production of steam as well as co-generation system for production of electricity and heat energy, mainly for in-house consumption, will be encouraged. In this regard, oil palm millers will be encouraged to adopt measures to enhance the efficiency of their non-grid connected facilities.

8.95 To meet the overall demand of consumers and improve the quality of the electricity supply system, several *transmission and distribution* projects will be constructed. Transmission network in Peninsular Malaysia is expected to total 17,000 cct-km, in Sabah 2,400 cct-km and in Sarawak 900 cct-km. Another 8,000 cct-km of distribution circuit will be constructed while 62 main intake substations and 123 main distribution stations will be installed in Peninsular Malaysia to further strengthen and improve the coverage of the networks. By the end of the Plan period, the distribution network in the Peninsula will reach 208,000 cct-km, in Sabah about 5,800 cct-km while in Sarawak it is expected to be 9,800 cct-km.

8.96 The implementation of the *rural electrification* programme will be continued with the implementation of 850 projects. For Peninsular Malaysia, the contribution of the Electricity Supply Industry Trust Account towards this programme will be increased. By the end of the Plan period, rural electricity coverage in Sabah and Sarawak will reach 72.8 per cent and 80.8 per cent, respectively.

8.97 To promote *gas utilisation* by the small and medium industrial, commercial and residential customers, the Natural Gas Reticulation System network will be expanded by about 50 per cent to 1,350 kilometres in 2005. With the expanded network, the natural gas consumption is expected to increase by 62 per cent to

119 mmscfd. To further promote NGV utilisation, another 20 NGV outlets will be built and the number of vehicles running on dual fuel is expected to increase by an additional 2,000 units when PROTON starts producing factory-fitted NGV vehicles.

8.98 During the remaining Plan period, efforts will be continued to promote *productive energy utilisation* through improvements in plant, equipment and processes as well as end-use. Under the MIEEIP, energy audits will be conducted to promote energy-use benchmarking, particularly among the small- and medium-scale enterprises. The coverage of the energy audits will be expanded to include the plastics, chemicals and textiles industries. To increase awareness and encourage the use of EE equipment, energy rating and labelling will be developed. In this regard, an EE testing facility will be established in Standards and Industrial Research Institute of Malaysia (SIRIM) Berhad. Recognising that funding is a constraint in the implementation of EE programmes, particularly in the industrial sector, a study will be undertaken to identify the modalities of finance.

8.99 At the regional level, Malaysia will continue to support the ASEAN initiative in energy supply security through the participation in the ASEAN Power Grid and Trans ASEAN Gas Pipeline projects. In this regard, the ASEAN Interconnection Master Plan will provide the framework for the development and implementation of 14 electricity supply interconnection projects in the ASEAN region up to the year 2020. To facilitate the implementation of the Trans ASEAN Gas Pipeline project, the establishment of the ASEAN Gas Centre in Malaysia will serve as the strategic technical and information resource and capacity building centre.

Water Supply

8.100 The sustainability of water supply will be ensured through increasing the efficiency of existing water supply systems, construction of source works and conservation of water resources. In this regard, the Federal Government will assume a more active role in planning, managing and coordinating programmes on water resources in the country. Effective monitoring and regulatory mechanisms will be used to ensure the quality of water supply meets established standards. Programmes on rehabilitation and upgrading of existing WTPs and NRW reduction will continue to be implemented. The billing and collection systems will be strengthened to increase revenue.

8.101 The construction of Pahang to Selangor ISRWT project will commence in 2004. It will be implemented in three packages, namely the construction of a water transfer tunnel, dam and pumping station. SSP3 will be fully operational with the completion of Rasa Stage II WTP in 2004 and Bukit Badong Stage II WTP in 2005. This will increase the water supply capacity of SSP3 by 525 Mld to its full capacity of 1,050 Mld. The multi-purpose Beris Dam in Kedah which has a storage capacity of 115 million m³ and supply capacity of 650 Mld will be completed in 2004. It will enhance the supply of water in the northern states of Kedah, Perlis and Pulau Pinang. The Chereh Dam with a storage capacity of 250 million m³, which forms part of the Greater Kuantan Water Supply Scheme Phase 2 will be completed by 2005. The Jus Dam will be completed in 2004 and increase the water availability in Melaka by 275 Mld. In addition, the Tanjung Malim Water Supply Scheme with a capacity of 128 Mld will be completed in 2005 and cater for the water needs of Behrang, Slim River and Tanjung Malim.

8.102 The development of water resources will be undertaken on a sustainable basis with emphasis given to Integrated Water Resources Management (IWRM). The IWRM integrates all water resources and incorporates considerations for land use, environment, social and economic development in water resources management. In addition, campaigns on raising IWRM awareness will be conducted at all levels to gain active support and enhance the transfer of knowledge on global experiences and best practices. Water conservation needs, capacity building as well as research and development (R&D) will also be incorporated into the IWRM programmes. The National Water Resources Study Phase 2 for Sarawak, based on IWRM concept, will commence during the remaining Plan period.

8.103 Alternative sources of water will continue to be developed to increase the national water supply. During the remaining Plan period, the National Groundwater Resources Study covering Johor, Kedah, Negeri Sembilan, Sabah, Sarawak and Selangor will be continued. For sustainable development of groundwater resources in the Langat Basin, monitoring of groundwater level and quality as well as land subsidence will be undertaken.

8.104 Emphasis will be given to reliable water supply in hinterlands and islands to improve public health and promote the tourism industry. The construction of the submarine pipelines to Pulau Perhentian in Terengganu and Pulau Buit in Sarawak will provide potable water to these islands. A wellhead protection programme will be set up in Pulau Tioman to protect the groundwater quality to ensure sustainable groundwater supply. Alternative rural water supply programme

will be expanded with emphasis on affordable, small-scale and community-led solutions for water management. This will include rainwater harvesting, groundwater development and low-water sanitation technologies.

8.105 A Management Information System will be set up to integrate the databases of all water supply authorities. This will provide easy access to information to improve the planning, monitoring, operation and maintenance of water supply systems.

8.106 The Melaka Water Board will be corporatised while Negeri Sembilan Water Supply Department will be privatised during the remaining Plan period. The corporatisation and privatisation of these state water supply authorities will include all aspects of water supply such as the construction of source works and distribution systems, operation and maintenance, as well as billing and collection of charges.

Sewerage

8.107 The implementation of the sewerage capital development programme will continue in the remaining Plan period. The construction works for Phase 1 of the National Sewerage Project will commence whilst the tendering process for Phase 2 will be initiated. Phase 1 which covers the central zone consists of five projects, namely: Bunus STP, Pantai STP and network, Bandar Tun Razak STP, Puchong STP and Southern Klang Valley Central Sludge Treatment Facility (CSTF). These projects will provide an additional sewerage treatment capacity of 979,000 population equivalent (PE) when completed in 2005.

8.108 Construction of Bayan Baru STP with a capacity of 200,000 PE will be completed in 2004 while the design of Jelutong STP and CSTF is scheduled to be completed in 2004. The Jelutong STP with a design capacity of 1.2 million PE will be constructed in two phases and Phase 1 will cater for 800,000 PE. The Jelutong CSTF will provide sludge treatment facility for Penang island. The completion of sewerage facilities at Bayan Baru and Jelutong will improve the quality of rivers and beaches in Penang island.

8.109 Sewerage improvement works in Port Dickson as well as Padang Matsirat and Pantai Tengah in Langkawi will be completed during the remaining Plan period. These works will provide sewerage capacity of 30,000 PE in Port Dickson

and 32,000 PE in Langkawi. The detailed designs will be prepared for the sewerage network systems and sewerage treatment works as well as sludge handling, treatment and disposal facilities for Pulau Tioman.

8.110 Studies will be carried out to identify areas that need to be provided with centralised sewerage systems. R&D in sewerage will be promoted including sludge re-use and disposal. The Sanitation Commission will be established to formulate economic and safety regulations to safeguard public interest and to promote the development of sewerage and solid waste management.

IV. ALLOCATION

8.111 The Eighth Plan allocation for infrastructure and utilities development amounting to RM29.4 billion will be increased to RM39.7 billion, as shown in *Table 8-13*. This allocation accounts for 24.8 per cent of the total development budget for the Eighth Plan. The transport sector will receive the bulk of this allocation, amounting to RM30.9 billion.

TABLE 8-13				
DEVELOPMENT ALLOCATION FOR INFRASTRUCTURE AND UTILITIES, 2001-2005 (RM million)				
Sector	8MP Allocation		Estimated Expenditure, 2001-2003	Balance, 2004-2005
	Original	Revised		
Transport	21,222.1	30,941.8	18,228.7	12,713.1
Roads ¹	14,002.6	18,614.4	10,316.9	8,297.5
Urban Transport	705.6	930.8	459.3	471.5
Rail	4,081.0	6,301.4	5,124.3	1,177.1
Ports	1,500.0	3,040.6	1,122.3	1,918.3
Airports	932.9	2,054.6	1,205.9	848.7
Utilities	8,151.5	8,764.8	4,544.6	4,220.2
Water Supply	3,966.3	4,810.0	2,231.5	2,578.5
Sewerage	1,583.6	1,666.0	678.8	987.2
Energy	2,601.6	2,288.8	1,634.3	654.5
Total	29,373.6	39,706.6	22,773.3	16,933.3
<i>Note:</i> ¹ Excludes localised roads in regional development areas, some local authorities and agricultural roads.				

V. CONCLUSION

8.112 Capacity expansion of infrastructure and utilities during the review period provided a catalyst to stimulate domestic demand through its linkages and spillover benefits. The increased capacity enhanced the mobility of goods and people, thereby facilitating business and improving the quality of life. To ensure that investments in the expanded infrastructure and utilities are utilised optimally, focus will be given towards improving the delivery of services and satisfying customer needs. Thus, the infrastructure and utilities network constructed will continue to enhance the efficiency, productivity and competitiveness of the economy.

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Chapter 1

Restoring Economic Dynamism

1

RESTORING ECONOMIC DYNAMISM

I. INTRODUCTION

1.01 Malaysia enters the remaining part of the Eighth Malaysia Plan period faced with greater challenges posed by increased competition and a volatile global environment. During the Eighth Plan review period, 2001-2003, the Malaysian economy continued to expand accompanied by low inflation and unemployment despite the turbulent external environment arising from the slower than expected growth in developed economies and geopolitical uncertainties. Structural transformation of the economy and restructuring of the corporate and financial sectors proceeded unimpeded, contributing to increased resilience of the economy. Progress was also made in meeting the socio-economic objectives, further improving the overall quality of life of Malaysians.

1.02 The continuing uncertainties in the global environment necessitate a review of the policy thrusts and priorities of the Eighth Malaysia Plan. The policy focus of the Mid-Term Review will essentially be to reposition the Malaysian economy to better deal with the changing global economic landscape and place it on a firmer foundation to achieve sustainable growth.

II. RESPONDING TO DEVELOPMENTS DURING THE REVIEW PERIOD

1.03 The Eighth Malaysia Plan outlines policies and strategies to achieve sustainable growth on the back of greater resilience and competitiveness in line with the tenets of the National Vision Policy. The Plan aims at shifting from an input-intensive growth strategy to one that is knowledge-intensive, increasing productivity, accelerating restructuring within the manufacturing and services sectors, revitalising the agriculture sector and strengthening socio-economic

development. Human resource development and technology enhancement are given prominence. The Eighth Plan also underscores the need for the private sector to continue to drive economic growth with the public sector providing the required institutional framework and infrastructure. In addition, the Plan emphasises the importance of a holistic and balanced approach to development and the overriding objective of national unity, which is central to Malaysia's development agenda.

1.04 Going into the review period, the economic environment underwent fundamental changes. The global economic slowdown in 2001, led by the deceleration of the United States (US) economy and the collapse of world electronics demand, was more severe than expected. The situation was worsened by the September 11 incident in the US, which added further downside risks to the already uncertain environment. In 2002, although the world economy and demand for electronics recovered slightly, the general economic mood remained dampened due to increasing uncertainties. Economic performance until the first half of 2003 remained subdued, weighed down by the Iraq invasion and sporadic terrorist attacks around the world causing increased risk to trade and investment as well as rising oil prices. This was worsened by the outbreak of the Severe Acute Respiratory Syndrome (SARS) with its devastating effect, particularly on travel and tourism-related activities.

1.05 Despite the challenging external economic and geopolitical environment, the Malaysian economy grew at an average rate of 3.0 per cent per annum with per capita income increasing by 2.4 per cent per annum and purchasing power parity by 3.9 per cent. Although the growth rate was lower than the Plan target, it was creditable given the openness of the economy, high dependence on electronics, and when compared with other regional economies. In addition, the inflation rate remained stable with the consumer price index averaging below 2.0 per cent and the unemployment rate was low at 3.5 per cent. The current account of the balance of payments continued to maintain a large surplus contributing to strong external reserves. While the fiscal deficit increased due to the pre-emptive measures introduced by the Government, it remained within prudent limits.

1.06 The economy also became more broad-based with increased contribution to growth arising from promoted services sectors and the gradual shift into high technology and knowledge-intensive manufacturing. The agriculture sector witnessed renewed vitality from improved primary commodity prices as well as further

expansion in food crops, fisheries and livestock. Initiatives to improve corporate governance, and restructure the corporate and financial sectors were also on track. Significant achievements were made in human resource development, particularly in improving the quality of the labour force. In addition, satisfactory progress was made towards achieving the socio-economic objectives, especially in terms of reducing the incidence of poverty, increasing the number of Bumiputera professionals and enterprises as well as providing better housing and basic amenities to the low-income group.

1.07 Concerted efforts that were taken to further improve economic fundamentals and increase resilience in the aftermath of the Asian financial crisis in 1998 enabled the economy to withstand the impact of the external shocks and avoid contraction during the review period. It also provided the latitude to introduce timely pro-growth measures to mitigate the impact of the shocks without causing imbalances in the economy. The two stimulus packages introduced by the Government in 2001 and the expansionary annual budgets succeeded in increasing private consumption, inducing private investment, building intellectual and physical capacity as well as cushioning the effect of the economic slowdown on the poor and disadvantaged while maintaining fiscal prudence. The Package of New Strategies introduced in 2003 to mitigate the impact of the Iraq invasion and outbreak of SARS, which focused on promoting private investment, strengthening competitiveness, developing new sources of growth and enhancing the effectiveness of the delivery system, helped to restore business confidence as well as improve efficiency and productivity levels. Monetary policy also remained accommodative towards this end.

III. KEY CHALLENGES

1.08 During the remaining Plan period, the economy is expected to confront greater challenges. Developments in the external environment, both economically as well as politically, will be of key concern. As developments in the external environment are largely beyond the span of domestic policy control, the critical task will be to mitigate the impact from any adverse developments and at the same time, seek out the opportunities that will enable the economy to achieve high and sustainable growth. In the domestic front, the key challenges will be to strengthen indigenous capability, return to private sector-driven growth and continue to maintain political and social stability.

Dealing with the Changing Dynamics in Global Competition

1.09 Globalisation has brought about the integration of economic markets as well as pervasive institutional and social changes. While it has generated a high volume of trade and capital flows across countries, it has also intensified competition for markets and investment funds. This has been facilitated by the ongoing process of trade and investment liberalisation through multilateral and bilateral initiatives, among others, under the World Trade Organisation (WTO), ASEAN Free Trade Area (AFTA), ASEAN Investment Area and other free trade arrangements.

1.10 Supported by rapid technological advancements, globalisation is also changing the way business is conducted and investments are made. A single product is now seldom completely made in one country. Design, production, marketing, distribution and services are split into various components and located at the most cost-effective locations all over the world. This is facilitated by the greater use of electronic business transactions that is providing a global reach for sourcing supplies, markets and investment opportunities. In this regard, Malaysia has to carve out a niche for itself, taking into account its strengths and effectively link up with other economies in the global supply chain.

1.11 The strong entrance of new players in the international economy, particularly China, India and emerging economies of Latin America and Europe while offering major new markets, are also changing the competitive platform for trade and investment. They have become highly attractive investment destinations and leading centres for the production of low and medium technology products at competitive prices and have the potential to move up the value chain in the medium-term given their indigenous technology capability and large pool of skilled human resource. Many economies are responding to the intensifying competition for markets as well as foreign investments by reforming their tax and regulatory framework, opening up their economies, privatising as well as entering into free trade agreements.

1.12 While Malaysia and other countries benefited from the dynamism of China, there is concern that the rise of China as an important producer and exporter of a wide range of manufactured products may pose a serious challenge to economies that are exporting these goods in the global market. In this regard, the proposed ASEAN-China Free Trade Area provides an important platform to leverage on China's growth and prosperity by exploiting the complementarities that exist as well as specialising and trading in products where the nation has

a competitive advantage. The biggest challenge will be for industries to restructure and reposition themselves so as to secure the opportunities generated by the entrance of China and the new players in a sustainable manner.

1.13 On the whole, Malaysia will need to be more alert and responsive to both the opportunities and challenges from global competition. It is essential to ensure that the country's policies and strategies are always forward-looking so that it can adapt to the changing environment and exploit the opportunities that arise. The country should also enhance its position as a strategic and cost-effective location for foreign investment while developing its domestic industries to be globally competitive. To maximise the benefits of globalisation, efforts will need to be intensified to improve knowledge management, accumulate new skills and change mindsets.

Minimising the Risks of Volatility

1.14 The integration of the global economy fuelled by technological advancements has raised the risk of macroeconomic volatility. As markets become more interlinked, economies are increasingly exposed to external disturbances as well as to the contagion effects emanating from economic, financial and geopolitical shocks in other parts of the world.

1.15 Malaysia, being an open economy, will inevitably continue to be affected by global economic trends, particularly that of its major markets. Although world economic growth is expected to improve during the remaining Plan period, it carries several downside risks. Geopolitical instability could act as a dampener to growth. The outbreak of SARS and other contagious diseases in the future adds another dimension to existing uncertainties. With the expected sedate growth in the Euro region and Japan pinned down by its slow structural reforms, global economic growth will depend largely on the performance of the US economy, which faces the risk of being weighed down by its growing external deficit.

1.16 Political and security uncertainties are expected to increasingly influence the external environment. Although the Iraq invasion was short and its immediate economic impact limited, it is expected to carry longer term downsides. There is also the threat that in the course of the fight against terrorism, new conflicts could arise. This could affect consumer and business confidence and negatively impact cross-border trade and investment. The cost of doing business will inevitably increase due to added risk from these uncertainties. Some businesses are expected

to be more severely affected than others, particularly those related to travel and tourism. In addition, the mobility of skilled workers is expected to be impeded.

1.17 Learning from the Asian financial crisis, the Eighth Plan endorses the task of strengthening resilience as a priority. Initiatives towards this end improved the ability of the economy to better withstand the external shocks as seen during the review period. In this regard, continued emphasis will need to be given to resolving imbalances and potential areas of vulnerability in the economy. Efforts will be made to further strengthen the financial sector and upgrade its risk-management capacity, develop a deeper and broader capital market, and build a more robust corporate sector with high standards of corporate governance. On the macroeconomic front, there is a need to ensure strong economic fundamentals with stable prices and exchange rates, sufficiently high level of savings, strong external account and high external reserves as well as a manageable fiscal deficit and sustainable level of debt. Greater efforts will also be required to strengthen indigenous capability to generate domestically-driven growth. In this regard, the private sector will need to resume its position as the engine of economic growth. Sound economic management and the setting up of an early warning system will be important to reduce the negative impact of external shocks whenever they occur. In addition, the strengthening of internal security will also be important to maintain peace and safety for the people as well as safeguard local and foreign business interests.

IV. THE WAY FORWARD

1.18 The Mid-Term Review will build upon the Package of New Strategies introduced in 2003, address critical problem areas and sources of vulnerability as well as deal with longer term and structural issues to restore the dynamism of the economy. Efforts will also be taken to accelerate the transformation to a knowledge-based economy. While the policy thrusts in the Eighth Malaysia Plan will continue to be relevant towards this end, some of the policy measures will be reinforced, reprioritised or fine-tuned and some new measures introduced.

1.19 Among the new policy dimensions introduced in the Mid-Term Review are as follows:

- ❑ initiating measures to assertively promote selected services industries, including education, tourism, Islamic finance, health, transport, information and communications technology-related and manufacturing-related services;

- ❑ developing selected manufacturing activities in marine, defence, aerospace and biotechnology industries as new sources of growth;
- ❑ generating new investment and commercial opportunities in agriculture, particularly in food and biotechnology-related activities to expand the product base and export capacity of the sector;
- ❑ developing the capability of local enterprises to market internationally and participate in the global supply chain;
- ❑ enhancing industrial skills training to meet market demand as well as improving education programmes to increase employability of human resource;
- ❑ implementing a more effective innovation system; and
- ❑ propelling Bumiputera equity ownership by setting up another investment trust company and increasing the minimum required proportion of public sector procurements and contract works that is to be allocated to Bumiputera entrepreneurs.

1.20 The overall policy focus of the Mid-Term Review will be to reposition Malaysia so that it is better placed to meet the challenges arising from the changing economic landscape as well as secure the opportunities that arise. This will set the Malaysian economy on a solid foundation to increase its dynamism and put in motion a steady and sustainable rate of growth consistent with its long-term potential.

1.21 For the remaining Plan period, the real Gross Domestic Product growth target that was envisaged in the Eighth Malaysia Plan will be revised to a level consistent with the potential output of the economy. At the revised rate of growth, Malaysia will be able to further strengthen its economic fundamentals, enhance its competitiveness and in turn continue to peg its currency without causing any distortions. The private sector, which is now more resilient following its restructuring, is expected to regain momentum and spearhead economic growth.

1.22 The Government will continue to ensure a business-friendly and secure environment to facilitate increased private sector participation in the economy. It will also continue to focus its resources on socio-economic development, particularly in education, health, housing and basic infrastructure. In line with

the demands of an increasingly affluent society, modern and high quality services, facilities and infrastructure will be provided on the basis of the user-pay principle, where appropriate. This approach while enabling the Government to provide these facilities in a timely manner, either on its own or through privatisation, will ensure greater equity and efficiency. The application of the user-pay principle will necessitate a change in the mindset of the public. Commensurate with increasing real income, the public must be prepared to pay more for better quality services and facilities. The Government on its part will ensure that development projects are implemented in a cost-effective manner and result in increased productivity.

1.23 The policy focus of the Mid-Term Review will be as follows:

- ❑ *reinforcing macroeconomic fundamentals to achieve sustained growth;*
- ❑ *bolstering economic resilience to better withstand shocks;*
- ❑ *retooling the economy to enhance its competitiveness;*
- ❑ *reactivating private investment to assume its role as the engine of growth;*
- ❑ *venturing into new sources of growth to sustain economic dynamism;*
- ❑ *accelerating the transition from low technology and input-intensive economy to one that is high technology and knowledge-based;*
- ❑ *increasing supply of quality human resources to meet the demands of an economy that is moving to higher value added activities;*
- ❑ *moving towards a more equitable society to ensure everyone benefits from development;*
- ❑ *promoting an exemplary value system; and*
- ❑ *enhancing international cooperation for prosperity.*

Reinforcing Macroeconomic Fundamentals

1.24 The frequent occurrence of destabilizing events since 1998 and the turbulent international environment underscore the need to further strengthen

macroeconomic fundamentals. This is to provide a stronger foundation for the economy to recover expeditiously, better withstand any future eventuality as well as provide the latitude to undertake appropriate and timely measures, when necessary. In this regard, the focus of macroeconomic management will be to keep the inflation rate low and stable, maintain an adequate level of national savings, sustain a healthy surplus in the balance of payments, ensure a stable exchange rate, maintain debt sustainability, secure a more prudent fiscal position as well as maintain strong and unencumbered external reserves. Emphasis will continue to be given to increasing productivity and efficiency while shifting away from input-driven growth.

1.25 Although the current economic environment necessitates the continuation of an expansionary public sector budget throughout the remaining Plan period, the size of the fiscal deficit will remain within prudent limits and will be on a declining trend. This is in line with the commitment to gradually reduce the size of public sector expenditure, as private expenditure strengthens to lead economic growth. The fiscal deficit will be financed from domestic non-inflationary sources. Public expenditure will be targeted at projects that contribute to improvements in efficiency and productive capacity, increase exports, strengthen domestic demand as well as provide economic opportunities for the low-income group.

1.26 The external position of the economy will be further strengthened by aggressively promoting exports and narrowing the deficit in the services account of the balance of payment. Initiatives to promote exports will include enhancing the competitiveness of exports, creating a niche in selected products, creating global brand names and venturing more assertively into non-traditional markets. Efforts will be taken to increase intra regional trade using the AFTA and other bilateral arrangement mechanisms. In the pursuit to continuously narrow the deficit in the services account, the focus will be on maximising the export potential of the education, tourism, health, transport and professional services.

1.27 Emphasis will be given to enhancing productivity and efficiency in order to spur economic growth. The Government will continue its policy shift from input-driven to one that is productivity-driven given the need to increase competitiveness and value added, which will lead to a higher living standard. The focus will be on more efficient use of labour and capital as well as improvement in skills, technology and managerial capability, and greater application of information and communications technology (ICT) and knowledge to increase the contribution of growth from total factor productivity.

Bolstering Economic Resilience

1.28 During the remaining Plan period, efforts will be continued to further strengthen the resilience of the economy. The focus will be on broadening the economic base besides further reinforcing economic fundamentals. Domestic demand will also be bolstered to reduce the vulnerability to adverse external developments. The economy will be constantly monitored to detect early warning signals of concern so that appropriate and timely measures can be introduced.

1.29 The financial sector, which has been restructured to increase the capacity and capability of domestic financial institutions in line with the Financial Sector Master Plan, will focus on raising the performance of banking institutions so that they are resilient, efficient and well-positioned to support the transformation of the economy and meet the more challenging economic environment. Efforts will also be taken to promote greater financial stability by developing an efficient infrastructure to drive innovation and dynamism within the banking system.

1.30 The capital market, which is fast becoming a significant alternative source of corporate financing guided by the Capital Market Master Plan, will be further enhanced to become more efficient and competitive. This will also reduce the issue of funding mismatch of short-term borrowings for long-term projects. Wide-ranging initiatives will be taken to develop the market institutions; the equity, bond, derivatives and Islamic capital markets; investment management; and the stockbroking industry.

1.31 The task of further improving corporate governance will remain high on the nation's agenda. Various measures to promote higher standards of corporate governance among public listed companies have been effected including the coming into force of the Malaysian Code on Corporate Governance, the requirement for directors of public listed companies to be accredited with the Research Institute of Investment Analysts Malaysia under its Mandatory Accreditation Programme and the setting up of the Minority Shareholder Watchdog Group. Initiatives will be taken to enhance shareholder rights, especially those of minority shareholders, and broaden the avenue for private enforcement of these rights. Further measures will also be introduced to promote timely, comprehensive and regular dissemination of relevant company information to shareholders.

1.32 The corporate sector must gear itself to manage shorter business cycles as well as any unexpected eventualities. In this regard, it has to improve its risk management capability, undertake prudent spending, keep sufficient reserves to

meet down cycles and cap borrowing at a sustainable level. The corporate sector must also work towards improving efficiency as well as managerial and financial management capability.

Enhancing Competitiveness

1.33 The WTO, AFTA and other regional arrangements will further liberalise trade, intensifying competition both in the domestic as well as international markets. The strong emergence of China in the global economy will also increase competition, particularly for the common exports of both countries.

1.34 In order to enhance competitiveness, the Government will continue to undertake initiatives in a more coordinated manner to create a pro-business environment that supports wealth creation. Efforts will focus, among others, on further reducing the cost of doing business, reviewing the incentive regime, improving market access and ensuring supply of human resource in line with technological change and market demand. Economy-wide efficiency and productivity will also be raised by promoting the fuller use of installed infrastructure capacity. The Government will continue to provide new and modern physical infrastructure, where necessary. Concerted efforts will also be taken to improve the delivery system by improving the facilitation of investment, fast tracking approvals at all levels of administration, streamlining procedures, strengthening human resource capacity and capability, expanding the use of ICT, ensuring compliance to the client's charter as well as strengthening management integrity and governance.

1.35 At the firm and industry levels, initiatives must be taken to increase productivity so as to reduce the cost of production and raise the quality of the product or service. This will require firms to upgrade their technology by introducing new machinery and raising technological capability. Efforts towards this end must also be complemented by increasing labour productivity through continuous skill upgrading of employees as well as improving entrepreneurial and managerial skills. In addition, firms need to accelerate the implementation of the productivity-linked wage system.

1.36 Firms will also need to improve their marketing capability, particularly to export markets. Currently, a significant portion of exports, especially of manufactured goods is linked with multinational corporations (MNCs). While local entrepreneurs will need to further develop direct access to export markets, they must also take concerted efforts to participate in the global supply chain

for selected products and services, taking advantage of MNCs in the country. The Government will facilitate the increased participation of local enterprises in the global supply chain by introducing appropriate measures. To sustain and increase market share, firms must also endeavour to improve existing products and services as well as undertake customisation to meet diverse and changing consumer preferences.

1.37 Given that Malaysia is losing its competitive edge in labour-intensive and low technology products, firms need to take more concerted efforts to move up the value chain to high technology and knowledge-intensive activities. In this regard, firms will have to give greater emphasis to research and development (R&D) as well as improve knowledge management at the firm level. In addition, they must enhance their marketing skills and develop new markets. Efforts will also be taken to increase the participation of local manufacturers in the global supply chain in identified sectors.

Reactivating Private Investment

1.38 Private investment has remained subdued, despite several measures introduced by the Government, mainly due to the existence of excess capacity and increased risk aversion as a result of the unstable environment. To return the economy to the fast growth track, the private sector must resume its role as the engine of growth by expanding existing investments and pioneering into new ventures. The Package of New Strategies introduced in 2003 contained 13 measures to promote private investment, including better access to credit and improved incentives for small and medium enterprises (SMEs) as well as liberalisation of Foreign Investment Committee guidelines. In addition to the Package, the Government further liberalised equity and expatriate employment policies in the manufacturing sector. Measures were also introduced to enhance investor participation, liquidity and efficiency of the capital market. During the remaining Plan period, the Government will continue to provide a more flexible and investor-friendly environment.

1.39 Foreign direct investment (FDI) will continue to be important in spearheading the economy into new and strategic areas of growth. To promote investment, Malaysia will introduce a more centralised approach to shorten the time for obtaining required approvals and permits. While continuing to provide pre-packaged incentives, the Government will also offer tailored incentives and non-tax support such as R&D funding and training grants for selected investments.

The pre-packaged incentives will also be fine-tuned so that they are effective in encouraging expansion of existing investments as well as drawing new investors into these areas. In addition to the existing mechanisms for consultation, an approach that enables the Government to meet with MNCs periodically and proactively to address the problems that they are facing will be adopted. The Government is also committed to simplify procedures, make available modern and efficient infrastructure and provide a secure investment environment.

1.40 At the same time, the Government will be more assertive in promoting domestic investment given the decline in international capital flows and intensifying competition for FDI. There is ample liquidity in the economy to support a higher level of domestic investment. SMEs will be nurtured to enable them to become the primary catalyst in spurring domestic investment. The Government will provide the necessary assistance including act as a mentor to promising SMEs, offer extension services to SMEs in selected industries as well as ensure that there is adequate and easier access to financing. Efforts will also be taken to enable SMEs to link up with the global supply chain through MNCs. The recommendations of the Small and Medium Industry Development Plan will also be on track to uplift the capacity and capability of SMEs in terms of technology, skills and marketing so that they can meet the challenges and gain from the opportunities generating from the liberalisation and advancement in ICT.

Venturing into New Sources of Growth

1.41 Malaysia will identify and develop new sources of growth, particularly in the services, manufacturing and agriculture sectors to diversify its economic base and sustain the dynamism of the economy. This will also increase resilience and reduce economic fluctuations arising from product cycles as well as enable the country to take advantage of the rapidly growing regional market.

1.42 Within the services sector, education, tourism, Islamic finance, health, transport, professional and consultancy as well as ICT-related and manufacturing-related services will be further exploited to realise their full potential so that they can drive economic growth as well as contribute more significantly to export earnings. Efforts will be intensified to make Malaysia the regional centre or hub for these services. The growth of these service industries are poised to accelerate given that most of the related infrastructure are already in place. In an effort to promote these services, the Government will undertake more effective and coordinated promotion programmes. To promote the education sector, among

others, institutions will be encouraged to obtain international accreditation for courses offered, procedures and conditions for entry of foreign students will be further liberalised and appropriate incentives will be provided to industry players. In the tourism sector, a holistic approach will be taken including engaging in product development and marketing, promoting domestic tourism as well as ensuring that the industry's human resource is equipped with the necessary skills. The launching of the Langkawi International Yacht Registry is also expected to make Langkawi and Malaysia a well-known destination.

1.43 Islamic finance including Islamic banking and capital market will be developed as strategic niche market segments. The potential of the Islamic capital market will be leveraged through the introduction of innovative products and forging mutually beneficial strategic alliances with other major Islamic capital markets. To support the development of health services, the focus will be on continuing to make available the required physical and institutional infrastructure and manpower as well as exploiting the nation's edge in traditional and complementary medicine, herbal medicine and biotechnology. Within the transport sector, the focus will be on air transport and port services. In respect of ICT-related services, software development, systems integration, web design, content development, IT-shared services and the setting up of call centres will be more actively promoted. In addition, manufacturing-related services such as the establishment of operational headquarters, international procurement centres, regional office, regional distribution centres, integrated logistic and R&D centres will be given preference.

1.44 In the manufacturing sector, initiatives will be introduced to encourage and support the graduation of the electrical and electronics industry to higher technology and value added products and activities. In addition, selected manufacturing activities in the marine, defence, aerospace and biotechnology industries will be developed as new sources of growth. A marine transportation policy will be formulated to guide the development of the sector including developing and promoting ship repairing and building of leisure crafts. A defence industry blueprint will be prepared to identify strategies, capabilities and competencies to develop the industry to become competitive and self-reliant in terms of technology for peaceful purposes. To further develop the aerospace industry, a national space policy will be formulated. The Bio-Valley project will spearhead the development of the biotechnology industry by supporting a spectrum of biotechnology-related activities.

1.45 In the agriculture sector, efforts to establish Malaysia as a regional centre for production of food and *halal* products will be expedited. While capitalising

on the potential of biomass and biotechnology products, efforts will be taken to venture into new products including ornamental fish, tuna and seaweed, so as to broaden the product base and increase the export earning capacity of the sector. The Government will also promote intensive and large-scale commercial agricultural activities including through the expansion of Permanent Food Production Parks and satellite farming areas. The productivity of the sector will be enhanced through the greater application of ICT-related technologies and use of e-commerce.

Accelerating Transformation to High Technology and Knowledge-based Economy

1.46 Malaysia currently is at a turning point disengaging itself from labour-intensive and low technology products to high technology and knowledge-based economic activities. This shift has been compelled by the increased competition for labour-intensive and lower technology products from the emerging economies backed by their enormous supply of labour and lower cost structure. Although the transition began in the mid-1990s, it was hampered by the Asian financial crisis and the subsequent sluggish growth of the economy. The Government has established the policy framework for this transformation under the Third Outline Perspective Plan (OPP3), Knowledge-based Economy Master Plan (KEMP) and the Second Industrial Master Plan (IMP2), and has started to implement several measures in the areas of human resource development, physical infrastructure, supporting regulations and incentives to facilitate the transition.

1.47 During the rest of the Plan period, efforts will be taken to accelerate the process of transition including the recommendations contained in the OPP3, KEMP and IMP2. Public sector efforts will continue to focus on providing the appropriate environment including the infrastructure and institutional support. Efforts will be taken to upgrade and expand communications infrastructure to increase accessibility and connectivity, particularly to rural areas. A more conducive environment will be created including through increased network security to promote electronic commerce and the accelerated roll out of Multimedia Super Corridor flagship applications. In addition, initiatives to nurture local capabilities in content development will be intensified.

1.48 Emphasis will be given to further strengthening the human resource capability by making available a larger pool of high quality skilled work force including providing greater flexibility in the recruitment of expatriates. The renewed emphasis given to English at the primary and secondary school levels will also contribute towards creating a workforce with excellent communication

skills and that can access the extensive source of information and knowledge available. The transition to a high technology and knowledge-based economy will inevitably result in some dislocation of labour and require labour market and institutional adjustments. The public sector, in cooperation with the private sector, will provide access to retraining and re-skilling to minimise the impact from such labour dislocation. The public sector will also continue to implement programmes guided by the National Framework for Bridging Digital Divide to ensure that the disadvantaged and those in rural and remote areas do not lose out as a result of the transformation of the economy.

1.49 To enhance the innovative and technological capacity and capability, the Science and Technology Policy II will be implemented. This will strengthen the synergistic partnership among the Government, industry, universities and research institutions to conduct R&D, promote increased private sector investment in R&D as well as increase the rate of commercialisation of research findings. In this regard, the intellectual property rights regime will also be reviewed.

1.50 The private sector including SMEs, will need to shift more aggressively into high technology and value added products in manufacturing as well as knowledge-intensive activities in the value chain such as product development and design, packaging, marketing and distribution. To enable this shift, the private sector will need to allocate greater resources for R&D and innovation, apply more ICT in their internal and external operations as well as introduce effective knowledge management processes within their organisation. The Government will provide the necessary support to accelerate this change.

Increasing Supply of Quality Human Resource

1.51 During the remaining Plan period, the main thrust of human resource development will be to increase the supply of competent, productive and knowledgeable human resource that is imbued with positive values to support a knowledge-based economy. The education and training delivery system will be strengthened so that it can effectively respond to changing market requirements. Accessibility to education and training will be improved through lifelong learning programmes and the greater use of ICT.

1.52 The quality of education and training will be raised by improving teaching and learning materials, and increasingly adopting a student-centred approach. A rating system will be developed to enable public institutions of higher learning to assess their own programmes. Efforts will also be taken to streamline the

qualifications offered by public and private education and training institutions. To make the education system less examination-oriented, the evaluation of the overall performance of students will also include school-based assessment.

1.53 The quality of technical education and vocational training will be enhanced by incorporating social and learning competencies as well as implementing the dual system. The training programmes provided by public training institutions will also be standardised with the establishment of a national curriculum bank at the National Vocational Training Council. To meet the demand for industrial skills training and ensure adequate supply of skilled human resource, public training institutes will conduct training on a double shift as well as use rented commercial premises.

1.54 To improve indigenous technological and innovative capability, efforts will be undertaken to increase the supply of R&D and science and technology (S&T) human resource as well as cultivate an R&D culture. Private institutions of higher learning will need to offer more high-end and hard courses to accelerate the supply of S&T human resource. Collaborative efforts between institutions of higher learning, research institutes and the private sector will also be intensified.

Moving Towards a More Equitable Society

1.55 The distribution agenda set out in the Eighth Malaysia Plan will be reinforced during the remaining Plan period with the aim of building a more united and equitable society. The two-pronged strategy of poverty alleviation and restructuring of society will continue to be implemented with greater vigour to ensure balanced and equitable participation among and within ethnic groups as well as regions. The distributional programmes will be further strengthened and streamlined to increase their effectiveness. The development of the less developed states including Sabah and Sarawak will be given due prominence.

1.56 In respect of poverty, efforts will be intensified to attain the Eighth Plan target of reducing the incidence of poverty to 0.5 per cent by 2005. The poverty eradication programmes will continue to be more target-specific by addressing pockets of poverty, particularly in remote areas. In addition, special attention will be given to *Orang Asli* and Bumiputera minorities in Sabah and Sarawak. A poverty map will also be established to assist in identifying the poverty target groups in both urban and rural areas, and delivering assistance directly to them.

1.57 In line with efforts to restructure society, initiatives will continue to be taken to strengthen and improve effective Bumiputera participation in the corporate sector as well as increase their equity ownership and control of companies to at least 30 per cent by 2010. In this regard, efforts will focus on developing a pool of resilient and competitive Bumiputera entrepreneurs with drive and dynamism. The capacity building programmes for existing and potential Bumiputera managers and entrepreneurs will be intensified to equip them with the requisite management skill and knowledge as well as inculcate positive values. The equity restructuring programmes will focus on increasing Bumiputera participation and ownership in the manufacturing, ICT and services sectors. In addition, to address the decline in the share of Bumiputera equity ownership resulting largely from increased investment liberalisation, the Government will set up another investment trust company, *Dana Harapan*. The Government will also increase the minimum required proportion of public sector procurements and contract works that is to be allocated to Bumiputera entrepreneurs. These contracts will only be awarded to credible and competent Bumiputera entrepreneurs. As for Indians, efforts will be undertaken to increase their equity ownership to 3.0 per cent by 2010 by providing more opportunities for them to be actively involved in business through various training and entrepreneurship programmes.

1.58 With regard to employment restructuring, measures will continue to be taken to reflect the ethnic composition of the population in all sectors and occupations. The proportion of Bumiputera in the legislators, senior officials and managers as well as craft and related trade workers categories will be increased. The number of Bumiputera accountants, engineers and architects will also be raised, as the proportion of Bumiputera in each of these registered professional occupations is lower than 30 per cent. Education and training will continue to be an important vehicle to achieve the employment restructuring objectives. Steps will also be taken to increase non-Bumiputera participation in the public services sector, particularly where they are less represented such as in teaching and nursing as well as the police and armed forces. At the same time, private sector employers will be encouraged to employ more Bumiputera, particularly at the administrative and managerial level.

Promoting an Exemplary Value System

1.59 National unity will continue to be the overriding consideration of all policies and programmes as it is an indispensable precondition to ensure continued development, particularly in a multi-ethnic society such as in Malaysia. Efforts to narrow the disparities and inequities among and within ethnic groups and

regions as well as foster the spirit of patriotism will provide the basis to foster national unity. The Government will continue to undertake initiatives to further enhance integration and understanding of various communities, cultures and traditions.

1.60 In line with the aspiration to become a developed country based on the concept of total development; the moral, spiritual and psychological aspects will continue to be given due prominence. Efforts will continue to be taken to mould a society that is caring, tolerant, moderate, progressive, industrious, civic conscious, disciplined and honest. Good work ethics including the quest for excellence and high commitment, will be promoted. Emphasis will also be given to inculcating a maintenance culture, which is important given the large amount of investment that has gone into the building of physical infrastructure. Besides initiatives by the Government, the private sector, non-governmental organisations as well as religious and social organisations will need to play a more conscious role towards this end.

Enhancing International Cooperation for Prosperity

1.61 The focus of the Government's foreign policy will be the promotion of development, trade and economic cooperation. Efforts will be taken to strengthen international cooperation at the bilateral level with Malaysia's close neighbours and other countries as well as at the multilateral level within the framework of the ASEAN, ASEAN Regional Forum, Asia-Pacific Economic Cooperation, Asia-Europe Meeting, South-South Cooperation, Organisation of the Islamic Conference, Commonwealth, Non-Aligned Movement, United Nations as well as other regional and international organisations.

1.62 Initiatives to further promote Malaysian products and search for new market opportunities overseas will be enhanced through the pursuit of closer bilateral relations with existing partners. The Government will also be opening several new missions overseas. In addition, the Government will continue to assist the private sector through government to government efforts to facilitate the private sector to venture into business arrangements with their counterparts overseas.

1.63 The promotion of closer bilateral relations with the country's neighbours will remain a high priority. In this regard, a constructive approach will be undertaken to expeditiously resolve outstanding issues including those related

to overlapping claims as well as determination of land and maritime boundaries. Bilateral relations with other Asian, African and Latin American countries as well as other traditional economic partners in Europe and the US will be further strengthened. Among others, Australia, the European Union, Japan, South Korea and the US will continue to be important in terms of trade as well as a source of investment and technology.

1.64 Increased efforts will be taken at the sub-regional level to realise the benefits of growth triangles such as the Indonesia-Malaysia-Singapore Growth Triangle, the Indonesia-Malaysia-Thailand Growth Triangle and the Brunei Darussalam-Indonesia-Malaysia-the Philippines East ASEAN Growth Area. This is expected to bring greater prosperity to less developed areas consistent with Malaysia's 'prosper thy neighbour' policy.

1.65 At the regional level, Malaysia will continue to push for the strengthening of ASEAN as a regional grouping. Functional cooperation on a sub-regional basis including the Mekong Basin Development and on an ASEAN-wide basis will continue to be supported. A strong, prosperous, consolidated and stable ASEAN provides the best guarantee for security, which is essential in pursuing economic development and progress.

1.66 In addressing the negative impact on the tourism industry as a result of incidents involving terrorism, the Government will continue to work closely with neighbouring countries as well as with the US both at the bilateral and multilateral levels. The establishment of the South East Asia Centre for Counter Terrorism in 2003 is an effort in this direction.

V. CONCLUSION

1.67 The Mid-Term Review of the Eighth Plan will focus on repositioning Malaysia so that it can more effectively manage the challenges that will arise from globalisation, increased competition and geopolitical uncertainties. This will place Malaysia on a firmer footing to expedite economic recovery and set in motion a steady and sustainable rate of economic growth. In this regard, while the major policy thrusts of the Eighth Malaysia Plan are still relevant, greater emphasis will be given to reinforcing macroeconomic fundamentals, strengthening resilience, enhancing competitiveness, promoting private investment, developing new sources of growth as well as accelerating the attainment of socio-economic objectives of eradicating poverty and restructuring society.

Chapter 2

Macroeconomic Perspective

2

MACROECONOMIC PERSPECTIVE

I. INTRODUCTION

2.01 During the review period, 2001-2003, the Malaysian economy recorded a creditable performance, despite the unprecedented volatility in the global economy as well as uncertainties arising from international terrorism, wars in Afghanistan and Iraq, and the outbreak of the Severe Acute Respiratory Syndrome (SARS). The economy was able to sustain growth due to the expansion in domestic demand brought about by fiscal stimulus and accommodative monetary policies. The promotion of domestic sources of growth also contributed to enhanced economic resilience. These policies brought about the robust expansion in consumption activities and placed the financial structure and economic fundamentals on a stronger footing.

2.02 For the remaining Plan period, 2004-2005, macroeconomic policies will be directed towards strengthening economic fundamentals and resilience as well as enhancing competitiveness to face the challenges of globalisation and liberalisation of the world economy. The Government will continue to actively pursue an endogenously-driven growth strategy, alongside the promotion of foreign direct investment (FDI). Pro-business policies will be pursued to provide an enabling environment for the private sector to perform a more aggressive role in stimulating growth and enhancing the long-term productive capacity of the economy. Policies that focus on new sources of growth and knowledge-driven strategies will continue to be emphasised. Fiscal prudence to preserve the long-term sustainability of the public sector account will continue, while monetary policy will remain accommodative to promote domestic demand and maintain low inflation and price stability. Despite better prospects expected in the domestic and global economies during the remaining Plan period, some revisions to the targets for the overall Plan period would be required on account of the slower growth achieved during the review period.

II. PROGRESS, 2001-2003

2.03 During the review period, the Gross Domestic Product (GDP) in real terms grew at an average rate of 3.0 per cent per annum compared with the Eighth Malaysia Plan (8MP) target of 7.5 per cent per annum. Although this was below expectation, the economic performance was better than that achieved by some other countries in the region. During this period, per capita Gross National Product (GNP) increased by 2.4 per cent per annum from RM13,352 in 2000 to RM14,324 in 2003. Per capita GNP in terms of purchasing power parity recorded a higher growth of 3.9 per cent per annum from US\$8,360 in 2000 to US\$9,380 in 2003 as a result of lower domestic inflation and stable exchange rate.

Aggregate Demand

2.04 Economic growth at the beginning of the review period was largely driven by domestic demand and followed by an improvement in external demand during the latter part of the period. Aggregate domestic demand expanded at an average rate of 3.9 per cent per annum, with consumption and investment growing at 5.7 per cent and 0.4 per cent, respectively. Investment growth was adversely affected by the economic slowdown at the beginning of the period. However, this was partly offset by the fiscal expansion arising from the two fiscal stimulus packages introduced in 2001. In addition, the 2002 and 2003 annual budgets introduced incentives and revised guidelines to induce domestic and foreign investment. In May 2003, the Government launched the Package of New Strategies to stimulate economic growth. It contained 90 measures to stimulate economic activities by mobilising domestic sources of growth, promoting private investment, strengthening the nation's competitiveness and ameliorating the adverse effect of SARS on the economy.

2.05 *Private investment*, which contracted during the first two years of the review period before turning around in 2003, registered a negative growth of 10.8 per cent per annum compared with the target of 19.0 per cent, as shown in *Table 2-1*. As a result, the share of private investment to total investment declined from 50.3 per cent in 2000 to 35.3 per cent in 2003. This was due to weak external demand and contraction of FDI inflows, in line with the decline in FDI worldwide and the increased competition for FDI from other developing economies.

2.06 While investments in the manufacturing and services sectors declined as a share of total private investment, the share of investment in agriculture and mining increased. In the manufacturing sector, the decline in output growth during 2001-2002 period and the presence of excess capacity contributed to the reduction in investment outlay. Capacity utilisation of the manufacturing sector averaged 78.0 per cent during the review period. In the services sector, new

TABLE 2-1
**GROSS NATIONAL PRODUCT BY EXPENDITURE
CATEGORY, 2000-2005**
(in current prices with 1987 prices in italics)

Category	RM million			Average Annual Growth Rate (%)				% of GDP		
	2000	2003	2005	8MP Target		2001- 2003	2004- 2005	2000	2003	2005
				Original	Revised					
Consumption	181,031 <i>119,238</i>	223,487 <i>140,829</i>	259,253 <i>160,209</i>	10.1 <i>7.5</i>	7.4 <i>6.1</i>	7.3 <i>5.7</i>	7.7 <i>6.7</i>	52.8 <i>56.8</i>	57.9 <i>61.4</i>	58.7 <i>62.2</i>
Private	145,355 <i>95,370</i>	169,848 <i>107,226</i>	199,306 <i>122,796</i>	10.4 <i>7.4</i>	6.5 <i>5.2</i>	5.3 <i>4.0</i>	8.3 <i>7.0</i>	42.4 <i>45.4</i>	44.0 <i>46.8</i>	45.2 <i>47.7</i>
Public	35,676 <i>23,868</i>	53,639 <i>33,603</i>	59,947 <i>37,413</i>	8.9 <i>7.7</i>	10.9 <i>9.4</i>	14.6 <i>12.1</i>	5.7 <i>5.5</i>	10.4 <i>11.4</i>	13.9 <i>14.7</i>	13.6 <i>14.5</i>
Investment	87,729 <i>64,840</i>	87,624 <i>65,574</i>	91,672 <i>67,893</i>	12.0 <i>11.3</i>	0.9 <i>0.9</i>	0.0 <i>0.4</i>	2.3 <i>1.8</i>	25.6 <i>30.9</i>	22.7 <i>28.6</i>	20.8 <i>26.4</i>
Private	44,102 <i>32,596</i>	30,944 <i>23,157</i>	39,102 <i>28,962</i>	19.7 <i>19.0</i>	-2.4 <i>-2.3</i>	-11.1 <i>-10.8</i>	12.4 <i>11.8</i>	12.9 <i>15.5</i>	8.0 <i>10.1</i>	8.9 <i>11.3</i>
Public	43,627 <i>32,244</i>	56,680 <i>42,417</i>	52,570 <i>38,931</i>	1.7 <i>1.1</i>	3.8 <i>3.8</i>	9.1 <i>9.6</i>	-3.7 <i>-4.2</i>	12.7 <i>15.4</i>	14.7 <i>18.5</i>	11.9 <i>15.1</i>
Change in Stocks	5,378 <i>2,785</i>	2,078 <i>1,583</i>	2,999 <i>2,849</i>	- <i>-</i>	- <i>-</i>	- <i>-</i>	- <i>-</i>	1.6 <i>1.3</i>	0.5 <i>0.7</i>	0.7 <i>1.1</i>
Exports of Goods & Non-factor Services	427,004 <i>246,158</i>	422,571 <i>238,310</i>	488,907 <i>271,607</i>	7.9 <i>6.8</i>	2.7 <i>2.0</i>	-0.3 <i>-1.1</i>	7.6 <i>6.8</i>	124.6 <i>117.2</i>	109.5 <i>103.9</i>	110.8 <i>105.5</i>
Imports of Goods & Non-factor Services	358,530 <i>223,062</i>	349,985 <i>217,009</i>	401,446 <i>245,155</i>	9.8 <i>7.8</i>	2.3 <i>1.9</i>	-0.8 <i>-0.9</i>	7.1 <i>6.3</i>	104.6 <i>106.2</i>	90.7 <i>94.6</i>	91.0 <i>95.2</i>
GDP at Purchasers' Value	342,612 <i>209,959</i>	385,775 <i>229,287</i>	441,385 <i>257,403</i>	7.9 <i>7.5</i>	5.2 <i>4.2</i>	4.0 <i>3.0</i>	7.0 <i>6.0</i>	100.0 <i>100.0</i>	100.0 <i>100.0</i>	100.0 <i>100.0</i>
Net Factor Payments	-28,909 <i>-19,271</i>	-26,515 <i>-18,164</i>	-33,287 <i>-22,444</i>							
GNP at Purchasers' Value	313,703 <i>190,688</i>	359,260 <i>211,123</i>	408,098 <i>234,959</i>	8.3 <i>7.9</i>	5.4 <i>4.3</i>	4.6 <i>3.5</i>	6.6 <i>5.5</i>			
GNP Per Capita at Purchasers' Value (RM)	13,352	14,324	15,598	5.9	3.2	2.4	4.4			

investments went into high value added services such as the utility, finance, transport, and information and communications technology (ICT) subsectors as well as the tourism, private education and private health subsectors. The share of investment in the agriculture sector to total investment increased from 8.5 per cent in 2000 to 11.0 per cent in 2002, boosted by the positive effect of an active promotion of private investment and other support programmes. Private sector investment in the mining sector increased its share to total investment from 10.4 per cent in 2000 to 14.0 per cent in 2002, arising from the continued investments in the oil and gas subsector.

2.07 Several investment indicators in 2002 showed that investment was on an upward trend. The total loans disbursed by the banking system to the manufacturing sector increased from RM94.1 billion in 2000 to RM104.1 billion in 2002, and the loans to the transport, storage and communications sector increased from RM8.9 billion to RM10.5 billion during the same period. New issues of private debt securities (PDS) increased from RM30.4 billion in 2000 to RM36.2 billion in 2002. Gross FDI inflows amounted to RM18.8 billion in 2001 and RM20.5 billion in 2002 despite the decline in global FDI inflows by 49.3 per cent and 27.0 per cent, respectively.

2.08 The expansionary fiscal policy adopted by the Government during the review period contributed to higher growth in *public investment*, averaging 9.6 per cent per annum compared with the target of 1.1 per cent. This involved the introduction of stimulus packages, which focused on increasing productive capacity, enhancing productivity and competitiveness as well as improving access to social amenities. Among the projects implemented in the stimulus packages were the construction of schools and computer laboratories, universities and community colleges, public sector housing and rural development. The share of public investment to GDP rose from 15.4 per cent in 2000 to 18.5 per cent in 2003.

2.09 *Private consumption* made an important contribution to growth during the review period, expanding at an average rate of 4.0 per cent per annum in real terms. It grew at 2.4 per cent in 2001, and increased to 4.4 per cent in 2002 and 5.2 per cent in 2003, following better consumer confidence in an environment of improving external demand, stable employment, and supportive fiscal and monetary policies. The measures to promote private consumption included maintaining favourable interest rates, revising lending guidelines, reducing income tax rates between one and two percentage points for all income bands, with the maximum taxable bracket in individual income tax reduced from 29 per cent to 28 per cent. In addition, the criteria for public sector employees to obtain car

loans were relaxed and the contribution of employees to the Employees Provident Fund (EPF) reduced. The share of private consumption to GDP rose from 45.4 per cent in 2000 to 46.8 per cent in 2003.

2.10 *Public consumption* in real terms also recorded higher growth at an average rate of 12.1 per cent per annum compared with the Plan target of 7.7 per cent. This could be attributed to higher Federal Government expenditure on emoluments as well as supplies and services, particularly in 2001 and 2002, which witnessed growth rates of 18.7 per cent and 12.0 per cent, respectively. This increased expenditure was in line with efforts to upgrade the government administrative machinery and enhance its delivery system, improve the maintenance of government buildings, and implement e-government. In addition, the expenditure on emoluments was higher following the 10 per cent salary adjustment and bonus payments to the 1,026,100 public sector employees as well as the implementation of the new salary scheme, the Malaysian Remuneration System in November 2002. As a result, the share of public consumption to GDP increased from 11.4 per cent in 2000 to 14.7 per cent in 2003.

2.11 The *exports of goods and non-factor services* in real terms declined at an average rate of 1.1 per cent per annum compared with the targeted growth of 6.8 per cent due to weak external demand. In nominal terms, after recording a double-digit growth rate in 2000, gross exports contracted by 10.4 per cent in 2001 due to the decline in world demand for electronic products as well as the slowdown in the major economies of the United States, European Union and Japan. Gross exports turned around to register growth rates of 6.0 per cent in 2002 and 4.1 per cent in 2003. During the review period, Malaysia maintained its position as the 18th largest exporting nation. The period also witnessed increased exports to the non-traditional markets, particularly China, which became the fifth largest export destination for Malaysia in 2002 from the tenth position in 2000. The export of goods, which accounted for about 86 per cent of total exports of goods and non-factor services, declined by 0.5 per cent per annum, due to major decline in the export of manufactured products in 2001. By comparison, the export of services grew by 0.4 per cent per annum, partly from the contribution of travel and education, which increased from RM19.0 billion in 2000 to RM22.9 billion in 2003.

2.12 *Imports of goods and non-factor services* in real terms also declined at an average rate of 0.9 per cent per annum compared with the target of 7.8 per

cent, largely due to the substantial decline of 8.6 per cent in 2001 as a result of the slowdown in the export-oriented manufacturing activities which dampened the demand for intermediate and capital goods. In 2002, the recovery in the external sector contributed to stronger domestic demand and led to higher imports of intermediate and capital goods, particularly in manufacturing, communications, and the oil and gas industry. The import intensity, measured in terms of the import of goods and non-factor services as percentage to aggregate demand, declined from 51.5 per cent in 2000 to 48.6 per cent in 2003, reflecting an increase in local content.

Total Factor Productivity

2.13 Total factor productivity (TFP) contributed 25.5 per cent to GDP growth, lower than the Plan target of 37.2 per cent, as shown in *Table 2-2*. This was a result of the economy growing below its long-term potential brought about by the slowdown in private investment and the weak demand for exports. The contribution of labour was 40.6 per cent and capital 33.9 per cent compared with the target of 21.5 per cent and 41.3 per cent, respectively, indicating that economic growth continued to be input-driven during the review period. Nevertheless, an assessment of performance at the firm level in selected manufacturing industries indicated that firms with higher TFP were the older, larger, and technologically more advanced firms as well as those that were exporting and involved FDI. The industries with high productivity growth were chemicals, electronics as well as rubber and plastics, while furniture, machinery and food processing recorded medium productivity growth. Low productivity performance was registered in the textiles, garments and autoparts industries.

2.14 Despite the smaller contribution of TFP to growth, the economy continued its transition to higher value added activities, with the public and private sector continuing to implement measures to enhance productivity. Among these were the increased expenditure on research and development (R&D), intensification of education and training programmes, retraining of retrenched workers, enhancing the utilisation of ICT, improving management techniques and organisational effectiveness, and expediting the granting of patents and utility innovation. During the review period, the number of patents granted increased by 3.6 times from 405 patents in 2000 to 1,492 patents in 2002, reflecting improved innovative capability within the economy.

TABLE 2-2

CONTRIBUTIONS OF FACTORS OF PRODUCTION, 1996-2005

Factor	7MP, 1996-2000		8MP Original Target, 2001-2005		2001-2003		8MP Revised Target			
							2004-2005		2001-2005	
	% Contribution	% of Total	% Contribution	% of Total	% Contribution	% of Total	% Contribution	% of Total	% Contribution	% of Total
GDP	4.7	100.0	7.5	100.0	3.0	100.0	6.0	100.0	4.2	100.0
Labour	1.2	25.0	1.6	21.5	1.2	40.6	1.7	28.6	1.4	32.6
Capital	2.3	50.2	3.1	41.3	1.0	33.9	2.6	43.0	1.7	40.0
TFP ¹	1.2	24.8	2.8	37.2	0.8	25.5	1.7	28.4	1.1	27.4

Note: ¹ Total factor productivity (TFP) is estimated using the Cobb-Douglas production function by subtracting from output growth, the portion of growth which is accounted for by increases in labour and capital.

Sectoral Output

2.15 During the review period, the economy experienced broad-based growth in all sectors of the economy although at rates lower than the Plan targets. The economic structure continued its transformation with the services sector increasing its leading role in generating economic growth. There was also greater application of knowledge in the major sectors of the economy supported by e-activities and the Internet.

2.16 The *agriculture, forestry, livestock and fishing sector* recorded an average growth of 1.5 per cent per annum during the review period, lower than the Plan target of 3.0 per cent, as shown in *Table 2-3*. Growth was contributed by the food crops subsector, which grew at 4.0 per cent per annum. Industrial crops recorded a negative growth of 0.1 per cent per annum. In the food crops subsector, vegetables and fruits recorded an impressive growth performance primarily due to the expansion in cultivated areas including those jointly undertaken by the public and private sectors, such as the Permanent Food Production Parks and satellite farming areas. All livestock subsectors achieved remarkable progress arising from higher demand from end-consumers and the export market. Beef recorded the highest growth of 23.2 per cent per annum. Efforts to modernise the fisheries subsector as well as increased surveillance to ensure that local fishing vessels land their catch in Malaysia further contributed to the development of the subsector, which recorded an average growth of 5.4 per cent per annum.

TABLE 2-3

GROSS DOMESTIC PRODUCT BY INDUSTRY OF ORIGIN, 2000-2005

(RM million in 1987 prices)

Sector	2000	%	2003	%	2005	%	Average Annual Growth Rate (%)			Contribution to Growth (%)		
							8MP Target		2001-2003	2004-2005	2001-2003	2004-2005
							Original	Revised				
Agriculture, Forestry, Livestock & Fishing	18,062	8.6	18,869	8.2	19,901	7.7	3.0	2.0	1.5	2.7	0.1	0.2
Mining & Quarrying	15,385	7.3	16,545	7.2	17,775	6.9	3.3	2.9	2.5	3.7	0.2	0.3
Manufacturing	67,250	32.0	70,225	30.6	81,651	31.7	8.9	4.0	1.5	7.8	0.5	2.4
Construction	6,964	3.3	7,461	3.3	7,891	3.1	6.5	2.5	2.3	2.8	0.1	0.1
Electricity, Gas & Water	8,278	3.9	9,398	4.1	10,958	4.3	7.5	5.8	4.3	8.0	0.2	0.3
Transport, Storage & Communications	16,858	8.0	19,398	8.5	22,320	8.7	9.1	5.8	4.8	7.3	0.4	0.6
Wholesale & Retail Trade, Hotels & Restaurants	31,116	14.8	33,445	14.6	37,153	14.4	7.7	3.6	2.4	5.4	0.4	0.8
Finance, Insurance, Real Estate & Business Services	26,755	12.7	32,973	14.4	37,520	14.6	8.5	7.0	7.2	6.7	1.0	1.0
Government Services	14,332	6.8	16,631	7.3	17,862	6.9	3.0	4.5	5.1	3.6	0.4	0.3
Other Services	16,070	7.7	18,341	8.0	20,488	8.0	9.0	5.0	4.5	5.7	0.4	0.5
(-) Imputed Bank Service Charges	15,832	7.5	19,680	8.6	22,518	8.7	6.5	7.3	7.5	7.0	0.6	0.6
(+) Import Duties	4,721	2.2	5,681	2.5	6,401	2.5	4.0	6.3	6.4	6.1	0.1	0.2
GDP at Purchasers' Value	209,959	100.0	229,287	100.0	257,403	100.0	7.5	4.2	3.0	6.0	3.0	6.0
Primary Sector	33,447	15.9	35,414	15.4	37,676	14.6	3.1	2.4	1.9	3.1	0.3	0.5
Secondary Sector	74,215	35.3	77,685	33.9	89,542	34.8	8.7	3.8	1.5	7.4	0.5	2.5
Tertiary Sector	113,409	54.0	130,186	56.8	146,301	56.8	7.7	5.2	4.7	6.0	2.6	3.4
Adjusted for Import Duties less Imputed Bank Service Charges												
Primary Sector	31,880	15.2	33,519	14.6	35,611	13.8	3.1	2.2	1.7	3.1	0.3	0.4
Secondary Sector	70,738	33.7	73,529	32.1	84,634	32.9	8.7	3.7	1.3	7.3	0.4	2.4
Tertiary Sector	107,341	51.1	122,239	53.3	137,158	53.3	7.7	5.0	4.4	5.9	2.3	3.2

2.17 In the industrial crops subsector, palm oil remained as the major contributor accounting for about one-third of total agriculture sector output. Despite the lower production of crude palm oil in 2002 due to the transitional lower biological yield, production rebounded in 2003 to record an average growth of 4.2 per cent per annum during the review period. In the rubber subsector, the higher prices during the 2002-2003 period motivated increased production, especially among the smallholders, who contributed about 85 per cent of the total rubber production in the country and accounted for the overall growth of 0.4 per cent during the review period. The forestry subsector also recorded a decline due to the reduction of the annual allowable cut rate to 272,870 hectares per year, in line with the commitment made under the International Tropical Timber Organisation on the implementation of sustainable forest management.

2.18 During the review period, the *mining sector* grew at an average of 2.5 per cent per annum compared with the target growth rate of 3.3 per cent. Growth was contributed by the increasing domestic utilisation of natural gas and a stronger external demand for liquefied natural gas (LNG). With the completion of the Third Malaysia Liquefied Natural Gas (MLNG 3) in Bintulu, Sarawak in 2003, the production of LNG increased from 15.4 million tonnes in 2000 to 18.0 million tonnes in 2003. During the period, crude oil production averaged 598,760 barrels per day (bpd), which was in line with the production target of 600,000 bpd set under the National Depletion Policy.

2.19 The overall growth of the *manufacturing sector* during the review period averaged 1.5 per cent per annum compared with the Plan target of 8.9 per cent. The slower growth was due to the 5.8 per cent contraction in 2001, which brought down the average growth rate despite the growth of 4.0 per cent and 6.5 per cent recorded in 2002 and 2003, respectively. Since the performance of the export-oriented industries¹ was adversely affected by the economic slowdown in the major industrial countries, the domestic-oriented industries², which grew at 5.4 per cent per annum, were the main contributor to growth for the sector. The higher growth of the domestic-oriented industries benefited from the positive effects of the fiscal stimulus programme and low interest rates. The transport equipment industry grew at an average rate of 8.4 per cent per annum following strong demand for passenger cars, particularly during the 2001-2002 period. The

¹ This comprises electrical and electronics, chemicals, wood products, textiles and apparel, palm oil and rubber products industries.

² This comprises construction-related, fabricated metal, food processing, transport equipment, beverages and tobacco, petroleum products, paper products and other manufacturing industries.

food processing industry grew at an average rate of 6.1 per cent per annum in response to strong consumer demand, while efforts to stimulate the construction sector, particularly residential housing, contributed to the increased value added of the construction-related industries. The overall capacity utilisation in the domestic-oriented industries continued to remain high.

2.20 In the export-oriented industries, the electronics industry remained the largest contributor to the overall manufacturing sector value added, accounting for 26.5 per cent of the sectoral output in 2003. The turnaround since 2002 was driven largely by the improvement in global demand for semiconductors, particularly chips for wireless applications due to the substantial increase in new mobile phones subscribers as well as new models of cellular phones. Growth in the petrochemical industry was propelled by efforts undertaken by *Petroliaam Nasional Berhad* (PETRONAS), particularly the establishment of the integrated petrochemical complexes in Kertih in Terengganu and Gebeng in Pahang, which provided the basic feedstock and centralised utility facilities for the production of petrochemical products such as ethylene, propylene and their derivatives.

2.21 The review period also witnessed several manufacturers moving up the value chain from assembly and packaging activities to full turnkey design and test solutions. As a result, Malaysia's attractiveness as a high value added production centre for electronic multinational corporations was enhanced. Several export-oriented industries also took advantage of the dampened business environment to consolidate and streamline their operations for the increasingly competitive global market. This included the relocation of labour-intensive industries and lower-end operations to lower-cost producing countries. At the same time, several manufacturers transferred their high-end operations to Malaysia to take advantage of the well-developed manufacturing facilities, competitive incentives as well as well-trained workforce proficient in English.

2.22 The *construction sector* recorded an average growth of 2.3 per cent per annum. Growth in the residential and non-residential subsectors was due to the continued focus of the Federal Government in the construction of roads, schools, community colleges, universities and public low-cost houses. The demand for private sector housing remained strong, as a result of home ownership campaigns, waiver of stamp duty as well as attractive financing packages offered by financial institutions. Several privatised infrastructure projects were also implemented such as the Kajang Ring Road in Selangor and the Butterworth Outer Ring Road in Pulau Pinang, in addition to the development of Putrajaya. Construction activity in the purpose-built office and retail space subsectors remained weak due to the property overhang.

2.23 The *services sector* continued to expand at an average rate of 4.7 per cent during the review period, supported by strong domestic demand and improved trade-related activities. The strong growth was largely contributed by the intermediate services subsectors³, which grew at an average of 6.3 per cent per annum, followed by final services⁴, which grew at 3.7 per cent per annum. Within intermediate services, the finance, insurance, real estate and business services subsector grew at 7.2 per cent per annum. Growth was mainly supported by the increase in the collection of insurance premiums and the expansion in bank lending activities, particularly for the purchase of residential property and passenger cars. The consolidation of the banking institutions into 10 major banks, and the introduction of new banking services and innovation, which led to the increased usage of e-banking and e-commerce, contributed to higher productivity in the subsector. The transport and communications subsector, which grew by 4.8 per cent per annum, was buoyed by the strong expansion in transport activities, such as the trade-related and transshipment activities undertaken by Port Klang in Selangor and Port of Tanjung Pelepas (PTP) in Johor. The installation of state-of-the art facilities as well as improvements in the quality of services enabled the Malaysian ports to expand their handling and storage capacities and capture a larger share of regional cargo and transshipment. The air transportation segment also recorded stronger performance in terms of cargo, although in 2003, the passenger sector was affected by the reduction in the frequency of flights to the SARS-affected countries.

2.24 In the final services group, the government services subsector recorded a higher average growth rate of 5.1 per cent per annum compared with the Plan target of 3.0 per cent. The higher growth was contributed by the expenditure on emoluments arising from bonus payments as well as salary increases for all government servants. The electricity, gas and water subsector grew at 4.3 per cent per annum arising from increased consumption of electricity by the industrial, commercial and residential consumers. Measures to assist the tourism-related industry affected by the outbreak of SARS in early 2003 managed to cushion the negative impact on the wholesale and retail trade, hotels and restaurants subsector to record an average growth of 2.4 per cent per annum during the review period. The other services subsector also recorded a moderate growth of 4.5 per cent per annum, led by the expansion of new sources of growth, especially in private higher education and private healthcare services. As at June 2003, 20

³ This comprises transport, storage and communications as well as finance, insurance, real estate and business services.

⁴ This comprises electricity, water and gas; wholesale and retail trade, hotels and restaurants; government services; and other services.

private universities and 516 private colleges were established, drawing foreign students particularly from China and Indonesia. In the private healthcare industry, there were 33 participating private hospitals catering to patients mainly from Brunei Darussalam, Indonesia, Saudi Arabia and Singapore.

Balance of Payments

2.25 The surplus in the *current account* of the balance of payments was maintained during the review period and remained large at RM36.8 billion in 2003, equivalent to 10.2 per cent of GNP, as shown in *Table 2-4*. This was mainly due to the sustained surplus in the merchandise account brought about by robust export performance. The merchandise surplus was complemented by the narrowing deficit in the services account arising from the higher surplus in the travel account including foreign exchange earnings from education. During the first two years of the review period, annual tourism receipts increased significantly to over RM26.0 billion, accruing from the record number of tourist arrivals that surpassed the average monthly mark of one million, coupled with longer average length of stay and higher per capita spending. With respect to education, the enrolment of foreign students increased by 37.8 per cent from 26,469 students in 2000 to 36,466 students in 2002. The net outflow in current transfers increased to RM9.3 billion in 2003, mainly due to higher remittances by foreign workers, whose number rose from 813,300 in 2000 to 1,225,400 in 2003.

2.26 The improvement in the services account indicated the success of policies and strategies that were adopted to strengthen the services sector. The tourism industry benefited from the strategy to diversify into new markets in Eastern Europe, West Asia, China and India as well as into niche areas through the provision of a wider variety of tourism products including the promotion of Malaysia as an international shopping and major events destination, eco-tourism, agro-tourism, as well as sports and health tourism. Ongoing efforts to further develop Malaysia as a regional centre of educational excellence led to the marked increase in the number of foreign students. Other measures to strengthen the services sector included adopting an integrated approach to move up the value chain by expanding into R&D, designing, branding, franchising, marketing and warehousing.

TABLE 2-4

BALANCE OF PAYMENTS, 2000-2005

Item	RM million				% to GNP				8MP Target (Cumulative)		% to GNP	
	2000	2003	2005		2000	2003	2005		Original	Revised	Original	Revised
Goods & Services	68,474	72,585	87,461		21.8	20.2	21.4		275,890	362,995	14.0	20.2
Goods	79,144	81,043	94,922		25.2	22.6	23.3		339,051	401,331	17.3	22.4
Exports	374,033	368,915	425,442		119.2	102.7	104.2		2,343,089	1,876,063	119.3	104.6
Imports	294,889	287,872	330,520		94.0	80.1	81.0		2,004,038	1,474,732	102.0	82.2
Services	-10,670	-8,458	-7,461		-3.4	-2.4	-1.8		-63,162	-38,336	-3.2	-2.1
Transportation	-11,736	-11,297	-12,951		-3.7	-3.1	-3.2		-64,054	-59,919	-3.3	-3.3
Travel	11,158	13,308	17,588		3.6	3.7	4.3		62,604	80,083	3.2	4.5
Other Services	-10,030	-10,369	-11,863		-3.2	-2.9	-2.9		-61,519	-57,714	-3.1	-3.2
Government Transactions	-62	-100	-235		0.0	0.0	-0.1		-193	-786	0.0	0.0
Income	-28,909	-26,515	-33,287		-9.2	-7.4	-8.2		-158,910	-139,006	-8.1	-7.7
Compensation of Employees	-975	-1,048	-2,058		-0.3	-0.3	-0.5		-6,890	-6,562	-0.4	-0.4
Investment Income	-27,934	-25,467	-31,229		-8.9	-7.1	-7.7		-152,020	-132,445	-7.7	-7.4
Current Transfer	-7,313	-9,303	-11,194		-2.3	-2.6	-2.7		-40,961	-49,169	-2.1	-2.7
Current Account	32,252	36,767	42,980		10.3	10.2	10.5		76,020	174,820	3.9	9.7
Capital Account												
Financial Account	-23,848	-12,500			-7.6	-3.5						
Direct Investment	6,694	3,500			2.1	1.0						
Abroad	-7,699				-2.5							
In Malaysia	14,393				4.6							
Portfolio Investment	-9,395				-3.0							
Other Investment	-21,147	-16,000			-6.7	-4.5						
Official Sector	3,936				1.3							
Private Sector	-25,083				-8.0							
Errors & Omissions	-12,107	-9,020			-3.9	-2.5						
Overall Balance	-3,703	15,247			-1.2	4.2						
Reserve Assets¹												
Central Bank Reserves	113,541				36.2							
Months of Retained Import	4.5											

Note: ¹ Refers to the end of period.

2.27 The *overall balance* shifted from a deficit of RM3.7 billion in 2000 to a surplus of RM3.7 billion in 2001, and the surplus continued to expand during the rest of the review period with the continued inflows of long-term capital and a lower net outflow of short-term capital due to the widening of interest differentials in favour of Malaysia. The improvements in the overall balance resulted in the strengthening of the external reserve position to RM146.9 billion or US\$38.7 billion, equivalent to 6.0 months of retained imports at the end of August 2003.

Price Development

2.28 The economy continued to enjoy low inflation and stable prices despite the increase in bus fares, telephone rates and toll tariffs as well as the prices of petrol and diesel during the review period. Prices as measured by the *Consumer Price Index* (CPI) registered an average growth of 1.6 per cent per annum during 2001-2002 period, as shown in *Table 2-5*. The low rate of inflation was achieved through the effective implementation of fiscal and monetary policies as well as administrative measures undertaken by the Government, including the enforcement of price tagging and monitoring the prices of goods. The low rate of inflation was also attributed to the stability of the exchange rate, low imported inflation and excess capacity in several sectors of the economy.

2.29 The rural CPI rose at an average rate of 1.4 per cent per annum, lower than the national average. This was due to lower prices for food; gross rent, fuel and power; medical care and health expenses; transport and communications; and recreation, entertainment, education and culture services in the rural areas. The CPI for urban areas was 0.1 percentage point higher than the national average, reflecting higher prices for food; medical care and health expenses; transport and communications; and miscellaneous goods and services.

2.30 Producer prices, as measured by the *Producer Price Index* (PPI), declined at an average of 0.4 per cent for the 2001-2002 period. This was due to the sharp decline of 5.5 per cent in the prices of mineral fuels, lubricants and related materials as well as price decline in chemicals and related products; manufactured goods classified chiefly by materials; machinery and transport equipment; and miscellaneous manufactured articles. At the same time, PPI for local production and imports also declined at an average of 0.4 per cent per annum. The GDP

TABLE 2-5

PRICE DEVELOPMENTS, 2000-2002

<i>Item</i>	<i>2000</i>	<i>Growth (%)</i>	<i>2001</i>	<i>Growth (%)</i>	<i>2002</i>	<i>Growth (%)</i>	<i>Average Annual Growth Rate (%), 2001-2002</i>
Consumer Price Index (2000=100)	100.0	1.6	101.4	1.4	103.2	1.8	1.6
of which:							
Food	100.0	1.9	100.7	0.7	101.4	0.7	0.7
Gross Rent, Fuel & Power	100.0	1.5	101.4	1.4	102.1	0.7	1.0
Medical Care & Health Expenses	100.0	2.0	102.9	2.9	105.4	2.4	2.6
Transport & Communications	100.0	2.1	103.6	3.6	110.4	6.5	5.1
Consumer Price Index by Region (2000=100)							
Rural	100.0	1.4	101.3	1.3	102.8	1.5	1.4
Urban	100.0	1.6	101.4	1.4	103.5	2.0	1.7
Core Consumer Price Index (2000=100)¹	100.0	1.7	101.5	1.5	103.5	2.0	1.7
Consumer Price Index by Lower Income Groups (2000=100)²	100.0	1.5	101.2	1.2	102.6	1.4	1.3
Producer Price Index (1989=100)							
of which:							
Domestic Economy	131.8	3.1	125.2	-5.0	130.7	4.5	-0.4
Local Production	135.3	3.6	127.0	-6.1	134.2	5.7	-0.4
Imports	118.1	1.1	117.8	-0.3	117.0	-0.6	-0.4
GDP Deflator (1987=100)	163.2	4.9	158.7	-2.7	164.5	3.6	0.4
<i>Notes:</i>							
¹ Includes index for food; clothing and footwear, gross rent, fuel and power; and transport and communications.							
² Refers to income groups earning less than RM1,500 monthly.							

deflator, which measures prices of consumption and investment goods as well as export and import items, was stable at an average rate of 0.4 per cent during the period.

Resource Balance

2.31 Gross national savings as a percentage to GNP declined from 40.0 per cent in 2000 to 35.2 per cent in 2003, as shown in *Table 2-6*. This level is still higher than the average level recorded by the developing countries and is comparable with the high saving economies. Public sector savings increased by 7.5 per cent per annum, reflecting a much stronger revenue position. Private sector savings, recorded a negative growth of 6.2 per cent per annum during the review period

due to the sharp decline in 2001 despite the recovery achieved during the 2002-2003 period. This recovery was due to improved cash flows from the implementation of fiscal measures, increased disposable incomes, stronger external demand and better commodity prices. Several measures were adopted to promote savings, including the *Minggu Dana Amanah Saham*, the *Bon Simpanan Malaysia* for senior citizens and charity organizations, and *Amanah Saham Gemilang*. Deposits in the banking system increased by 0.6 per cent per annum for the 2001-2002 period while savings in other institutions such as the EPF and *Lembaga Tabung Haji* increased by 9.2 per cent per annum.

2.32 During the review period, gross investment including change in stock declined by 1.2 per cent per annum, brought about largely by the sharp fall in private sector investment in 2001. Investment as a percentage to GNP declined from 29.7 per cent in 2000 to 25.0 per cent in 2003. As a result, the surplus of resource balance as a percentage to GNP was 9.1 per cent for the review period.

TABLE 2-6
RESOURCE BALANCE, 2000-2005
(% to GNP)

Sector	2000	2003	2005	8MP Target			
				Original	Revised	2001-2003	2004-2005
<i>Public</i>							
Savings	17.7	19.2	16.3	14.0	18.1	18.5	17.5
Investment	14.8	16.2	13.3	12.1	15.2	16.1	14.0
Resource Balance	2.9	3.0	3.0	1.9	2.9	2.4	3.5
<i>Private</i>							
Savings	22.3	16.0	17.4	21.3	16.4	16.3	16.6
Investment	14.9	8.8	9.9	19.3	9.6	9.6	9.6
Resource Balance	7.4	7.2	7.5	2.0	6.8	6.7	7.0
<i>Total</i>							
Savings	40.0	35.2	33.7	35.3	34.5	34.8	34.1
Investment	29.7	25.0	23.2	31.4	24.8	25.7	23.6
Resource Balance	10.3	10.2	10.5	3.9	9.7	9.1	10.5

TABLE 2-7							
INCOME EFFECT OF CHANGES IN TERMS OF TRADE, 2000-2005							
Item	2000	2003	2005	Average Annual Growth Rate (%)			
				8MP Target			
				Original	2001-2003	Revised	
				2001-2005		2004-2005	2001-2005
Exports Price Index (1987=100)	173.5	177.3	180.2	1.0	0.7	0.8	0.8
Imports Price Index (1987=100)	160.7	161.3	163.8	1.8	0.1	0.7	0.4
Terms of Trade (1987=100)	107.9	109.9	110.1	-0.8	0.6	0.1	0.4
Gross Domestic Product (RM million)							
in Constant 1987 Prices	209,959	229,287	257,403	7.5	3.0	6.0	4.2
in Real Purchasing Power	229,465	252,993	284,361	6.4	3.3	6.0	4.4

Terms of Trade

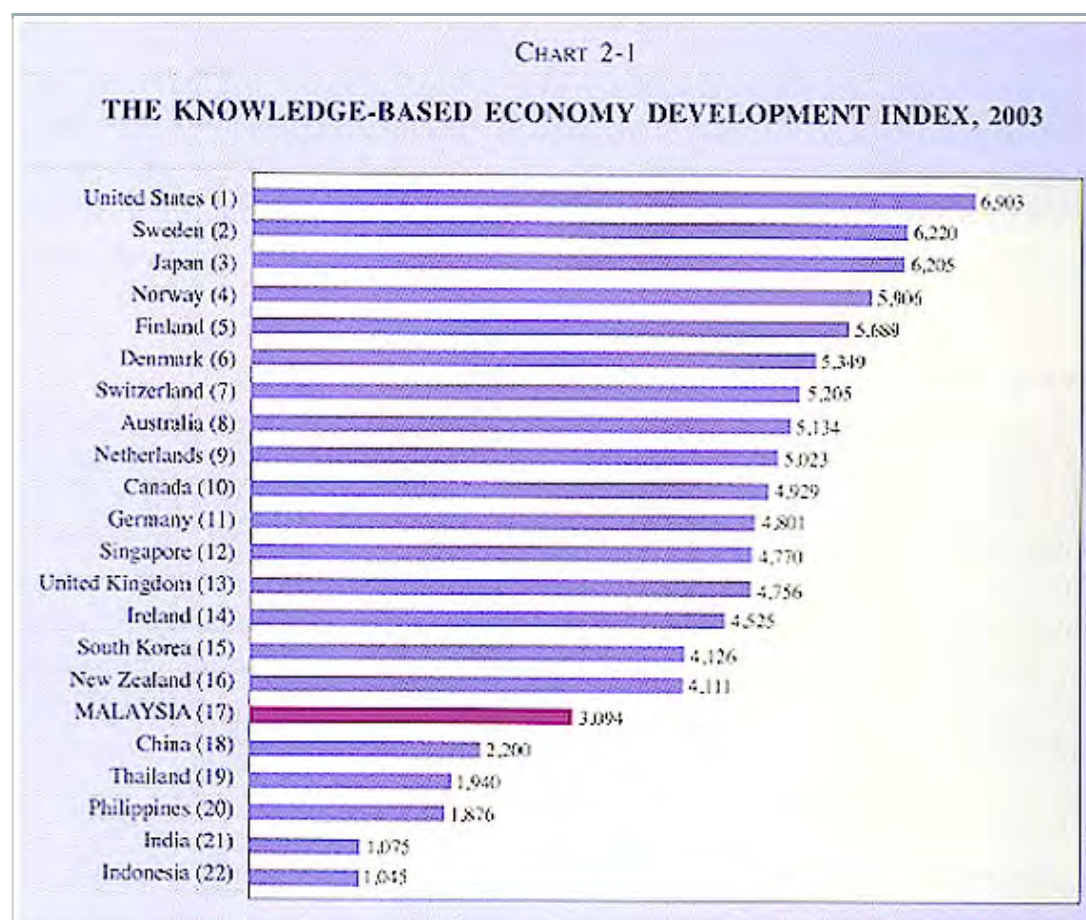
2.33 During the review period, the terms of trade improved at an average rate of 0.6 per cent per annum with export prices increasing by 0.7 per cent per annum compared with a 0.1 per cent increase in import prices, as shown in *Table 2-7*. The improvement in export prices was due to the 0.9 per cent per annum increase in prices of commodity exports, contributed mainly by prices of rubber, crude palm oil and cocoa. The improved terms of trade contributed to a higher GDP in real purchasing power of 3.3 per cent per annum from RM229.5 billion in 2000 to RM253.0 billion in 2003.

Knowledge-Based Economy

2.34 To accelerate the transformation to a knowledge-based economy, the Government launched the Knowledge-Based Economy Master Plan (KEMP) in 2002. The KEMP reiterates the strategic thrusts outlined in the Third Outline Perspective Plan, 2001-2010, and contains 136 recommendations encompassing human resource development, infostructure, incentives, science and technology development, reorientation of the private and public sectors as well as addressing

the digital divide. The Government also monitored the progress towards a knowledge-based economy on the basis of the Knowledge-Based Economy Development Index⁵ (KDI).

2.35 In terms of the KDI, Malaysia remained at 17th position in 2003 similar to that in 2000, as shown in *Chart 2-1*. Malaysia continued to remain ahead of the developing regional economies.



⁵ The KDI was developed to assess Malaysia's readiness to become a knowledge-based economy. The KDI for 2000 was presented in Chapter 5 of the OPP3, 2001-2010. It compares Malaysia's position relative to 21 other countries, which are mainly developed. The KDI is derived from selected key factors required to drive a knowledge-based economy, namely, computer infrastructure, infostructure, education and training as well as R&D and technology.

2.36 In terms of the areas covered, Malaysia's ranking improved for education and training, was unchanged for computer infrastructure and infostructure, and declined for R&D and technology. Improvement in education and training was mainly attributed to higher current public expenditure on education as well as better literacy rate, pupil-teacher ratio in primary schools and enrolment in secondary schools. In respect of computer infrastructure and connectivity, Malaysia's position improved for computers in use as a share of worldwide computers in use, the number of mobile telephone subscribers per 1,000 inhabitants and international call costs. For R&D and technology, although increases were recorded in the number of scientists and engineers involved in R&D activities and the number of R&D personnel nationwide, it was weighed down by the decline in other indicators, such as the share of high-technology exports to manufactured exports, total expenditure on R&D as a percentage of GDP and the number of patents granted to residents.

III. PROSPECTS, 2004-2005

The World Economy

2.37 The prospects for the world economy is expected to improve, with *world output* growing at an average rate of 4.2 per cent per annum in 2004-2005, as shown in *Table 2-8*. During this period, the economies in the Organisation of Economic Cooperation and Development are projected to grow at an average of 2.8 per cent, with the US economy growing at a higher rate of 3.6 per cent. The Euro area is expected to grow moderately at an average rate of 2.1 per cent while growth in Japan is expected at 1.5 per cent due to weak domestic demand.

2.38 Developing countries are expected to grow faster at 5.8 per cent per annum during the period. The ASEAN-4, namely, Indonesia, Malaysia, the Philippines and Thailand, is projected to grow at an average rate of 4.7 per cent, as a result of the gradual global recovery in the electronics sector. Rising intra-regional trade will also contribute to this growth, as the ASEAN Free Trade Area will offer an enlarged market with a potential 500 million consumers. In addition, cooperation with China through the ASEAN-China Free Trade Area (FTA) is expected to open up a market of more than 1.8 billion consumers with a combined GDP of US\$1.5 to US\$2.0 trillion and a two-way trade of US\$1.2 trillion.

TABLE 2-8

WORLD ECONOMIC OUTLOOK, 2001-2005
(average annual growth rate, %)

	2001	2002	2003	2004	2005	2004-2005
WORLD OUTPUT	2.4	3.0	3.2	4.1	4.3	4.2
High-Income Countries	1.0	1.8	1.8	2.9	3.0	3.0
OECD Countries	0.8	1.8	1.9	3.0	2.5	2.8
United States	0.3	2.4	2.6	3.9	3.3	3.6
Euro Area	1.5	0.9	0.5	1.9	2.2	2.1
Japan	0.4	0.2	2.0	1.4	1.6	1.5
Non-OECD Countries	-0.7	2.3	3.7	5.3	5.0	5.2
Developing Countries	4.1	4.6	5.0	5.6	5.9	5.8
ASEAN-4 ¹	2.9	4.3	4.1	4.4	5.0	4.7
Sub-Saharan Africa	3.5	3.0	3.1	5.0	4.9	5.0
South Asia	4.0	4.6	5.5	5.8	5.5	5.7
Europe & Central Asia	2.2	4.6	4.3	4.5	4.1	4.3
Latin America & the Caribbean	0.3	-0.8	1.8	3.7	3.8	3.8
Transition Countries of Europe & Central Asia	5.1	4.2	4.9	4.7	4.5	4.6
WORLD MERCHANDISE TRADE VOLUME	0.1	3.2	2.9	5.5	6.6	6.1
Imports						
High-Income Countries	-1.0	2.2	2.8	4.8	6.3	5.6
Developing Economies	1.9	6.0	5.1	7.8	8.0	7.9
Exports						
High-Income Countries	-0.8	2.2	1.6	5.7	6.4	5.8
Developing Economies	2.7	6.5	4.3	6.9	7.4	7.2
CONSUMER PRICES						
Advanced Economies	2.2	1.5	1.8	1.3	2.0	1.7
Developing Economies	5.8	5.3	5.9	4.9	4.0	4.5
Countries in Transition	16.2	11.1	9.7	9.1	4.9	7.0

Note: ¹ Includes Indonesia, Malaysia, the Philippines and Thailand.

Source: International Monetary Fund (IMF) World Economic Outlook, September 2003 and various sources.

2.39 In Latin America and the Caribbean, growth is estimated to accelerate to 3.8 per cent per annum, aided by the easing of external financial constraints. The developing economies of Europe and Central Asia are projected to register stronger growth of 4.3 per cent due to higher investment rates and greater macroeconomic stability. In Sub-Saharan Africa, GDP growth is expected to

expand largely because of the improvements in the security situation, continued strengthening of macroeconomic policies and stability, rising commodity prices, and debt relief under the Highly Indebted Poor Countries Initiative. The South Asian countries are also expected to register stronger growth mainly due to the improvements in the political and policy environment.

2.40 The growth in world output is expected to be achieved in an environment of low *inflation* with the adoption of non-inflationary monetary policies in most countries. The inflation rate is expected to stabilise at an average rate of 1.7 per cent per annum in advanced economies and 4.5 per cent in developing economies while decreasing steadily in transition economies. Global inflationary pressures will remain subdued as technological advancements lead to higher productivity and lower cost of production.

2.41 The volume of *world merchandise trade* is expected to improve in 2004-2005, growing at an average rate of 6.1 per cent as the global economy recovers. Greater globalisation of the production of parts and components in locations where it can be performed at the lowest cost will continue to fuel growth in global trade. Trade in services will continue to grow at a faster rate than merchandise trade with FDI inflows increasingly channelled to the services sector. The liberalisation of international trade under the initiatives of the World Trade Organisation will require greater regional cooperation as well as the balancing of interest of both the developed and developing countries.

The Malaysian Economy

Macroeconomic Strategies

2.42 Macroeconomic policies during the remaining years of the Plan will be directed towards achieving the objectives of the Eighth Malaysia Plan of sustainable growth with resilience. Sound macroeconomic management will continue to be pursued together with efforts to strengthen the governance and resilience of the financial and corporate sectors. In addition, efforts will be intensified to develop the knowledge-based economy and accelerate the development of growth sectors. The key strategic measures that will be pursued for the next two years are as follows:

- ❑ *increasing competitiveness through productivity enhancement, raising the quality of the workforce and greater application of knowledge;*

- ❑ *strengthening resilience through sound economic fundamentals and strong financial and corporate sectors;*
- ❑ *stimulating private domestic investment as well as attracting quality FDI to boost growth and raise the productive capacity of the economy;*
- ❑ *promoting new sources of growth in the manufacturing and services sectors to broaden the economic base;*
- ❑ *revitalising the agriculture sector to increase its productivity and economic returns;*
- ❑ *pursuing sound macroeconomic management with fiscal prudence; and*
- ❑ *improving the delivery system of the Government to create a pro-business environment.*

2.43 The Malaysian economy will continue to rely on domestic demand to accelerate its growth performance while at the same time adopting an innovative and concerted approach to meet the increasing challenges in the global environment. In this regard, the public sector will perform a facilitative role by pursuing prudent fiscal and accommodative monetary policies. The private sector is expected to be more aggressive in stimulating the economy by increasing investment as well as enhancing productivity and competitiveness. During 2004-2005, real GDP is projected to grow at an average rate of 6.0 per cent per annum in line with the potential output, placing the economy on track towards achieving the targets of the National Vision Policy and Vision 2020. Economic growth will accrue from the increased activities in the services and the manufacturing sectors as well as the agriculture sector. The high growth is also expected to be achieved in an environment of low inflation and low unemployment rate. Per capita GNP is projected to increase by 4.4 per cent per annum from RM14,324 or US\$3,770 in 2003 to RM15,598 or US\$4,105 in 2005, while per capita GNP in terms of purchasing power parity is expected to record a higher increase of 5.5 per cent per annum from US\$9,380 in 2003 to US\$10,432 by 2005.

Aggregate Demand

2.44 On the demand side, private investment and consumption are expected to be the driving force of the economy during the remaining Plan period. Greater

emphasis will be given to enhance the productivity and competitiveness of Malaysian businesses and accelerate private investment, particularly domestic investment. Towards this end, the current incentives and cost of doing business in Malaysia as well as the guidelines and procedures will be constantly reviewed to ensure that they are competitive and contribute to a pro-business environment. As an immediate measure, the incentives provided under the Promotion of Investment Act, 1986, the Income Tax Act, 1967, as well as the procedures under the Industrial Coordination Act, 1975 will be revised. The revision of the Foreign Investment Committee (FIC) guidelines will provide greater flexibility to foreign equity participation in local companies to enhance the country's attractiveness to FDI. The Government will continue to undertake investment promotion activities with particular emphasis on the services, agriculture and ICT sectors. The financial system will focus on supporting domestic investment, particularly in the productive sectors of the economy and providing sufficient funds for the development and expansion of small and medium enterprises (SMEs). In addition, the delivery system of the Government will be further improved, particularly with regards to streamlining procedures and processes to speed up the processing of applications.

2.45 *Private investment* is expected to record higher growth at an average rate of 11.8 per cent per annum with its share to total investment increasing from 35.3 per cent in 2003 to 42.7 per cent by 2005. In nominal terms, private investment is expected to increase from RM30.9 billion in 2003 to RM39.1 billion or 8.9 per cent of GDP in 2005. This will be supported by better growth and trade prospects of the global economy. Efforts to increase private investment will focus on accelerating domestic investment and promoting FDI. In this regard, the Government will enter into FTA at the bilateral level as well as cooperate at regional level under ASEAN. Initiatives are currently underway in respect of ASEAN-China FTA and ASEAN-Japan FTA.

2.46 Measures undertaken will also address problems faced by the private sector, particularly increasing the access of SMEs to funds, maintaining favourable interest rates, ensuring ample liquidity in the banking system, reducing the cost of doing business through tax incentives for promoted activities, monitoring and reviewing rates for utility, transport and communications, and promoting the adoption of the productivity-wage link system. To promote FDIs, efforts have been made to relax FIC conditions, relax requirements for expatriate workers, and strengthen further the safety and security conditions for a crime-free environment to instil confidence among the foreign investors.

2.47 *Private consumption* is expected to expand at an average rate of 7.0 per cent per annum and propel economic growth during the remaining Plan period. The per capita private consumption in nominal terms is expected to rise by 6.1 per cent from RM6,772 in 2003 to RM7,618 in 2005, in an environment of low inflation. The expansion is expected to arise from continued improvement in consumer confidence and increasing disposable income underpinned by supportive fiscal and accommodative monetary policies, sustained employment growth, recovery in external demand, wealth effect from a stronger capital market and favourable commodity prices. Low interest rate and greater accessibility to financing facilities will increase the demand for durable goods.

2.48 *Public investment* is projected to decline at an average of 4.2 per cent per annum during the remaining Plan period on account of the rapid expansion of development expenditure during the review period. About RM109.2 billion or 68.3 per cent of the revised total development expenditure of RM160.0 billion was disbursed during the review period. Correspondingly, the share of public investment to GDP will decline from 18.5 per cent in 2003 to 15.1 per cent in 2005, thereby returning to a more sustainable level. Public investment will be directed towards the provision of essential infrastructure facilities, expansion of productive capacity of the economy, upgrading the workforce, increasing investment in R&D, fostering and promoting technology development, and providing for the needs of the low income and the disadvantaged groups. The non-financial public enterprises, particularly PETRONAS, Malaysian Airline System Berhad, *Telekom Malaysia Berhad* and *Tenaga Nasional Berhad* will continue investing to expand their capacity and support services as well as enhance their efficiency and competitiveness.

2.49 *Public consumption* is expected to remain strong with growth averaging 5.5 per cent per annum and contribute 14.5 per cent to GDP in 2005. The increase in emoluments as well as supplies and services, particularly for the further enhancement of e-government flagship applications and expansion of e-learning in the public educational institutions and skill training institutes will contribute to the growth in public consumption. The operating expenditure of the Federal Government is expected to increase by 9.4 per cent per annum from RM73.2 billion in 2003 to RM87.7 billion by 2005.

2.50 With better prospects in world trade as well as increasing competitiveness of Malaysian products, real *exports of goods and non-factor services* are expected to record stronger growth at an average of 6.8 per cent per annum during the remaining Plan period. Manufactured exports are expected to expand by 8.0 per

cent per annum and contribute 84.0 per cent to total export earnings in 2005, compared with 83.0 per cent achieved in 2003. Working in close cooperation with the private sector, the Government will continue to undertake aggressive promotional efforts in China, India and non-traditional markets. To facilitate the distribution of Malaysian-made products, more regional distribution centres will be established. Efforts to develop Malaysia as a regional centre of educational excellence, promote tourism, and develop the ports and airports services and shipping are expected to generate higher export receipts from services which are projected to grow at 8.8 per cent per annum.

2.51 *Imports of goods and non-factor services* are expected to grow at an average rate of 6.3 per cent per annum during the remaining Plan period. Despite the increase in imports, the import elasticity is expected to decline to 1.1 in 2005 compared with 2.9 recorded in 2000 due to increased domestic capability to produce selected capital and intermediate goods. In line with the policy to reduce import content, SMEs will be encouraged to supply parts and components to the MNCs in the electronics and transport equipment industry. The Government will also promote the domestic production of machinery as well as robotics and electronic components.

Total Factor Productivity

2.52 The contribution of TFP to growth will be increased by enhancing the efficiency in the utilisation of capital and human resource. Ongoing efforts to upgrade the skills and knowledge of the workforce will be accelerated. Emphasis will also be given to the acquisition of efficient management techniques and know-how, improving organisational management, increasing specialisation and customisation as well as shifting towards higher value added processes and industries. Efforts to develop the knowledge-based economy through the introduction of new technology and innovation, upgrading of existing technology, enhancing the utilisation of information technology and accelerating the pace of R&D will also contribute to higher TFP.

Sectoral Output

2.53 The agriculture, manufacturing and services sectors will continue to generate growth dynamism during the remaining Plan period. Faced with strong competition from the lower cost producing countries, these sectors are expected to move into

higher value added activities. The sectors will also increase the application of knowledge to take full advantage of the available opportunities in the increasingly liberalised and globalised world economy.

2.54 The *agriculture sector* is expected to grow at an average rate of 2.7 per cent per annum, particularly arising from higher production of palm oil, rubber and food crops. For crude palm oil, expansion in matured areas, higher oil extraction rate in Sabah and Sarawak as well as improvement in yields are expected to contribute to the increase in output to about 13.3 million tonnes in 2005. Measures will also be undertaken to replant high yielding hybrids to lower the cost of production. Continuous efforts will be made to further diversify palm oil applications and biomass in downstream industries. Efforts will also be taken to increase market share through promotional efforts undertaken by the Malaysian Palm Oil Promotion Council together with the Malaysian Palm Oil Board Technical Advisory Services.

2.55 The Government will continue to implement programmes to increase the production of food and narrow the food-trade balance. The contribution of food subsector to agriculture value added is expected to increase to 40.9 per cent in 2005. Emphasis will be given to the production of livestock, fish, fruits and vegetables. The participation of State Governments in making land available and the provision of incentives are expected to increase the participation of the private sector in the large-scale production of food. Efforts will also be taken to improve quality in view of strong competition from neighbouring countries. The development of agro-forestry, bamboo and rattan, floriculture, herbs and medicinal plants and ornamental fish will continue to be promoted.

2.56 Production of natural rubber is also expected to increase, supported by measures to improve productivity through the consolidation of smallholdings and modernisation of production management. This is to meet the increased demand from domestic downstream rubber-based industries, particularly rubber gloves, rubber-based industrial and automotive parts, tyres and tubes, and rubber footwear. Incentives will be introduced to encourage the private sector to consolidate and manage uneconomic-sized rubber smallholdings and utilise idle land.

2.57 The production of sawlogs is projected to decline in line with the policy of sustainable forest management. However, efforts will be made to promote active participation of the private sector in the development of forestry plantations with fast-growing trees of quality wood. The private sector will also be encouraged to invest in the planting of latex timber clones to ensure a regular supply of rubber wood to the furniture industry.

2.58 The *mining sector* is expected to expand at an average rate of 3.7 per cent per annum with the increase in natural gas production for the MLNG 3 plant in Bintulu, Sarawak as well as the development of small gas fields in offshore Peninsular Malaysia. Production of crude oil will be about 600,000 bpd while production of condensates is expected to increase, consistent with the rising output of natural gas. To further enhance domestic capabilities and capacity in oil exploration, production and refining, a local consortium will be established to develop marginal oil fields and be involved in petroleum-related activities.

2.59 The *manufacturing sector* is expected to grow at an average rate of 7.8 per cent per annum during the remaining Plan period. The export-oriented industries are projected to rebound to 9.6 per cent per annum while domestic-oriented industries are expected to sustain growth at 8.3 per cent per annum. In the export-oriented industries, the electronics subsector is estimated to achieve an accelerated growth of 9.6 per cent per annum following the recovery in global demand for electronics during the 2004-2005 period. The increased demand for personal computers, higher-end memory, flash and digital signal processing chips in consumer products, and digital electronics in the automotive industry will support this recovery. Increased competition from lower cost producing countries, especially in the electrical products industry, will make it necessary for industry players to restructure and move to higher value added products. The areas that will be promoted include advanced electronics, advanced materials, biotechnology, electro-optics and non-linear optics, optoelectronics, software engineering, aerospace as well as the resource-based industries in the oleochemicals, rubber products and food processing using emerging technologies. The Government will continue to promote FDI in these sectors.

2.60 In the domestic-oriented industry, growth will continue to be generated by the transport equipment sector and the food processing industry. The implementation of the integrated and cluster-based manufacturing activity of *Perusahaan Otomobil Nasional Berhad* (PROTON) at Proton City in Tanjung Malim, Perak is expected to further stimulate the growth of the sector and enhance its ability to compete in the regional market.

2.61 The contribution of SMEs in the manufacturing and services sectors will be enhanced. Efforts will focus on strengthening the necessary infrastructure for SMEs development, capacity building and enhancing their access to financing. Continued close collaboration and cooperation among government agencies will facilitate the orderly development of SMEs.

2.62 During the remaining Plan period, the *construction sector* is expected to grow at an average of 2.8 per cent per annum, mainly contributed by the residential

subsector. Growth is expected to moderate in the engineering and the non-residential subsectors following the completion of several major infrastructure projects. Among the major projects that are still ongoing are the construction of the East-Coast Expressway, Kapar-Sabak Bernam and Klang-Banting Road and Tanjung Kidurong-Berkam Coastal Road in Sabah, as well as the construction of the Rawang-Ipoh double tracking project. The industry players will need to enhance productivity in the sector through modernisation, adoption of new technologies and building methods, constant innovation, as well as improving quality.

2.63 The *services sector* is expected to sustain its growth momentum at an average rate of 6.0 per cent per annum during the remaining Plan period. Growth is expected to arise from both the intermediate and final services sectors. In particular, the transport, storage and communications subsector is expected to expand in view of the expected increase in trade, tourist arrivals and growth in the communications industry. The dedicated sea-air cargo links at Port Klang-KL International Airport and PTP-Sultan Ismail Airport, which were launched in 2003, are expected to boost transshipment traffic activities. The links will act as a catalyst to further promote Port Klang and PTP as transshipment hubs and boost Malaysia's inter-modal transport services. Cargo from ASEAN and other Asian countries brought in by sea to Port Klang and PTP will then be air-flown to their next destinations.

2.64 The wholesale and retail trade, hotels and restaurants subsector is expected to benefit from increased domestic demand and tourist spending. The aggressive promotional efforts undertaken in niche markets such as West Asia will continue to increase the number of tourists from these sources. The utilities subsector is also projected to strengthen in line with the improved performance of the manufacturing sector. The growth of the banking, insurance and financial services subsector is expected to emanate from increased banking activities and greater usage of e-banking and e-commerce. The insurance subsector is also expected to expand further following collaborative efforts undertaken by all parties, namely, the regulators, stakeholders and the industry players to accelerate the pace of development as outlined under the Financial Sector Master Plan. Private education and private medical institutions are expected to spur growth in the other services subsector. Efforts to promote Malaysia as a centre of educational and medical excellence will be actively pursued, particularly in the neighbouring countries as well as among the Islamic countries. The Government services subsector, which is expected to maintain its growth trend, will adopt innovative work processes and accelerate the implementation of e-government.

Balance of Payments

2.65 During the remaining Plan period, the surplus in the overall balance of payments is expected to continue to increase due to the large surplus in the current account at 10.5 per cent of GNP, higher inflows of long-term capital and lower net outflows of short-term capital. The current account surplus is estimated to be about RM43.0 billion in 2005, which is a 16.9 per cent increase over the surplus in 2003. This is due to the sustained strong surplus position of the merchandise account resulting from improved exports performance as well as the reduced deficit in the services account. The improved overall balance of payments will result in a stronger external reserve position.

2.66 To address the deficit in the services account, measures will continue to be taken to further develop the services industry to increase foreign exchange earnings, particularly from tourism, education, transport, finance, health and professional services. Extensive promotion will be carried out to attract tourists from both established and emerging markets. Efforts that will continue to be taken to encourage longer periods of stay include promoting customer-focused product development, facilitating and increasing accessibility of air, surface and sea transportation as well as ensuring the comfort, safety and security of tourists. To further develop Malaysia as a centre of educational excellence, the Government together with the private sector will continue to undertake joint promotion of Malaysia's educational facilities and institutions overseas. The private sector will also be further encouraged to play a bigger role in higher education. To strengthen Malaysia's attractiveness as a health tourist centre, the Government will continue to promote the sector in view of its potential in generating foreign exchange earnings. The seamless movement of sea-air cargo, involving Port Klang in Selangor and PTP in Johor is expected to increase the foreign exchange earnings from transportation services.

Price Development

2.67 Efforts to maintain a low rate of inflation and stable prices will continue during the remaining Plan period. The Government will continue to monitor closely price movements, particularly essential food items during festive seasons to ensure that the general price level remains low. While imports of consumer

goods will ease domestic supply constraints, measures will also be undertaken to increase domestic food production. Imported inflation is expected to remain low, given the subdued inflation in industrial economies. In addition, efforts will be made to ensure that the growth of money supply is consistent with price stability and that wage increase is generally in line with productivity growth to maintain cost competitiveness.

Resource Balance

2.68 During the remaining Plan period, the increase in income will contribute to the growth of gross national savings at the rate of 4.3 per cent per annum, resulting in a high savings rate of 33.7 per cent to GNP in 2005. Efforts to encourage savings will continue, among others, through unit trust schemes and savings institutions, and campaigns at the school level. Investment, including changes in stocks, is expected to increase by 2.7 per cent per annum or 23.2 per cent to GNP largely brought about by the rise in private investment. The overall savings-investment balance is expected to increase from 10.2 per cent to GNP in 2003 to 10.5 per cent in 2005.

Terms of Trade

2.69 Export prices are expected to increase at an average rate of 0.8 per cent per annum during the remaining Plan period, brought about by higher export prices of agricultural commodities following better demand and the higher value-added manufactured products. By comparison, import prices are expected to increase by 0.7 per cent. As a result, Malaysia's terms of trade is expected to grow at an average rate of 0.1 per cent for the remaining Plan period and its GDP in terms of real purchasing power is projected to increase at 6.0 per cent per annum.

IV. CONCLUSION

2.70 The Malaysian economy performed creditably despite the instability in the external environment due to timely pre-emptive measures introduced by the Government. During the remaining Plan period, the focus will be on enhancing the nation's competitiveness and resilience to face the challenges and the uncertainties in an increasingly interconnected and liberalised global environment. Policies to

achieve sustainable growth with macroeconomic stability will include encouraging further domestic and foreign investment, improving productivity and innovation, enhancing technological development, developing quality human resource as well as accelerating the transition to a knowledge-based economy. Efforts to develop new sources of growth and tap new markets will diversify the economy and strengthen macroeconomic dynamism in order to bring the nation closer towards achieving its long-term growth targets.

Chapter 3

Distribution

3

DISTRIBUTION

I. INTRODUCTION

3.01 During the review period, further progress was made towards creating a more equitable society, particularly with regard to poverty eradication and income distribution. The proportion of registered Bumiputera professionals and the number of Bumiputera enterprises increased in both the corporate and non-corporate sectors. The proportion of Bumiputera corporate equity ownership however showed a marginal decline. From the perspective of regional balance, the gap between the more developed states and the less developed states narrowed during the same period.

3.02 The Government will continue to implement programmes and projects to achieve distributional and regional balance strategies during the remaining Plan period. As an integral part of the poverty eradication strategy, target-specific programmes will be implemented to address pockets of poverty in rural and urban areas as well as among the *Orang Asli* and Bumiputera minorities. To continue with the restructuring of society, strategic measures will be instituted and efforts intensified to increase Bumiputera equity ownership to at least 30 per cent by 2010 as targeted in the Third Outline Perspective Plan. Strategies to restructure employment will focus on programmes to increase the number of Bumiputera professionals, managers and skilled workers in various occupations and sectors. In further developing the Bumiputera Commercial and Industrial Community (BCIC), efforts will focus on the creation of more competitive, market-oriented and resilient Bumiputera entrepreneurs. On regional balance, efforts will be undertaken to accelerate development of all the states and reduce socio-economic imbalances among the states.

II. PROGRESS, 2001-2003

Poverty Eradication

3.03 *General Poverty.* The incidence of poverty among Malaysians decreased from 7.5 per cent in 1999 to 5.1 per cent in 2002, as shown in *Table 3-1*, and the number of poor households declined by 25.6 per cent to 267,900 households. If the handicapped, the disabled and the elderly who received welfare support from the Government are excluded, the incidence of poverty in 2002 was estimated at 4.5 per cent. The overall decline in poverty was the result of the Government's continued efforts in implementing poverty eradication programmes, particularly the promotion of income generating projects during the review period. All states recorded a decline in the incidence of poverty, as shown in *Table 3-2*. Wilayah Persekutuan Kuala Lumpur achieved the lowest incidence of poverty at 0.5 per cent in 2002. Poverty in Sabah was still the highest despite reducing its incidence from 20.1 per cent in 1999 to 16.0 per cent in 2002.

3.04 *Rural Poverty.* The incidence of rural poverty decreased from 12.4 per cent in 1999 to 11.4 per cent in 2002. The number of rural poor households decreased by 26.8 per cent to 198,300 households in 2002. The incidence of poverty was highest among the agricultural, hunting and forestry workers at 14.5 per cent. Rural households headed by the elderly, that is 65 years and above, and female-headed households registered high incidence of poverty at 28.6 per cent and 25.7 per cent, respectively.

3.05 *Urban Poverty.* The incidence of urban poverty declined to 2.0 per cent in 2002 as a result of the implementation of specific programmes to generate income and at the same time improve the standard of living of the urban poor such as the squatter resettlement and low-cost housing projects. In 2001, a Cabinet Committee on Urban Poverty was established to address urban poverty and the susceptibility of the low-income households in urban areas to any downturn in the economy. To address pockets of poverty among households in urban centres and its periphery, the Government established a database to build an urban poverty map. In 2003, a pilot survey was conducted in Johor Bahru to build the urban poverty map.

3.06 *Poverty by Ethnic Group.* The incidence of poverty among Bumiputera remained the highest, despite decreasing from 10.2 per cent in 1999 to 7.3 per cent in 2002. During the same period, the incidence of poverty among the Chinese decreased from 2.6 per cent to 1.5 per cent while the incidence for the Indians remained at 1.9 per cent in 2002.

TABLE 3-1

**INCIDENCE OF POVERTY AND NUMBER OF POOR HOUSEHOLDS,
1999 AND 2002**

		1999			2002		
		<i>Total</i>	<i>Urban</i>	<i>Rural</i>	<i>Total</i>	<i>Urban</i>	<i>Rural</i>
Incidence of Poverty ¹	(%)	7.5	3.4	12.4	5.1	2.0	11.4
Number of Poor Households	('000)	360.1	89.1	271.0	267.9	69.6	198.3
Incidence of Hardcore Poverty ²	(%)	1.4	0.5	2.4	1.0	0.4	2.3
Number of Hardcore-Poor Households	('000)	66.0	13.9	52.1	52.9	12.6	40.3
Total Households	('000)	4,800.0	2,612.5	2,187.5	5,220.6	3,482.9	1,737.7

Notes:

¹ The poverty line income in 2002 was RM529 for Peninsular Malaysia, RM690 for Sabah and RM600 for Sarawak.

² Estimated using half the poverty line income.

TABLE 3-2

**INCIDENCE OF POVERTY BY STATE, 1999 AND 2002
(%)**

<i>State</i>	<i>1999</i>	<i>2002</i>
More Developed		
Johor	2.5	1.8
Melaka	5.7	2.7
Negeri Sembilan	2.5	2.2
Perak	9.5	7.9
Pulau Pinang	2.7	1.4
Selangor ¹	2.0	1.1
Wilayah Persekutuan Kuala Lumpur	2.3	0.5
Less Developed		
Kedah	13.5	10.7
Kelantan	18.7	12.4
Pahang	5.5	3.8
Perlis	13.3	10.1
Sabah ²	20.1	16.0
Sarawak	6.7	5.8
Terengganu	14.9	10.7
Malaysia	7.5	5.1

Notes:

¹ Includes Wilayah Persekutuan Putrajaya.

² Includes Wilayah Persekutuan Labuan.

3.07 According to the Population and Housing Census of Malaysia 2000, there was a total of 132,873 *Orang Asli* living in 840 villages throughout Peninsular Malaysia. During the review period, the Government continued implementing the resettlement, economic and social development programmes for the *Orang Asli*. Income-generating activities such as land development, vegetable farming and livestock rearing as well as retail business and handicraft industries were intensified. With regard to human resource development, a special education programme was implemented to assist *Orang Asli* students in primary schools. Under this programme, school uniforms, fees, books, writing materials and transportation to schools were provided. In addition, hostels and meals were provided to schools in remote areas. Measures were also undertaken to improve the attendance of the *Orang Asli* students by recruiting more *Orang Asli* teachers. In this regard, more qualified *Orang Asli* individuals were encouraged to join the teaching profession. As for skills training, a total of 655 *Orang Asli* was trained in various skills such as automotive repair maintenance; construction and maintenance of buildings; and sewing and handicraft making.

3.08 A special Household Income Survey (HIS) to gather household income data on *Bumiputera minorities* in Sabah and Sarawak was conducted in 2002. Nine minority groups were selected for Sarawak, namely, Bisaya, Bukitan, Kadayan, Kajang, Kayan, Kelabit, Kenyah, Lun Bawang and Penan. In Sabah, this survey included nine minority groups, namely, Bisaya, Idahan, Iranun, Kadayan, Orang Sungei, Pulau Kokos, Rungus, Sulu/Suluk and Tidong. The special HIS indicated that the incidence of poverty was the highest among the Rungus, Sulu/Suluk and Orang Sungei of Sabah and Penan, Kenyah and Kajang of Sarawak. To address the high incidence of poverty among the Penan community, the State Government formulated a comprehensive Penan Development Action Plan during the review period.

3.09 *Hardcore Poverty*. The incidence of hardcore poverty decreased from 1.4 per cent in 1999 to 1.0 per cent in 2002, as shown in *Table 3-1*. The incidence of rural hardcore poverty decreased marginally from 2.4 per cent in 1999 to 2.3 per cent in 2002, while that of urban hardcore poverty from 0.5 per cent to 0.4 per cent. Households headed by the elderly registered a higher incidence of hardcore poverty at 4.9 per cent while that for female-headed households was at 9.4 per cent in 2002.

3.10 The *Skim Pembangunan Kesejahteraan Rakyat* (SPKR) continued to focus on income-generating projects and inculcating positive values including building self-esteem and self-reliance among the hardcore poor. Among the income-generating projects were petty trading, cottage industries, livestock and aquaculture projects and the commercial production of food crops. SPKR also continued to provide training and improve basic amenities for the hardcore poor. During the

review period, a total of RM406.2 million was allocated for various projects under the SPKR benefiting about 150,000 hardcore poor. To further strengthen the implementation of the SPKR, the Government provided an additional allocation of RM250 million in 2003.

3.11 In addition to the SPKR, programmes spearheaded by Non-Governmental Organisations (NGOs) and the private sector also addressed the issue of hardcore poverty. During the review period, *Amanah Ikhtiar Malaysia* (AIM) provided micro-credit loans through its seven schemes¹ to 148,400 poor families, amounting to RM358 million. Out of this, RM281 million was disbursed from the interest-free loans of RM300 million provided by the Government. More than 52 per cent of the credit was extended under the *Skim Pembiayaan Ikhtiar 1* where the loan amount ranged from RM100 to RM4,900 per person. The rate of repayment for the micro-credit was high at 96.5 per cent in 2001, 95.7 per cent in 2002 and 95.3 per cent in 2003. In addition, the private sector, NGOs and various state-based poverty eradication foundations intensified their efforts in providing skills training as well as in-kind and financial contributions to the poor.

Income Distribution

3.12 The overall income distribution among households improved during the review period. The proportion of lower income households, defined as those earning less than RM1,200, decreased from 33.1 per cent in 1999 to 25.9 per cent in 2002, as shown in *Table 3-3*. The share of middle-income households, defined as those earning between RM1,200 and RM3,499, increased from 47.7 per cent in 1999 to 47.9 per cent in 2002, thus contributing towards achieving the objective of creating a bigger middle-income class.

3.13 In line with the overall improvement in income distribution, all ethnic groups registered an increase in household income during the review period. The mean monthly gross household income increased from RM2,472 in 1999 to RM3,011 in 2002, registering an average growth rate of 6.8 per cent per annum, as shown in *Table 3-4*. The increase was due to the greater employment opportunities generated during the period that enabled more Malaysians to be gainfully employed. The Bumiputera mean household income grew at an average rate of 6.2 per cent per annum to RM2,376 in 2002, while that of the Chinese increased by 7.4 per cent per annum to RM4,279. As a result, the income imbalance between the Bumiputera and Chinese widened as indicated by the increase in the Bumiputera-Chinese income disparity ratio from 1:1.74 in 1999 to 1:1.80 in 2002. However, the income disparity ratio between Bumiputera and Indians decreased from 1:1.36 to 1:1.28.

¹ The seven schemes are *Skim Pembiayaan Ikhtiar* (SPI1, SPI2 and SPI3); *Skim Khas Ibu Tunggal*; *Skim Pembiayaan Ikhtiar Nelayan*; *Skim Pembiayaan Pendidikan* and *Skim Pembiayaan Perumahan*.

3.14 During the review period, rural household income increased marginally by 0.2 per cent per annum to RM1,729 in 2002, while urban household income grew at 5.6 per cent to RM3,652. As a result, the income disparity ratio between rural and urban households widened from 1:1.81 in 1999 to 1:2.11 in 2002.

TABLE 3-3
**DISTRIBUTION OF HOUSEHOLDS BY
MONTHLY GROSS HOUSEHOLD INCOME, 1999 AND 2002**
(%)

<i>Income Class (RM)</i>	<i>1999</i>	<i>2002</i>
499 and below	6.0	3.7
500 - 999	19.0	15.3
1,000 - 1,199	8.1	6.9
1,200 - 1,499	10.7	9.5
1,500 - 1,999	13.9	13.4
2,000 - 2,499	10.1	10.4
2,500 - 2,999	7.3	8.3
3,000 - 3,499	5.7	6.3
3,500 - 3,999	3.9	4.7
4,000 - 4,999	5.5	6.7
5,000 and above	9.8	14.8
Total	100.0	100.0
Mean Income (RM)	2,472	3,011
Median Income (RM)	1,704	2,049
Gini Coefficient	0.4432	0.4607

TABLE 3-4
**MEAN MONTHLY GROSS HOUSEHOLD INCOME
BY ETHNIC GROUP, 1999 AND 2002**
(RM)

<i>Ethnic Group</i>	<i>1999</i>	<i>2002</i>	<i>Average Annual Growth Rate (%), 2000-2002</i>
Bumiputera	1,984	2,376	6.2
Chinese	3,456	4,279	7.4
Indians	2,702	3,044	4.1
Others	1,371	2,165	16.5
Malaysia	2,472	3,011	6.8
Urban	3,103	3,652	5.6
Rural	1,718	1,729	0.2

Restructuring of Ownership of the Corporate Sector

3.15 All ethnic groups registered an increase in the ownership of share capital in the corporate sector during the review period. Bumiputera share capital ownership grew at 7.8 per cent per annum compared with the higher rate registered by the Chinese at 11.2 per cent, as shown in *Table 3-5*. In absolute terms, Chinese share capital ownership, which increased by RM15.2 billion per annum, was three times higher than the RM5.1 billion achieved by Bumiputera. This resulted in the proportion of Bumiputera equity ownership to decrease marginally from about 18.9 per cent in 2000 to 18.7 per cent in 2002. The growth of Bumiputera equity ownership was impaired as a result of the slower economic growth, unfavourable stock market conditions and the prolonged effect of the Asian financial crisis.

TABLE 3-5
**OWNERSHIP OF SHARE CAPITAL (AT PAR VALUE)
OF LIMITED COMPANIES¹, 2000 AND 2002**
(RM million)

<i>Ownership Group</i>	<i>2000</i>	<i>%</i>	<i>2002</i>	<i>%</i>	<i>Average Annual Growth Rate (%), 2001- 2002</i>
Bumiputera	62,976.0	18.9	73,161.8	18.7	7.8
Institutions ²	9,830.0	3.0	11,633.6	3.0	8.8
Trust Agencies ³	5,802.4	1.7	6,415.8	1.6	5.2
Individuals	47,343.6	14.2	55,112.4	14.1	7.9
Non-Bumiputera	137,412.8	41.3	168,962.7	43.2	10.9
Chinese	129,318.3	38.9	159,806.9	40.9	11.2
Indians	5,136.8	1.5	5,951.1	1.5	7.6
Others	2,957.7	0.9	3,204.7	0.8	4.1
Foreigners	103,909.4	31.3	112,727.6	28.9	4.2
Nominee Companies	28,119.4	8.5	35,969.5	9.2	13.1
Total	332,417.6	100.0	390,821.6	100.0	8.4

Notes:

¹ Excludes shares held by Federal and State Governments.

² Refers to shares held through institutions channeling Bumiputera funds such as the *Amanah Saham Bumiputera Scheme*, *Lembaga Tabung Haji* and *Lembaga Tabung Angkatan Tentera*.

³ Refers to shares held through trust agencies, such as *Permodalan Nasional Berhad* and State Economic Development Corporations.

3.16 On the other hand, Chinese ownership of share capital increased from 38.9 per cent in 2000 to 40.9 per cent in 2002. This was attributed to the stronger foundation of their companies which was fundamental in overcoming challenges posed by the period of uncertainty and volatile business environment. The stronger business linkages and wider experiences among the Chinese entrepreneurs also enabled them to take advantage of the new emerging market opportunities and reshape their industries through strategic investment.

3.17 In terms of equity ownership by sector, the highest proportion of Bumiputera equity ownership in 2002 was in agriculture 28.3 per cent, construction 24.5 per cent and transportation 23.6 per cent, as shown in *Table 3-6*. Ownership in the manufacturing sector remained low at 10.5 per cent.

3.18 During the review period, more opportunities were provided to Bumiputera and other minority groups to invest in the unit trust schemes with the establishment of three new schemes, namely *Amanah Saham Didik*, *Amanah Saham Gemilang* (ASG) and *Amanah Saham Nasional 3* (ASN3), in addition to the existing five schemes under the *Permodalan Nasional Berhad*. As at July 2003, the number of Bumiputera unit holder accounts in these schemes increased to 7.4 million with an investment value of RM37.7 billion. The number of non-Bumiputera investors in *Amanah Saham Malaysia*, *Amanah Saham Wawasan 2020*, the ASG and the ASN3 accounted for 65 per cent of the total number of investors. The total amount of investment of the non-Bumiputera investors in these four schemes was RM4.3 billion. Investment in these schemes continued to offer reasonable returns to investors despite lower economic growth and sluggish stock market.

3.19 Efforts were intensified to increase Bumiputera participation in the manufacturing and other dynamic sectors including Information and Communications Technology (ICT), education, health, tourism, sea and air transport, professional and consultancy services. In this regard, the Government provided technical and financial support including training, preparation of business plan and incubator programmes. However, Bumiputera participation in the high-value added manufacturing activities was not encouraging due to their limited experience, knowledge and capability in this sector.

3.20 Measures were undertaken to increase the utilisation of Bumiputera resources by identifying and developing Malay reserve, *baitulmal*, *waqaf*, native and customary land with potential for commercial activities. In this regard, the respective state religious departments with the cooperation of Bumiputera institutions and agencies as well as the private sector, developed *baitulmal* and *waqaf* land into residential and commercial properties. These included private hospitals, training institutions, hotels and business premises in urban areas and oil palm and forestry plantations in the rural areas.

TABLE 3-6

OWNERSHIP OF SHARE CAPITAL (AT PAR VALUE) OF LIMITED COMPANIES¹

BY ETHNIC GROUP AND SECTOR, 2002

(%)

<i>Ownership Group</i>	<i>Agriculture</i>	<i>Mining</i>	<i>Manufacturing</i>	<i>Utility</i>	<i>Construction</i>	<i>Wholesale & Retail Trade</i>	<i>Transportation</i>	<i>Finance</i>	<i>Others</i>	<i>Total</i>
Bumiputera	28.3	19.9	10.5	12.4	24.5	13.8	23.6	20.7	16.1	18.7
Non-Bumiputera	41.1	53.1	35.8	38.1	50.6	46.6	49.6	42.5	48.4	43.2
Chinese	39.8	50.8	34.2	37.1	49.2	44.2	47.5	39.1	45.5	40.9
Indians	1.0	1.1	0.9	0.8	1.1	1.7	1.9	1.9	2.7	1.5
Others	0.3	1.2	0.7	0.2	0.3	0.7	0.2	1.5	0.2	0.8
Foreigners	21.9	20.5	45.7	32.1	13.8	34.3	17.0	27.1	27.5	28.9
Nominee Companies	8.8	6.5	8.1	17.5	11.1	5.3	9.8	9.7	7.9	9.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: ¹ Excludes shares held by Federal and State Governments.

Employment Restructuring

3.21 During the review period, significant progress was achieved to restructure employment, particularly towards increasing the number and the proportion of Bumiputera employed in the professional, managerial and other high-income occupation categories. Through education and training, the main vehicle for employment restructuring strategy, a larger number of Bumiputera secured jobs in the strategic and modern sectors of the economy.

3.22 The proportion of Bumiputera employment increased marginally from 56.4 per cent in 2000 to 56.5 per cent in 2003, as shown in *Table 3-7*. In all sectors, except for the wholesale and retail trade and construction, the proportion of Bumiputera employment was higher compared with other ethnic groups. However, on the basis of ethnic composition, the proportion of Bumiputera employment in several sectors was lower than the target set. In terms of employment within ethnic groups, Bumiputera were mainly in the manufacturing and agriculture sectors while Chinese were in the wholesale and retail trade and Indians in the manufacturing and other services sectors.

3.23 Although the proportion of Bumiputera employment increased during the period, the unemployment rate among them remained the highest and increased from 4.6 per cent in 2000 to 4.9 per cent in 2003. This was partly due to the mismatch between qualification and the requirement of the industry among Bumiputera. In addressing the issue of unemployed graduates, the Government introduced several programmes including *Skim Sangkutan dan Latihan, Program Latihan Siswazah Menganggur* and various graduate entrepreneurship programmes.

3.24 The proportion of Bumiputera in administrative and managerial occupations such as legislators, senior officials and managers, remained low at 37.2 per cent in 2000 and 37.9 per cent in 2003, as shown in *Table 3-8*. The proportion of Chinese in this category was higher at 54.6 per cent in 2003. In the professional category, the proportion of Bumiputera employment increased marginally from 58.3 per cent in 2000 to 58.4 per cent in 2003. However, about 54 per cent of Bumiputera in this category were lecturers, pre-university and secondary school teachers, writers and artists while only 45.8 per cent were in the other professional category. In the technicians and associate professionals category, the share of Bumiputera employment remained at 60.5 per cent in 2003. About 33 per cent of them were primary school teachers and nurses.

TABLE 3-7
EMPLOYMENT BY SECTOR AND ETHNIC GROUP, 2000 AND 2003
(‘000)

Sector	2000						2003					
	Bumiputera	%	Chinese	%	Indians	%	Others	%	Total ¹	%	Others	%
Agriculture, Forestry, Livestock & Fishing %	867.1	18.2	155.7	5.7	85.7	11.1	47.2	29.2	1,155.7	13.7	810.3	16.0
	75.0		13.5		7.4		4.1		100.0		74.9	
Mining & Quarrying %	23.7	0.5	8.6	0.3	4.2	0.6	1.0	0.6	37.5	0.4	24.1	0.5
	63.2		22.9		11.2		2.7		100.0		63.3	
Manufacturing %	1,256.4	26.3	769.9	28.0	291.1	37.8	11.9	7.4	2,329.3	27.5	1,346.0	26.6
	53.9		33.1		12.5		0.5		100.0		54.5	
Construction %	286.1	6.0	290.6	10.5	35.8	4.6	37.9	23.4	650.4	7.7	260.2	5.2
	44.0		44.7		5.5		5.8		100.0		43.9	
Electricity, Gas & Water %	53.4	1.1	8.7	0.3	8.5	1.1	3.3	2.0	73.9	0.9	63.8	1.3
	72.2		11.8		11.5		4.5		100.0		72.3	
Transport, Storage & Communications %	257.5	5.4	131.7	4.8	55.5	7.2	13.1	8.1	457.8	5.4	292.4	5.8
	56.2		28.8		12.1		2.9		100.0		56.2	
Wholesale & Retail Trade, Hotels & Restaurants %	607.4	12.7	771.7	28.0	105.6	13.7	17.8	11.0	1,502.5	17.8	669.1	13.2
	40.4		51.4		7.0		1.2		100.0		40.5	
Finance, Insurance, Real Estate & Business Services %	230.5	4.8	209.5	7.6	50.3	6.5	13.1	8.1	503.4	5.9	286.3	5.7
	45.8		41.6		10.0		2.6		100.0		45.8	
Other Services ² %	1,194.6	25.0	406.9	14.8	133.9	17.4	16.5	10.2	1,751.9	20.7	1,299.9	25.7
	68.2		23.2		7.7		0.9		100.0		69.5	
Total Employed %	4,776.7	100.0	2,753.3	100.0	770.6	100.0	161.8	100.0	8,462.4	100.0	5,052.1	100.0
	56.4		32.5		9.1		1.9		100.0		56.5	
Labour Force %	5,004.7		2,797.6		791.6		165.3		8,759.2		5,314.9	
	57.1		31.9		9.0		1.9		100.0		57.2	
Unemployment %	228.0		44.3		21.0		3.5		296.8		262.8	
	76.8		14.9		7.1		1.2		100.0		75.2	
Unemployment Rate (%)	4.6		1.6		2.7		2.1		3.4		4.9	

Notes:

¹ Excludes non-citizens.

² Includes public, private and community services.

TABLE 3-8

EMPLOYMENT BY OCCUPATION AND ETHNIC GROUP, 2000 AND 2003 ('000)

Occupation	2000						2003													
	Bumiputera	%	Chinese	%	Indians	%	Others	%	Total ¹	%	Bumiputera	%	Chinese	%	Indians	%	Others	%	Total ¹	%
Legislators, Senior Officials & Managers %	230.6	4.8	342.3	12.4	41.2	5.4	5.3	3.3	619.4	7.3	280.0	5.5	403.2	13.8	50.3	6.2	5.3	3.3	738.8	8.3
	37.2		55.3		6.6		0.9		100.0		37.9		54.6		6.8		0.7		100.0	
Professionals %	301.2	6.3	169.1	6.1	40.2	5.2	6.4	4.0	516.9	6.1	306.8	6.1	169.9	5.8	41.9	5.2	6.9	4.3	525.5	5.9
	58.3		32.7		7.8		1.2		100.0		58.4		32.3		8.0		1.3		100.0	
Lecturers, Pre-University & Secondary School Teachers and Writers & Artists %	161.2	3.4	38.7	1.4	12.4	1.6	3.2	2.0	215.5	2.5	166.2	3.3	39.1	1.3	13.2	1.6	3.3	2.0	221.8	2.5
	74.8		18.0		5.7		1.5		100.0		74.9		17.6		6.0		1.5		100.0	
Technicians & Associate Professionals %	655.1	13.7	318.9	11.6	101.8	13.2	7.6	4.7	1,083.4	12.8	754.3	14.9	362.0	12.4	120.2	14.8	9.5	5.9	1,246.0	13.9
	60.5		29.4		9.4		0.7		100.0		60.5		29.1		9.6		0.8		100.0	
Primary School Teachers and Nurses %	232.7	4.9	67.5	2.5	20.8	2.7	3.2	2.0	324.2	3.8	251.3	5.0	72.0	2.5	23.2	2.9	3.7	2.3	350.2	28.1
	71.8		20.8		6.4		1.0		100.0		71.8		20.6		6.6		1.0		100.0	
Clerical Workers %	502.2	10.5	300.6	10.9	71.6	9.3	4.5	2.8	878.9	10.4	544.1	10.8	319.5	11.0	82.5	10.2	5.1	3.1	951.2	10.6
	57.1		34.2		8.2		0.5		100.0		57.2		33.6		8.7		0.5		100.0	
Service Workers & Shop & Market Sales Workers %	595.7	12.5	471.0	17.1	85.6	11.1	10.0	6.2	1,162.3	13.7	722.7	14.3	536.2	18.4	107.6	13.2	12.2	7.5	1,378.7	15.4
	51.2		40.5		7.4		0.9		100.0		52.4		38.9		7.8		0.9		100.0	
Skilled Agricultural & Fishery Workers %	921.8	19.3	157.4	5.7	62.6	8.1	40.2	24.8	1,182.0	14.0	789.5	15.6	105.3	3.6	39.6	4.9	35.4	21.8	969.8	10.8
	78.0		13.3		5.3		3.4		100.0		81.4		10.9		4.1		3.6		100.0	
Craft & Related Trade Workers %	337.6	7.1	386.3	14.1	57.6	7.5	9.5	5.9	791.0	9.3	447.7	8.9	473.4	16.3	75.8	9.3	11.1	6.9	1,008.0	11.3
	42.7		48.8		7.3		1.2		100.0		44.4		47.0		7.5		1.1		100.0	
Plant & Machine Operators & Assemblers %	783.8	16.4	315.8	11.5	158.6	20.6	25.0	15.4	1,283.2	15.2	798.8	15.8	317.5	10.9	162.7	20.0	24.7	15.2	1,303.7	14.6
	61.1		24.6		12.4		1.9		100.0		61.3		24.4		12.5		1.9		100.0	
Elementary Occupations %	448.7	9.4	292.0	10.6	151.4	19.6	53.3	32.9	945.4	11.2	408.2	8.1	226.4	7.8	131.8	16.2	51.9	32.0	818.3	9.2
	47.5		30.9		16.0		5.6		100.0		49.9		27.7		16.1		6.3		100.0	
Total %	4,776.7	100.0	2,753.3	100.0	770.6	100.0	161.8	100.0	8,462.4	100.0	5,052.1	100.0	2,913.4	100.0	812.4	100.0	162.1	100.0	8,940.0	100.0
	56.4		32.5		9.1		1.9		100.0		56.5		32.6		9.1		1.8		100.0	

Note: ¹ Excludes non-citizens.

3.25 The number of Bumiputera registered in eight selected professional occupations such as accountants, doctors, lawyers and engineers, also increased during the review period. The proportion of Bumiputera in these occupations increased from 35.5 per cent in 2000 to 37.2 per cent in 2002, as shown in *Table 3-9*. The profession with the highest number of Bumiputera was engineers. However, 84.7 per cent of them were graduate engineers and only 15.3 per cent were professional engineers.

Development of the Bumiputera Commercial and Industrial Community

3.26 The review period witnessed progress made in developing a viable, competitive and resilient BCIC. A larger number of Bumiputera entrepreneurs were nurtured through the implementation of a broad range of assistance programmes provided by the Government and the private sector. The BCIC programmes gave emphasis to quality management, efficiency and business ethics, and facilitated the entry of Bumiputera entrepreneurs into the manufacturing and modern services sectors particularly the small and medium enterprises.

3.27 Packaged programmes such as the Vendor Development Programme, the Franchise Development Programme, the Venture Capital Scheme and *Projek Usahawan Bumiputera Dalam Bidang Peruncitan* (PROSPER) were continued during the review period. These programmes included several types of assistance such as the provision of formal business training and hands-on experience, marketing channel, business premise, technical advice and financial support. At the same time, the Government and the private sector continued to provide one-off or unpackaged assistance to the Bumiputera business community.

3.28 Under the Vendor Development Programme, a total of 75 Bumiputera enterprises was developed as vendors for privately owned companies, mainly in the automotive, motorcycles and food industries as well as other products including building equipment and furniture. Another 83 were selected to provide parts, supplies and services to large government-owned companies, such as *Petroleum Nasional Berhad*, *Tenaga Nasional Berhad* and *Telekom Malaysia Berhad*. In addition, 90 new Bumiputera franchisees were selected under the Franchise Development Programme involving in eight types of products and services, namely cosmetics, furniture, fast food, books, optical and pharmaceuticals as well as motor car servicing, tuition centres and courier services.

TABLE 3-9

REGISTERED PROFESSIONALS BY ETHNIC GROUP, 2000 AND 2002

Profession	2000					2002					Net Increase, 2001-2002				
	Bumiputera	Chinese	Indians	Others	Total	Bumiputera	Chinese	Indians	Others	Total	Bumiputera	Chinese	Indians	Others	Total
Accountants	2,673	11,944	883	178	15,678	3,673	13,707	941	50	18,371	1,000	1,763	58	-128	2,693
%	17.1	76.2	5.6	1.1	100.0	20.0	74.6	5.1	0.3	100.0	37.1	65.5	2.2	-4.8	100.0
Architects	1,152	1,539	41	6	2,738	1,296	1,563	40	75	2,974	144	24	-1	69	236
%	42.1	56.2	1.5	0.2	100.0	43.6	52.6	1.3	2.5	100.0	61.0	10.2	-0.4	29.2	100.0
Professionals	450	1,034	23	4	1,511	495	1,003	25	71	1,594	45	-31	2	67	83
%	29.8	68.4	1.5	0.3	100.0	31.1	62.9	1.6	4.4	100.0	54.2	-37.3	2.4	80.7	100.0
Doctors	4,590	3,822	3,527	489	12,428	5,346	4,151	3,808	564	13,869	756	329	281	75	1,441
%	36.9	30.8	28.4	3.9	100.0	38.5	29.9	27.5	4.1	100.0	52.5	22.8	19.5	5.2	100.0
Dentists	790	952	460	43	2,245	914	963	456	59	2,392	124	11	-4	16	147
%	35.2	42.4	20.5	1.9	100.0	38.2	40.3	19.1	2.4	100.0	84.3	7.5	-2.7	10.9	100.0
Veterinary Surgeons	428	284	281	33	1,026	468	348	300	51	1,167	40	64	19	18	141
%	41.7	27.7	27.4	3.2	100.0	40.1	29.8	25.7	4.4	100.0	28.4	45.4	13.5	12.7	100.0
Engineers	15,334	18,416	1,864	405	36,019	18,165	20,897	2,196	489	41,747	2,831	2,481	332	84	5,728
%	42.6	51.1	5.2	1.1	100.0	43.5	50.1	5.3	1.2	100.0	49.4	43.3	5.8	1.5	100.0
Professionals	2,461	6,536	636	198	9,831	2,784	6,840	685	198	10,507	323	304	49	0	676
%	25.0	66.5	6.5	2.0	100.0	26.5	65.1	6.5	1.9	100.0	47.8	45.0	7.2	0.0	100.0
Surveyors	1,298	1,426	97	56	2,877	1,432	1,536	95	49	3,112	134	110	-2	-7	235
%	45.1	49.6	3.4	1.9	100.0	46.0	49.3	3.1	1.6	100.0	57.0	46.8	-0.8	-3.0	100.0
Professionals	713	876	58	30	1,677	786	914	59	27	1,786	73	38	1	-3	109
%	42.5	52.2	3.5	1.8	100.0	44.0	51.2	3.3	1.5	100.0	67.0	34.9	0.9	-2.8	100.0
Lawyers	3,111	3,860	2,586	76	9,633	3,752	4,105	2,757	74	10,688	641	245	171	-2	1,055
%	32.3	40.1	26.8	0.8	100.0	35.1	38.4	25.8	0.7	100.0	60.8	23.2	16.2	-0.2	100.0
Total	29,376	42,243	9,739	1,286	82,644	35,046	47,270	10,593	1,411	94,320	5,670	5,027	854	125	11,676
%	35.5	51.1	11.8	1.6	100.0	37.2	50.1	11.2	1.5	100.0	48.5	43.1	7.3	1.1	100.0

Sources: Professional associations and institutions covering both public and private sectors such as Malaysian Institute of Accountants, Board of Architects Malaysia, Malaysia Dental Council, Malaysian Medical Council, Board of Engineers Malaysia, Bar Council Malaysia, The Institution of Surveyors Malaysia and Malaysia Veterinary Surgeons Council.

3.29 The Venture Capital Scheme of *Perbadanan Usahawan Nasional Berhad* (PUNB) attracted 119 Bumiputera entrepreneurs to participate in strategic industries, particularly in the manufacture of plastics and petrochemical-based products, engineering and automotive components and service-related activities such as telecommunications and information technology. In line with the emphasis given to the creation of more Bumiputera entrepreneurs in retail trade through *PROSPER*, especially in new townships and residential areas, PUNB attracted 284 Bumiputera retailers to venture into businesses such as mini-markets, electrical goods, pharmacies, telecommunications and ICT-related businesses.

3.30 The Mentor Programme created 137 link-ups between experienced companies and newly-established Bumiputera enterprises. At the same time, the *Skim Usahasama Tulen* established 54 new ventures between Bumiputera and non-Bumiputera partners. Under the *Skim Kilang Bimbingan*, 134 Bumiputera entrepreneurs were selected to utilise factory premises provided by the *Bank Pembangunan dan Infrastruktur Malaysia Berhad* (BPIMB). The *Program Pembangunan Usahawan Luar Bandar* assisted 220 rural small-scale entrepreneurs in the acquisition of modern and appropriate production equipment.

3.31 Various types of unpackaged or one-off assistance continued to be provided by the Government and the private sector to supplement the packaged programmes. Government agencies and companies, as well as local authorities provided additional business premises for Bumiputera entrepreneurs. A total of 1,826 new business premises was constructed or purchased by, among others, *Majlis Amanah Rakyat*, State Economic Development Corporations, BPIMB and PUNB, of which about 79 per cent was taken up by Bumiputera entrepreneurs. A survey conducted in 2002 revealed that Bumiputera owned only 8.2 per cent of the various types of business premises compared with 58.7 per cent by the non-Bumiputera, as shown in *Table 3-10*. The survey also showed that in the industrial premise sub-category, Bumiputera owned only 2.6 per cent.

3.32 With regard to business financing, a total of 46 funds was provided to extend financial assistance to Bumiputera entrepreneurs, of which 28 funds were also accessible to non-Bumiputera entrepreneurs. A study was carried out to streamline the funds to make it more effective and accessible to the entrepreneurs. During the review period, loans totaling RM5.6 billion were disbursed to 167,370 Bumiputera entrepreneurs. Under The Package of New Strategies launched in 2003, the Government provided an additional allocation of RM3.7 billion to the New Entrepreneurs Fund, Fund for the Small and Medium Industries, Fund for Food, Tourism Fund, *Tabung Kumpulan Ekonomi Usaha Niaga* and *Skim Pembiayaan Ikhtiar* as well as new micro-credit schemes operated by *Bank Pertanian Malaysia* and *Bank Simpanan Nasional*.

TABLE 3-10
OWNERSHIP OF COMMERCIAL BUILDINGS/PREMISES BY ETHNIC GROUP, 2002

Type of Building/Premise	Bumiputera		Chinese		Indians		Others ¹		Total	
	Unit	%	Unit	%	Unit	%	Unit	%	Unit	%
Building										
One Floor	8,564	18.3	29,384	62.6	1,821	3.9	7,152	15.2	46,921	100.0
Two Floor	8,631	9.2	62,122	66.2	3,559	3.8	19,516	20.8	93,828	100.0
Three Floor	2,306	6.1	21,271	56.5	1,061	2.8	13,000	34.5	37,638	100.0
More than Three Floor	3,025	6.9	21,964	50.4	1,390	3.2	17,188	39.5	43,567	100.0
Business Complex	1,449	5.6	11,060	42.6	659	2.5	12,784	49.3	25,952	100.0
Industrial Premise	1,651	2.6	28,495	44.8	485	0.8	33,001	51.9	63,632	100.0
Hotel	131	7.0	720	38.3	29	1.5	1,000	53.2	1,880	100.0
Total	25,757	8.2	175,016	55.8	9,004	2.9	103,641	33.1	313,418	100.0

Note: ¹ Includes ownership by companies/associations with no specific ethnic composition.

Source: Based on 75 per cent responses from local authorities.

Balanced Regional Development

3.33 *Development Composite Index*². Efforts were undertaken to promote balanced development between states by diversifying the economic base, developing knowledge-based activities and providing a better social infrastructure, particularly for the less-developed states. The Development Composite Index (DCI) was used to gauge the levels of development of states. During the review period, all states recorded improvement in terms of the economic and social development criteria as reflected in the increase in the DCI, as shown in *Table 3-11*. Among the more developed states, Wilayah Persekutuan Kuala Lumpur and Melaka registered an increase of 6.3 and 4.7 points respectively, indicating a higher level of economic activity, income as well as quality of life. For the less developed states, the average change in DCI during the same period was 4.2 points, mainly due to increase in mean monthly income and reduction in infant mortality rate.

3.34 *Gross Domestic Product*. The economic slow down during the review period affected the overall Gross Domestic Product (GDP) performance of the more developed states. In terms of real GDP growth, the more developed states recorded an average rate of 3.0 per cent per annum. Selangor, Pulau Pinang and Johor exceeded the national average of 3.0 per cent, as shown in *Table 3-12*. This was largely due to the increased contribution of the manufacturing and services sectors. Among the less developed states, Sarawak, Terengganu and Pahang registered higher growth than the national average as a result of contributions from the agriculture, mining and manufacturing sectors of the respective states. Overall, the less developed states recorded an average GDP growth of 2.9 per cent per annum, marginally lower than the national average.

3.35 *Per Capita GDP*. The average annual per capita GDP grew by 1.8 per cent during the review period. The average per capita GDP of the more developed states increased by 1.6 per cent per annum from RM17,667 in 2000 to RM18,534 in 2003. Among them, Wilayah Persekutuan Kuala Lumpur recorded the highest per capita GDP at RM30,578, almost doubled the national average of RM15,382. As for the less developed states, the average per capita GDP increased by 1.6

² The Development Composite Index (DCI) refers to the average score of the Economic Development Index (EDI) and Social Development Index (SDI). The EDI refers to the percentage of standardised score for the per capita GDP, unemployment rate, urbanisation rate, mean monthly income, number of registered cars and motorcycles per 1,000 population and number of telephones per 1,000 population. The SDI refers to the percentage of standardised score for poverty rate, provision of piped water and electricity, number of doctors per 10,000 population and infant mortality rate. States with DCI higher than the national average are categorised as more developed states and those having a DCI lower than the national average as less developed states.

TABLE 3-11

DEVELOPMENT COMPOSITE INDEX, 2000-2003

(2000=100)

Indicator/State	More Developed States								Less Developed States								Malaysia
	Total	Johor	Malaka	Negeri Sembilan	Perak	Pulau Pinang	Selangor ¹	W.P. K. Lumpur	Total	Kedah	Kelantan	Pahang	Perlis	Sabah ²	Sarawak	Terengganu	
Economic Development Index	2000	105.9	102.5	104.3	99.6	99.1	111.9	107.5	116.4	93.1	94.9	89.8	94.5	95.5	86.9	92.3	97.8
	2003	106.1	102.9	104.8	99.8	99.3	112.0	106.7	117.5	93.7	95.0	89.9	96.1	94.3	86.3	94.5	99.7
Per Capita Income (RM)	2000	104.8	99.2	101.0	98.4	95.7	109.8	105.6	123.8	95.1	90.9	86.9	92.7	92.5	92.2	97.9	112.3
	2003	110.1	104.7	106.1	103.7	101.3	115.7	111.6	127.9	100.4	95.8	91.9	98.3	97.3	97.3	104.1	118.4
Unemployment Rate	2000	105.7	107.3	110.0	98.2	96.4	112.7	110.9	104.5	96.6	103.6	97.3	102.7	110.9	77.3	86.4	98.2
	2003	93.5	95.5	95.5	86.3	82.8	103.6	94.4	96.7	85.9	92.0	83.9	95.5	93.2	61.9	82.8	92.0
Urbanisation Rate	2000	105.6	101.4	102.7	96.5	98.6	108.8	112.7	118.8	90.2	88.7	85.9	90.1	86.1	93.5	93.1	93.8
	2003	106.6	102.6	104.3	97.6	99.3	109.5	113.6	119.5	91.1	89.6	86.5	91.2	87.1	94.5	94.2	94.6
Mean Monthly Income	1999	104.3	102.0	97.6	98.4	91.6	107.5	114.1	118.8	90.7	90.1	86.7	88.6	88.0	93.5	97.7	90.0
	2002	125.1	121.3	118.1	119.0	113.0	126.8	136.1	141.5	112.0	111.1	108.1	111.3	111.5	115.6	116.7	109.8
Registered Cars & Motorcycles per 1,000 Population	2000	105.7	100.7	102.1	100.7	100.5	114.8	94.6	126.1	93.0	95.1	93.0	95.1	91.7	89.1	93.9	93.2
	2003	108.8	104.4	105.7	104.1	103.9	112.9	98.0	132.3	96.6	98.2	96.5	98.7	95.4	92.9	97.7	96.7
Telephones per 1,000 Population	2000	107.6	103.8	105.7	104.1	104.3	113.5	113.7	108.5	90.5	95.9	85.9	91.7	96.1	82.2	90.0	91.5
	2002	111.6	107.2	112.1	107.3	109.0	118.4	115.8	111.3	94.4	99.4	91.0	96.7	98.7	84.8	93.7	96.6
Social Development Index	2000	104.9	104.6	102.2	104.7	103.3	105.8	106.0	107.8	94.7	99.0	91.5	99.0	99.3	81.6	96.9	95.8
	2003	113.3	112.0	111.0	113.4	109.7	114.0	113.6	119.2	102.5	105.6	96.7	106.8	105.5	92.8	103.8	106.0
Incidence of Poverty	1999	105.6	107.8	102.8	107.8	96.9	107.5	108.6	108.1	91.0	90.6	82.5	103.1	91.0	80.4	101.2	88.5
	2002	123.9	125.3	123.5	124.5	113.2	126.1	126.7	127.9	109.1	107.6	104.2	121.4	108.8	97.1	117.4	107.6
Population Provided with Piped Water	2000	106.6	105.5	106.4	106.4	107.3	107.3	106.4	107.3	95.6	105.5	80.0	100.9	102.7	76.3	101.8	101.8
	2002	106.9	107.0	106.8	106.3	106.8	106.8	106.8	107.3	96.5	105.1	80.5	102.6	106.4	76.7	101.3	103.0
Population Provided with Electricity	2000	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	96.1	103.9	103.9	103.9	103.9	75.7	77.1	103.9
	2002	104.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0	96.1	104.0	104.0	104.0	104.0	75.7	77.1	104.0
Infant Mortality Rate per 1,000 Live Births	1998	102.5	108.3	94.3	103.1	107.3	105.7	113.5	85.5	94.2	97.9	91.7	90.1	100.5	82.4	109.9	87.0
	2000	123.5	123.2	114.3	128.0	121.9	126.6	129.4	121.2	112.1	112.3	93.8	107.5	106.8	119.1	126.6	118.4
Number of Doctors per 10,000 Population	2000	105.9	97.6	103.4	102.0	101.2	104.8	97.7	134.2	96.8	97.1	99.5	96.8	98.5	93.2	94.5	97.8
	2002	108.2	100.5	106.5	104.2	102.6	106.6	101.1	1351Q	98.4	99.0	101.1	98.7	101.5	95.3	96.3	97.1
Development Composite Index	2000	105.4	103.5	103.2	102.1	101.2	108.9	106.8	112.1	93.9	96.9	90.7	96.7	97.4	84.2	94.6	96.8
	2003	109.7	107.4	107.9	106.6	104.5	113.0	110.1	118.4	98.1	100.3	93.3	101.4	99.9	89.5	99.1	102.8
Change in Index		4.3	3.9	4.7	4.5	3.3	4.2	3.4	6.3	4.2	3.4	2.7	4.7	2.5	5.3	4.5	6.0

Notes:

¹ Includes Wilayah Persekutuan Putrajaya.² Includes Wilayah Persekutuan Labuan.

TABLE 3-12

GROSS DOMESTIC PRODUCT BY STATE, 2000-2005

State	GDP at Purchasers' Value in 1987 prices						Per Capita GDP in Current Prices						Ratio of Per Capita GDP to Malaysian Average			
	RM million			Average Annual Growth Rate (%)			RM		Average Annual Growth Rate (%)							
	2000	2003	2005	2001-2003	2004-2005	2001-2005	2000	2003	2005	2001-2003	2004-2005	2001-2005				
More Developed States	141,837	154,958	174,602	3.0	6.1	4.2	17,667	18,534	20,448	1.6	5.0	3.0	1.21	1.20	1.20	
Johor	23,798	26,162	29,801	3.2	6.7	4.6	14,058	14,861	16,466	1.9	5.3	3.2	0.95	0.97	0.98	
Melaka	6,040	6,460	7,302	2.3	6.3	3.9	15,244	15,810	17,556	1.2	5.4	2.9	1.07	1.03	1.04	
Negeri Sembilan	7,205	7,682	8,596	2.2	5.8	3.6	13,574	14,143	15,570	1.4	4.9	2.8	0.88	0.92	0.92	
Perak	15,158	16,366	18,325	2.6	5.8	3.9	11,826	12,546	13,922	2.0	5.3	3.3	0.92	0.82	0.83	
Pulau Pinang	17,064	18,788	21,277	3.3	6.4	4.5	20,894	22,294	24,813	2.2	5.5	3.5	1.46	1.45	1.47	
Selangor ¹	46,609	52,188	58,890	3.8	6.2	4.5	18,157	19,507	21,309	2.4	4.5	3.3	1.20	1.27	1.26	
Wilayah Persekutuan Kuala Lumpur	25,963	27,312	30,412	1.7	5.5	3.2	29,919	30,578	33,500	0.7	4.7	2.3	2.06	1.99	1.99	
Less Developed States	68,122	74,329	82,801	2.9	5.5	4.0	11,401	11,964	13,002	1.6	4.2	2.7	0.78	0.78	0.78	
Kedah	8,969	9,355	10,397	1.4	5.4	3.0	8,754	8,850	9,645	0.4	4.4	2.0	0.61	0.58	0.57	
Kelantan	5,120	5,327	5,893	1.3	5.2	2.9	6,137	6,168	6,710	0.2	4.3	1.8	0.42	0.40	0.40	
Pahang	7,826	8,565	9,476	3.1	5.2	3.9	9,855	10,490	11,378	2.1	4.1	2.9	0.71	0.68	0.67	
Perlis	1,239	1,274	1,409	0.9	5.1	2.6	9,739	9,839	10,761	0.3	4.6	2.0	0.74	0.64	0.64	
Sabah ²	15,698	16,960	18,885	2.6	5.5	3.8	9,560	9,859	10,646	1.0	3.9	2.2	0.63	0.64	0.63	
Sarawak	16,817	18,993	21,266	4.1	5.8	4.8	13,248	14,421	15,775	2.9	4.8	3.6	0.88	0.94	0.94	
Terengganu	12,453	13,855	15,475	3.6	5.7	4.4	22,514	24,121	26,098	2.3	4.0	3.0	1.59	1.57	1.55	
Malaysia	209,959	229,287	257,403	3.0	6.0	4.2	14,582	15,382	16,870	1.8	4.7	3.0	1.00	1.00	1.00	

Notes:

¹ Includes Wilayah Persekutuan Putrajaya.² Includes Wilayah Persekutuan Labuan.

per cent per annum from RM11,401 in 2000 to RM11,964 in 2003. Among the less developed states, Terengganu recorded the highest per capita GDP of RM24,121 in 2003. Overall, the gap between the average per capita GDP of the more developed and less developed states to the national average remained at 1.2:0.8. During the review period, the average per capita GDP of most of the less developed states reached the target of attaining at least two-thirds of the national average.

III. PROSPECTS, 2004-2005

3.36 During the remaining Plan period, distributional strategies will continue to emphasise on narrowing income imbalance and increasing effective Bumiputera participation as well as equity ownership in the corporate sector. Efforts will be intensified towards eradicating poverty by 2005, through specific programmes to address pockets of poverty, particularly in remote areas. In addition, measures will be undertaken to strengthen the programmes to develop the BCIC, including expanding the Bumiputera middle-class, through the development of more competitive, market-oriented and resilient Bumiputera entrepreneurs. The private sector and NGOs will be encouraged to provide meaningful contribution for the attainment of distributional objectives. Greater emphasis will be placed on ensuring balanced regional development by further strengthening the economic base of the less developed states and reducing the socio-economic imbalances of the states.

Poverty Eradication

3.37 *Rural Poverty.* As the incidence of rural poverty decreased, efforts will be directed towards identifying the target groups for specific anti-poverty programmes. In this respect, the Government will draw-up a poverty map to identify areas with high concentration of poor households. This will be used to channel development programmes to the target groups. The list on the hardcore poor will be updated and expanded to include all poor households in rural areas including the *Orang Asli*.

3.38 In addition, skills training and education programmes will be expanded to enable the poor and low-income groups, including people with disabilities, to be employed in the more productive and remunerative sectors of the economy. In this respect, with the establishment of additional community colleges, more

training opportunities will be available for school leavers and workers, including those in the rural and estate sectors. To enable people with disabilities to participate actively in the economy, the number of special schools as well as skills and training institutions will be increased. At the same time, assistance will continue to be given to the handicapped, the disabled and the destitutes to enable them to benefit from sosio-economic development.

3.39 The Government will also ensure that the poor and low-income groups benefit from various measures implemented in the education system. The provision of financial assistance, free textbooks and meals will be continued during the remaining Plan period. The sustained upgrading of schools and related infrastructure in the rural areas will make quality education more accessible to the poor.

3.40 The SPKR will be strengthened to address issues of hardcore and general poverty in rural and urban areas through economic, social and physical programmes such as the *Program Pembangunan Bersepadu Desa Terpencil*, *Skim ASB-Sejahtera* and Housing Assistance Programme. In addition, efforts will be intensified to infuse a disciplined work culture and positive values and attitudes among the rural poor through programmes such as *Program Pembangunan Minda Insan* and *Program Pembangunan Sikap Keluarga Termiskin*.

3.41 *Urban Poverty*. The pilot survey to build the urban poverty map in Johor Bahru will be expanded to cover the whole nation to determine the location of the urban poor. The poverty map and data base will be used as a basis to consolidate anti-poverty programmes and overcome the issue of overlapping assistance given to the same households by different agencies and of certain households not receiving any assistance. The information will also be used to formulate programmes to provide housing, amenities and opportunities to generate income for the poor. In addition, the existing integrated approach taken by local authorities, private sector and NGOs to assist the urban poor will be continued through programmes such as the Integrated Development for Urban Communities, *Pusat RAHMAT*, *Projek HARAPAN* and *Skim Khas Ibu Tunggal*. Efforts to resettle squatters will be continued to improve the living standard of the urban poor.

3.42 *Orang Asli*. A comprehensive development plan will be developed to overcome the high incidence of poverty among the *Orang Asli* and improve their quality of life. The existing projects under the *Program Pembangunan Bersepadu Desa Terpencil*, the *Rancangan Pengumpulan Semula* and the *Penyusunan Semula Kampung* will be continued to address extreme poverty among the *Orang Asli*. In addition, the Village Micro-Credit Scheme will be extended to the *Orang Asli*

to enable them to undertake economic activities especially in agriculture and be involved in small businesses. During the remaining Plan period, education programmes will be intensified for the *Orang Asli* community. *Orang Asli* parents in remote settlements will be encouraged to send their school-going children to hostels in schools. Steps will also be taken to increase the awareness of the importance of education for the *Orang Asli* by fostering closer interaction between the school authorities and the community. More students from the community will be encouraged to enroll in institutions of higher learning, particularly in polytechnics and community colleges. In addition, the number of vocational courses to train the *Orang Asli* in areas of forestry development, house construction and maintenance will also be increased.

3.43 *Bumiputera Minorities.* During the remaining Plan period, as part of the target-specific programmes to eradicate poverty, the income generating projects under the SPKR will be extended to address issues of hardcore and general poverty among the Bumiputera minorities in Sabah and Sarawak. The respective State Planning Units will coordinate these efforts to eradicate poverty among the Bumiputera minorities. The involvement of federal and state agencies as well as NGOs and the private sector in the poverty eradication programmes will be enhanced.

3.44 *Other Initiatives.* The NGOs and the private sector will be encouraged to expand their activities and coverage in assisting the poor. AIM will utilise the RM300 million interest-free loans provided by the Government to service a wider spectrum of participants and regions in the country. By end of 2005, AIM expects to provide micro-credit loans to about 143,000 participants involving RM368 million. Special preparatory programmes for potential participants will also be conducted by AIM to build self-esteem and self-reliance among the poor. In addition, the private sector and the various state-based *Yayasan Basmis Kemiskinan* and other NGOs will continue their efforts in providing skills training as well as in-kind and financial contributions to the poor.

Income Distribution

3.45 The Government will continue to address the issue of income imbalance, particularly between and within ethnic groups, income groups, regions and states. With the expected moderate economic growth during the remaining Plan period, the middle-income group is anticipated to increase further in size and share of income. As part of a major long-term income distribution objective, the nation

will create a bigger and more prosperous middle-income group in addition to increasing income of the lower income group. Efforts to expand the Bumiputera middle-income group will also be intensified.

Restructuring of Ownership of the Corporate Sector

3.46 During the remaining Plan period, concerted efforts will be undertaken to improve Bumiputera participation in the corporate sector as well as increase their equity and effective control of companies to meet the restructuring objectives. In this respect, implementing agencies will be required to reinforce efforts to increase Bumiputera participation in the economy. In addition, the private sector must maintain a high level of commitment and complement Government's efforts in the attainment of this objective.

3.47 Efforts will also be undertaken to ensure that the implementing agencies have an effective delivery and monitoring mechanism. In this regard, government agencies are required to establish a monitoring system to monitor the implementation of programmes related to restructuring of society. At the same time, the Government will continue to create an enabling environment to facilitate greater Bumiputera ownership and participation in the economy, particularly in the high-value added activities and modern and dynamic services sector. Measures will also be undertaken to ensure that the growth momentum is sustained to allow for further progress in the ownership restructuring process.

3.48 As the success and achievement of the equity restructuring target will depend very much on the values, attitude as well as skills, knowledge and management capability among Bumiputera managers and entrepreneurs, the related training programmes will also focus on inculcating positive values. At the same time, Bumiputera entrepreneurs as well as managers and corporate leaders will be encouraged to continuously acquire the knowledge as well as relevant management and entrepreneurship skills. In line with these efforts, skills training institutes such as the Securities Industry Development Centre and *Institut Keusahawanan Negara* will continue to conduct training programmes for the directors, corporate managers, Bumiputera entrepreneurs and officers in various implementing agencies. The training programmes will focus on enhancing knowledge and skills on related issues in business, capital market and corporate matters.

3.49 Equity restructuring programmes will continue to focus on increasing Bumiputera ownership and participation in manufacturing and services sectors in particular ICT subsector. Related agencies will strengthen and establish specialised

information and advisory centres to disseminate information on business opportunities and provide advisory services on the formulation of business plans, market research and technical services.

3.50 As the listing of companies on the stock exchange will provide wider scope and greater opportunities for expansion and growth as well as strengthen Bumiputera participation in the corporate sector, more Bumiputera companies will be encouraged to apply for listing on the Kuala Lumpur Stock Exchange. In this regard, the Securities Commission will continue to nurture and facilitate these companies by providing them with the necessary assistance.

3.51 During the remaining Plan period, Bumiputera companies will be encouraged to rationalise and strengthen their position to face future challenges and take advantage of the growing business potential. In this respect, the Government will continue to encourage Bumiputera companies to establish more joint ventures and smart partnerships with non-Bumiputera and foreign companies. At the same time, Bumiputera institutions and trust agencies will take measures to increase their effectiveness and efficiency in mobilising and managing resources in a more volatile and uncertain business environment. Steps will also be taken to improve management capability and ensure high professionalism in these institutions and agencies.

3.52 Recognising that the share of Bumiputera equity will further decline resulting largely from increased investment liberalisation, strategic measures will be undertaken to attain the equity restructuring target. In this regard, a new investment company, Dana Harapan, will be established to manage a Second National Unit Trust Fund. This fund will be managed by professional and experienced managers to attract and mobilise Bumiputera savings and capital. Strong and profitable government companies will be transferred to this fund.

3.53 Another strategic measure to increase Bumiputera ownership and participation in the corporate sector as well as promoting domestic industries will be the award of a minimum of 60 per cent of government procurements, contract works and other related projects to Bumiputera entrepreneurs. In this respect, only competent and credible entrepreneurs will be awarded these contracts.

3.54 Malay reserve, *baitulmal*, *waqaf*, as well as native and customary land will continue to be identified and developed for commercial and other suitable projects. The development of these lands will provide wider opportunities for Bumiputera to participate in the business activities. Bumiputera institutions,

agencies and companies will continue to be encouraged to participate in the development of these lands. At the same time, the Government will also strengthen monitoring mechanism for the proper development of such lands.

3.56 Efforts to increase Indian equity ownership to 3.0 per cent by 2010 will be focused on providing opportunities to young potential entrepreneurs to acquire and increase their knowledge, skill and management capability as well as through the provision of financial assistance. At the same time, the relevant chambers of commerce and business associations will be encouraged to establish more joint venture companies and businesses. In addition, special skill training programmes will be provided at *Pusat GIATMARA* and community colleges for the school leavers among the low-income Indian community.

Employment Restructuring

3.56 Education and training will remain an important strategy to meet the employment restructuring objectives. Attention will continue to be given towards increasing Bumiputera participation in professional, managerial and other high-income occupations. Assistance will be given to qualified Bumiputera students to study in public and private institutions of higher learning, particularly in science, ICT and other professional courses. The Government will also continue to sponsor outstanding Bumiputera students to pursue higher education in reputable institutions abroad. More opportunities will be provided to Bumiputera to pursue technical and vocational training conducted by the government agencies as well as the private sector. In line with this, more training institutions will be established.

3.57 During the remaining Plan period, the Government and the private sector will continue with programmes to provide unemployed Bumiputera graduates with relevant knowledge and skills to enable them to be gainfully employed. At the same time, Bumiputera graduates will also be encouraged to participate in various entrepreneurship programmes such as the Graduate Entrepreneurship Scheme and PROSPER.

3.58 In line with employment restructuring objectives, the private sector will be encouraged to employ more Bumiputera, particularly at the administrative and managerial levels. Steps to increase non-Bumiputera participation in the public sector will be continued especially in the profession where they are not well represented, such as teaching and nursing professions, police and the armed forces.

Development of the Bumiputera Commercial and Industrial Community

3.59 The Government, including the trust agencies and government-owned companies, will continue efforts to meet the targets and objectives of the BCIC programmes. Government support and intervention will emphasise the creation of a pool of resilient and competitive Bumiputera entrepreneurs with drive and dynamism. In addition, the existing programmes will be expanded to enhance the development of BCIC in Sabah and Sarawak.

3.60 The packaged programmes, such as the vendor and franchise development programmes, will be further strengthened and expanded to benefit a larger number of Bumiputera entrepreneurs. In this regard, more corporations will be appointed as anchor companies and franchisors. Stringent criteria will be imposed for the selection of new vendors and franchisees to ensure quality and sustained participation of Bumiputera entrepreneurs. Under the Vendor Development Programme, more Bumiputera vendors will be selected to participate in new industries, particularly in ICT as well as ship building and repairing industries. To enhance the participation of Bumiputera, the franchise activities will be centralised under the *Perbadanan Nasional Berhad* (PNS). In this regard, PNS will be restructured to take over the responsibility on franchise development which will include, among others, purchasing selected franchise from overseas, developing Bumiputera franchisees and products, and implementing Research and Development on local franchise products.

3.61 During the remaining Plan period, the Government will continue to facilitate the entry of Bumiputera entrepreneurs into the business sector, in particular those having some experience and capital. This will include training, R&D and technical support, credit and business infrastructure facilities as well as product promotion. Efforts to increase the number of Bumiputera scientists and technologists will also be intensified as this group provides the source for expanding the pool of Bumiputera entrepreneurs.

3.62 Consistent with the objective of making the existing entrepreneurial funds more focused and accessible, these funds will be streamlined and restructured into a three-tier system. At the apex, five funds, currently managed by *Bank Negara Malaysia* and channeled through various financial institutions, will become the main referral funds for the entrepreneurs and will be categorised as Development Fund, as shown in *Table 3-13*. This category of fund will be given to entrepreneurs based on the project viability as well as their track records. Another 21 funds, which are mostly implemented by development financial institutions, will be

categorised as Nurturing Fund. Under this Fund, project viability will be the main criteria for eligibility. The third group of funds, known as Germination Fund, will provide easy-term loan financing to encourage the creation of more Bumiputera entrepreneurs. Currently, this Fund, consisting of eight funds, is being implemented by government agencies and NGOs. The remainder of the 12 funds will either cease operation or be merged into the new three-tier system.

3.63 A database of borrowers will be established and linked to all fund agencies. In this regard, the existing PNS database will be upgraded as the common referral database for effective implementation and monitoring of the entrepreneurial funds.

Balanced Regional Development

3.64 During the remaining Plan period, economic growth in all states is expected to remain high. The more developed states are projected to grow at an average rate of 6.1 per cent per annum, spearheaded by further expansion in the manufacturing sector as well as services sector, particularly the wholesale and retail trade, hotels and restaurants. The less developed states are expected to grow at an average rate of 5.7 per cent per annum, with resource-based manufacturing activities continue to be the major contributor to growth.

3.65 Efforts will be continued to accelerate the development of all the states, particularly the less developed states, and reduce the socio-economic imbalances among the states. In this regard, economic activities will be promoted on the basis of the comparative strength of the states, the industrial dispersal programme, further improvement of infrastructure and better access to quality public amenities. The development of the less developed states will be further intensified through the diversification into manufacturing and selected services activities as well as modernising the rural areas and increasing accessibility to ICT facilities.

3.66 New and potential areas of growth, especially in tourism, health and education, will be identified and promoted for all states based on their locational advantage as well as socio-economic considerations. Existing procedures and regulations as well as incentive packages will be reviewed and streamlined to attract more investment. Concerted efforts will be taken to ensure that the less developed states are able to generate faster growth. In this regard, private sector participation in modern methods of farming and agro-based processing activities will continue to be encouraged.

TABLE 3-13

ENTREPRENEURIAL FUNDS BY CATEGORY

<i>Category/Fund</i>	<i>Implementing Agency</i>	<i>Specialisation/Target Group</i>
I. DEVELOPMENT FUND		
1. Fund for Bumiputera Entrepreneurs Project	Financial Institutions	Financing Bumiputera entrepreneurs with government contracts/projects
2. New Entrepreneurs Fund	Financial Institutions	Financing Bumiputera SMEs
3. Fund for Small and Medium Industry 2	Financial Institutions	Financing SMEs in manufacturing and services sectors
4. Rehabilitation Fund for Small and Medium Industry	Financial Institutions	Financing SMEs with non-performing loans and cash-flow problems
5. Entrepreneurs Rehabilitation and Development Fund	Financial Institutions	Assisting Bumiputera enterprises in all sectors to settle non-performing loans
II. NURTURING FUND		
6. Soft Loan for SMEs	Small and Medium Industries Development Corporation (SMIDEC)	Providing basic capital for SMEs
7. Basic Capital Scheme	Bank Pembangunan dan Infrastruktur Malaysia Berhad (BPIMB)	Providing basic capital for Bumiputera SMEs
8. Graduates Entrepreneurs Fund	BPIMB	Financing graduate entrepreneurs in all sectors
9. Film Industry Fund	BPIMB	Financing enterprises in film industry
10. Tourism Fund	BPIMB	Financing enterprises in tourism industry
11. Tourism Infrastructure Fund	BPIMB	Financing enterprises to provide tourism infrastructure
12. Terengganu Entrepreneurial Fund	BPIMB	Developing Bumiputera entrepreneurs in Terengganu
13. Fund for Food	Bank Pertanian Malaysia (BPM)	Financing main food production
14. BCIC Financing Scheme	BPM	Financing Bumiputera entrepreneurs in agriculture and rural areas
15. Shipping Fund	Bank Industri dan Teknologi Malaysia Berhad (BITMB)	Financing shipping activities
16. Education Fund	BITMB	Financing private institutions of higher learning to purchase machinery and equipment
17. Joint Venture Promotion Scheme	RHB Bank Berhad (Consortium of 18 commercial banks)	Developing genuine joint-venture between Bumiputera and non-Bumiputera enterprises

<i>Category/Fund</i>	<i>Implementing Agency</i>	<i>Specialisation/Target Group</i>
18. Bumiputera Venture Capital Fund	Perbadanan Usahawan Nasional Berhad (PUNB)	Providing venture capital for Bumiputera SMEs in manufacturing and services sectors
19. Fund for Bumiputera Entrepreneurs in Retail Trade	PUNB	Financing Bumiputera retailers
20. MAVCAP Fund	Malaysia Venture Capital Management Berhad (MAVCAP)	Providing venture capital in selected technology sectors
<i>Guarantee Scheme</i>		
21. New Main Guarantee Scheme	Credit Guarantee Corporation Malaysia Berhad (CGC)	Providing loan guarantee for all sectors
22. Direct Access Guarantee Scheme	CGC	Providing loan guarantee for manufacturing sector
23. Small Entrepreneurs Guarantee Scheme	CGC	Providing credit facilities for small-size entrepreneurs
24. Guarantee Scheme for Interest-free Banking	CGC	Providing loan guarantee under Islamic banking system
25. Elastic Guarantee Scheme	CGC	Providing guarantee for loans under Development Fund
26. Franchise Financing Scheme	CGC	Providing finance and loan guarantee for franchise industry
III. GERMINATION FUND		
27. Business Financing Scheme	Majlis Amanah Rakyat (MARA)	Financing Bumiputera SMEs
28. <i>Skim Pembiayaan Ekonomi Desa</i>	BPIMB	Providing financing for Bumiputera entrepreneurs in rural areas
29. Equity Investment Scheme	Perbadanan Nasional Berhad (PNS)	Equity financing
30. Franchise Development Assistance Scheme	PNS	Financing entrepreneurs in franchise industry
31. Youth Economic Development Fund	Ministry of Youth and Sports	Providing financing for youths
32. <i>Tabung Ekonomi Kumpulan Usaha Niaga (TEKUN)</i>	Yayasan TEKUN Nasional	Providing micro credit for Bumiputera small traders
33. <i>Skim Pembiayaan Ikhtiar</i>	Amanah Ikhtiar Malaysia (AIM)	Providing micro-credit for entrepreneurs from poor households
34. <i>Skim Khas Ibu Tunggal</i>	AIM	Providing micro-credit for single mothers in small businesses

IV. CONCLUSION

3.67 Progress was made in reducing poverty and restructuring of society during the review period, despite the lower economic growth. During the remaining Plan period, poverty eradication programmes will be more target-specific by addressing issues of poverty among specific vulnerable groups in both the rural and urban areas. As for the restructuring of society, steps will be taken to increase effective Bumiputera participation in major sectors of the economy while pursuing efforts towards achieving the target on Bumiputera equity ownership. The development gap between states will be narrowed further. The implementation of these distributional and regional development strategies during the remaining Plan period will enhance the attainment of the objectives of the National Vision Policy and the building of a developed nation by the year 2020.

Chapter 4

Population, Employment and Human Resource Development

4

POPULATION, EMPLOYMENT AND HUMAN RESOURCE DEVELOPMENT

I. INTRODUCTION

4.01 The human resource development strategy in the Eighth Malaysia Plan is to create a critical mass of trained, skilled and knowledgeable workforce to sustain economic growth, increase competitiveness and support a knowledge-based economy. During the review period, the quality of education and training was further enhanced through increased coverage and utilisation of information and communications technology (ICT), introduction of quality assurance system as well as improvements in infrastructure facilities. The performance gap between rural and urban schools was narrowed further with the provision of a conducive teaching and learning environment. Specialised and advanced technological training programmes were expanded to meet increasing demand for highly skilled human resource. In addition, the unemployment rate remained low despite slower economic growth.

4.02 During the remaining Plan period, efforts will be intensified to increase the capability of the education and training delivery system to meet the dynamism of the labour market. The supply of quality science and technology (S&T) human resource will be expanded to enhance scientific and technological capabilities in order to intensify innovative research and development (R&D) activities. Measures will also be undertaken to aggressively promote and develop Malaysia as a regional centre of educational excellence. In addition, to promote a knowledge-seeking culture and ensure sustainable employment, greater opportunities for lifelong learning will be provided. Positive values will be reinforced to strengthen the discipline and mental resilience of the workforce, which are among the critical elements in productivity enhancement. Further measures will also be instituted to ensure productivity increases commensurate with increases in labour cost.

II. PROGRESS, 2001-2003

4.03 During the review period, total employment expanded at an average annual rate of 3.1 per cent while the unemployment rate was low at 3.5 per cent. The quality of the labour force improved with a higher proportion having tertiary education. Greater access to quality education and training was provided and this was enhanced through the provision of lifelong learning programmes. Concerted efforts were undertaken to train and retrain workers in order to upgrade their skills and adaptability.

Population

4.04 It is estimated that the population grew at an average rate of 2.2 per cent per annum from 23.49 million in 2000 to 25.08 million in 2003, as shown in *Table 4-1*. The population of Malaysian citizens grew at 2.0 per cent per annum while the non-citizen population increased at 5.6 per cent due to the increased employment of foreign workers, particularly in the manufacturing, construction and plantation sectors.

4.05 The proportion of the population in the working age group 15-64 constituted 62.7 per cent in 2003, those below the age of 15 at 33.2 per cent while the population in the age group 65 and above was 4.1 per cent. The dependency ratio improved from 61.4 per cent in 2000 to 59.5 per cent in 2003 with the decrease in the number of dependents to 100 persons of working age. Malaysia continues to have a young population as reflected by the median age of 23.9 years in 2003.

4.06 Continued improvements in the quality of life raised life expectancy of the population with the males increasing from 70.2 years in 2000 to 70.9 years in 2003 while females from 75 years to 75.5 years. However, there was rising incidence of the population afflicted with diseases related to unhealthy lifestyles such as cancer with 17,174 cases in 2000 and 25,560 cases in 2002 with 1,400 death reported in 2002, and heart disease cases from 33,623 to 37,075 and 2,300 death during the same period.

4.07 The total fertility rate of major ethnic groups declined. Nevertheless, the Bumiputera registered the highest total fertility rate of 3.43, raising their proportion of the citizen population from 65 per cent in 2000 to 65.5 per cent in 2003. The total fertility rate for the Chinese was 2.51 and Indians 2.46, with their proportion decreasing from 26.1 per cent to 25.6 per cent and from 7.6 per cent to 7.5 per cent, respectively.

TABLE 4-1

POPULATION SIZE AND AGE-STRUCTURE, 2000-2005
(million persons)

	2000	%	2003	%	2005	%	Average Annual Growth Rate (%)			
							8MP		2001-2003	2004-2005
							Original	Revised		
Total Population	23.49		25.08		26.16		2.3	2.2	2.2	2.1
Citizens	22.08	100.0	23.42	100.0	24.36	100.0	2.3	2.0	2.0	2.0
Bumiputera	14.35	65.0	15.35	65.5	16.06	65.9	2.6	2.3	2.3	2.3
Chinese	5.76	26.1	6.00	25.6	6.15	25.2	1.6	1.3	1.4	1.2
Indian	1.68	7.6	1.76	7.5	1.82	7.5	1.8	1.6	1.6	1.7
Others	0.29	1.3	0.31	1.4	0.33	1.4	-1.1	2.6	2.2	3.2
Non-Citizen ¹	1.41		1.66		1.80		2.4	5.0	5.6	4.1
Age Structure										
0-14	8.00	34.0	8.33	33.2	8.55	32.7	1.1	1.3	1.4	1.3
15-64	14.56	62.0	15.72	62.7	16.50	63.1	2.8	2.5	2.6	2.5
65 and above	0.93	4.0	1.03	4.1	1.11	4.2	3.6	3.6	3.5	3.8
Dependency ratio (%)	61.4		59.5		58.6					
Median Age (years)	23.4		23.9		24.2					

Note: ¹ Includes expatriates and foreign workers.

4.08 The urban population increased from 62.0 per cent in 2000 to 62.5 per cent in 2003 as a result of increased migration, growth in new urban areas and the extension of administrative urban boundaries. The size of the urban population grew at an average annual rate of 2.5 per cent during the review period. The median age of the population in urban areas at 24 years in 2003 was higher than the national average. The working age group 15-64 constituted 64.4 per cent and those below the age of 15 were 31.7 per cent while 3.9 per cent were in the age group 65 and above. The dependency ratio was 55 per cent.

4.09 The share of rural population declined from 38.0 per cent in 2000 to 37.5 per cent in 2003 with an average growth rate of 1.8 per cent per annum. The median age of the rural population was 21.1 years. The share of the working age group 15-64 was 59.8 per cent in 2003 while those below the age of 15 constituted 35.7 per cent and the age group 65 and above was 4.5 per cent. Thus, the dependency ratio declined from 73 per cent in 2000 to 67 per cent in 2003.

Labour Force

4.10 The labour force increased at an average rate of 3.2 per cent per annum from 9.6 million in 2000 to 10.5 million in 2003, as shown in *Table 4-2*. The overall labour force participation rate (LFPR) improved from 65.7 per cent in 2000 to 66.9 per cent in 2003. Both the male and female LFPRs registered an increase with the male LFPR increasing from 85.7 per cent to 87.1 per cent and the female LFPR from 44.8 per cent to 45.7 per cent. The female LFPR, however, was still low compared with other countries such as Australia, Japan and the United Kingdom, which had participation rates of above 60 per cent.

4.11 During the review period, there were 942,400 additional entrants into the labour market, averaging 314,130 persons per year, of which 90.1 per cent were locals. With the extension of universal education to 11 years as well as increased number of people pursuing higher education, the proportion of the labour force in the age group 15-24 declined. This was reflected by the decline in LFPR of this age group from 49.4 per cent in 2000 to 48.4 per cent in 2003.

4.12 There was significant improvement in the quality of the labour force during the review period. The Labour Force Survey conducted by the Department of Statistics showed that the proportion of the labour force with tertiary education increased from 13.9 per cent in 2000 to 17.1 per cent in 2003. The percentage of local labour with tertiary education improved from 15.2 per cent to 19.0 per cent with 12.2 per cent having technical education and vocational training qualifications. The proportion of the labour force with secondary education also increased from 53.8 per cent in 2000 to 56.2 per cent in 2003.

4.13 Several subsectors of the economy continued to experience labour shortages requiring the employment of foreign workers. Consequently, foreign workers with work permits accounted for 9.5 per cent of the labour force in 2003 and the ratio of foreign workers to local labour increased from 9.3:100 in 2000 to 11.7:100 in 2003. In 2003, 31.5 per cent of the foreign workers were in the manufacturing sector, 29.3 per cent in plantation, 6.7 per cent in services while 18.9 per cent were domestic maids. Expatriates, who are highly skilled foreign workers, accounted for 9.7 per cent of foreign labour in 2003 and they were mainly employed as managers, software consultants, lecturers, engineers and trainers.

TABLE 4-2

EMPLOYMENT BY SECTOR, 2000-2005 (‘000 persons)

Sector	2000				2003				2005				Average Annual Growth Rate (%)				Net Job Creation			
	%		%		%		%		8MP Target		2001-2003		2004-2005		2001-2003		2004-2005			
									Original		Revised									
Agriculture, Forestry, Livestock & Fishing	1,407.5	15.2	1,404.8	13.8	1,403.0	12.9	-1.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-2.8	-0.3	-1.8	-0.3		
Mining & Quarrying	41.2	0.4	42.7	0.4	43.5	0.4	0.5	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.5	0.2	0.8	0.1		
Manufacturing	2,558.3	27.6	2,829.0	27.9	3,177.1	29.3	4.6	4.4	3.4	6.0	6.0	6.0	6.0	6.0	270.7	30.9	348.1	50.2		
Construction	755.0	8.1	793.7	7.8	823.0	7.6	3.1	1.7	1.7	1.8	1.8	1.8	1.8	1.8	38.7	4.4	29.2	4.2		
Electricity, Gas & Water	75.0	0.8	89.4	0.9	99.5	0.9	2.7	5.8	6.0	5.5	5.5	5.5	5.5	5.5	14.4	1.6	10.1	1.5		
Transport, Storage & Communications	461.6	5.0	524.3	5.2	579.0	5.3	3.7	4.6	4.3	5.1	5.1	5.1	5.1	5.1	62.8	7.2	54.7	7.9		
Wholesale & Retail Trade, Hotels & Restaurants	1,584.2	17.1	1,731.1	17.1	1,814.6	16.7	3.5	2.8	3.0	2.4	2.4	2.4	2.4	2.4	146.9	16.8	83.5	12.0		
Finance, Insurance, Real Estate & Business Services	508.7	5.5	631.8	6.2	680.0	6.3	4.9	6.0	7.5	3.7	3.7	3.7	3.7	3.7	123.1	14.0	48.3	7.0		
Government Services	981.0	10.6	1,026.1	10.1	1,048.7	9.7	1.8	1.3	1.5	1.1	1.1	1.1	1.1	1.1	45.1	5.1	22.6	3.3		
Other Services	898.7	9.7	1,075.2	10.6	1,173.5	10.8	5.8	5.5	6.2	4.5	4.5	4.5	4.5	4.5	176.5	20.1	98.3	14.2		
Total	9,271.2	100.0	10,148.1	100.0	10,842.0	100.0	3.2	3.2	3.1	3.4	3.4	3.4	3.4	3.4	876.9	100.0	693.9	100.0		
Labour Force	9,572.5		10,514.9		11,208.3		3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2						
Local Labour	8,759.2		9,289.5		10,208.3		3.7	3.1	2.0	4.8	4.8	4.8	4.8	4.8						
Foreign Labour	813.3		1,225.4		1,000.0		-5.3	4.2	14.6	-9.7	-9.7	-9.7	-9.7	-9.7						
Unemployment	301.3		366.8		366.3															
Unemployment rate (%)	3.1		3.5		3.3															

4.14 In 2002, the policy on the employment of foreign workers was revised to alleviate the shortage of skilled workers. Foreign workers with five years working experience in Malaysia were eligible to be certified as skilled workers by the National Vocational Training Council (NVTC) and the Construction Industry Development Board (CIDB). With this certification, their employment can be extended for another five years to a maximum of 10 years. As at September 2003, the NVTC had certified 23,069 foreign workers as skilled workers, of which 47.4 per cent was in manufacturing, 31.6 per cent in services and 21.0 per cent in agriculture while 16,758 foreign workers were certified by CIDB.

Employment by Sector

4.15 During the review period, despite the slower economic growth, total employment grew at an average rate of 3.1 per cent per annum, as shown in *Table 4-2*. A higher rate of growth in the labour force at 3.2 per cent coupled with a weaker demand for labour led to an increased unemployment rate from 3.1 per cent in 2000 to 3.5 per cent in 2003. Two-thirds of the unemployed were from the age group 15-24. There was also an increase in the number of job seekers with tertiary education from 11.2 per cent in 2000 to 14.5 per cent in 2003 due to the increased number of graduates entering the labour market. However, the number of new jobs created which required tertiary qualifications was low. On average, 59.3 per cent of these job seekers were unemployed for less than six months.

4.16 Employment in the *services sector*, which accounted for 48.6 per cent of total employment in 2000, increased by an average rate of 4.0 per cent per annum, generating 568,800 new jobs during the review period. Within the sector, the finance, insurance, real estate and business services subsector registered the highest growth at 7.5 per cent per annum contributing 123,100 new jobs. However, the other services subsector, which grew at 6.2 per cent per annum, generated the highest number of jobs, accounting for 176,500 new jobs.

4.17 The *manufacturing sector* contributed 270,700 new jobs as a result of the expansion in domestic-oriented industries, which benefited from the positive effects of the fiscal stimulus programme. Consequently, employment in the manufacturing sector expanded at an average rate of 3.4 per cent per annum, thus increasing its share to 27.9 per cent in 2003.

4.18 In the *construction sector*, employment recorded an average annual growth of 1.7 per cent contributing 4.4 per cent of employment creation or 38,700 new

jobs. This was mainly due to higher government expenditures on infrastructure projects and increased construction of residential property. Nevertheless, the sector had to rely on foreign workers as locals find working in this sector unattractive. As a result, the number of foreign workers employed increased from 65,891 in 2000 to 224,350 in 2003, accounting for 28.3 per cent of the total employed in this sector.

4.19 Employment in the *agriculture sector* continued to contract at an average rate of 0.1 per cent per annum due to increased mechanisation, better agronomic practices and structural changes. The contraction was also attributed to better utilisation of labour in oil palm plantation and the adoption of the Low Intensity Tapping System in rubber plantations. Consequently, the share of employment in the agriculture sector fell from 15.2 per cent to 13.8 per cent during the review period. Although the demand for labour declined, the sector continued to face labour shortages due to the uncondusive working environment, resulting in the number of foreign workers employed in this sector increasing from 175,834 in 2000 to 327,490 in 2003.

Employment by Occupation

4.20 Demand for human resource in most occupational categories registered a positive growth during the review period, as shown in *Table 4-3*, with the highest growth registered in the craft and related trade workers category. At the end of the review period, the occupational structure changed as a result of the higher increase in the demand for service workers and shop and market sales workers category compared with the skilled agriculture and fishery workers category, in line with the expansion of the services sector. In tandem with the strategic shift towards higher value added activities, demand for workers in the elementary occupational group further contracted.

4.21 The *legislators, senior officials and managers* category grew at an average rate of 6.4 per cent per annum, accounting for 15.0 per cent of total employment created or 131,600 new jobs. Its share to total employment increased from 6.9 per cent in 2000 to 7.6 per cent in 2003. This was due to the increasing demand for general managers in the wholesale and retail trade, hotels and restaurants subsector, of which general managers in wholesale and retail trade accounted for 27 per cent of occupations in this category as a result of the entrance of large retailers into the subsector while general managers in lodging and catering services accounted for 10.8 per cent.

TABLE 4-3

EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP, 2000-2005 ('000 persons)

Occupational Group ¹	Average Annual Growth Rate (%)						Net Job Creation						
	2000		2003		2005		8MP Target	2001-2003		2004-2005			
	%	%	%	%	%	%		Total	%	Total	%		
Legislators, Senior Officials & Managers ²	639.7	6.9	771.3	7.6	845.7	7.8	5.7	6.4	4.7	131.6	15.0	74.4	10.7
Professionals ³	528.5	5.7	548.0	5.4	628.8	5.8	3.5	1.2	7.1	19.5	2.2	80.8	11.6
Technicians & Associate Professionals ⁴	1,103.3	11.9	1,268.5	12.5	1,409.5	13.0	5.0	4.8	5.4	165.2	18.8	140.9	20.3
Clerical Workers ⁵	890.0	9.6	974.2	9.6	1,008.3	9.3	2.5	3.1	1.7	84.2	9.6	34.1	4.9
Service Workers, Shop & Market Sales Workers ⁶	1,205.3	13.0	1,420.7	14.0	1,593.8	14.7	5.7	5.6	5.9	215.4	24.6	173.0	24.9
Skilled Agricultural & Fishery Workers ⁷	1,390.7	15.0	1,288.8	12.7	1,268.5	11.7	-1.8	-2.5	-0.8	-101.9	-11.6	-20.3	-2.9
Craft & Related Trade Workers ⁸	843.7	9.1	1,085.8	10.7	1,246.8	11.5	8.1	8.8	7.2	242.2	27.6	161.0	23.2
Plant & Machine Operators & Assemblers ⁹	1,492.7	16.1	1,623.7	16.0	1,691.4	15.6	2.5	2.8	2.1	131.0	14.9	67.7	9.8
Elementary Occupations ¹⁰	1,177.4	12.7	1,167.0	11.5	1,149.3	10.6	-0.5	-0.3	-0.8	-10.4	-1.1	-17.8	-2.5
Total	9,271.2	100.0	10,148.1	100.0	10,842.0	100.0	3.2	3.1	3.4	876.9	100.0	693.9	100.0

Notes:

- ¹ This classification is based on the Malaysia Standard Classification of Occupations 1998.
- ² Includes general managers, department managers and senior government officials.
- ³ Includes graduate teaching professionals, accountants and auditors as well as computer system designers and analysts.
- ⁴ Includes non-graduate teachers, supervisors as well as air traffic and transport controllers.
- ⁵ Includes administrative clerks, accounting and finance clerks as well as telephone operators.
- ⁶ Includes cooks, travel guides and waiters.
- ⁷ Includes farm workers, plantation workers and forestry workers.
- ⁸ Includes mechanics and fitters, carpenters and tailors.
- ⁹ Includes equipment assemblers, drivers and machine operators.
- ¹⁰ Includes street vendors, domestic helpers and cleaners as well as construction and maintenance labourer.

4.22 The demand for *professionals* grew at an average annual rate of 1.2 per cent, accounting for 2.2 per cent or 19,500 of total jobs created. However, its share to total employment declined from 5.7 per cent in 2000 to 5.4 per cent in 2003. More than 29 per cent of employment in this category was graduate teachers at pre-university and secondary education levels in line with efforts to enhance the quality of educators.

4.23 The *technicians and associate professionals* category registered an average growth of 4.8 per cent per annum to account for 165,200 jobs created. In this category, 15.3 per cent were engineering technicians in fields such as electrical and electronics as well as telecommunications partly due to the expansion of telecommunications services as the telecommunications companies upgraded their services to meet increasing demand. The share of this category to total employment also increased from 11.9 per cent in 2000 to 12.5 per cent in 2003.

4.24 The *clerical workers* category, which recorded an average increase of 3.1 per cent per annum, retained its share to total employment at 9.6 per cent in 2003. In this category, administrative clerks constituted 59.4 per cent. At the same time, demand for *service workers and shop and market sales workers* category grew at an average rate of 5.6 per cent per annum, accounting for 215,400 new jobs or 24.6 per cent of total net job creation. The increase in demand for these workers, especially sales supervisors and sales workers, which constituted almost 40 per cent of workers in this category, was due to the entry of new large retailers into the wholesale and retail trade, hotels and restaurants subsector. Consequently, the share of the *service workers and shop and market sales workers* category increased from 13 per cent of total employment in 2000 to 14 per cent in 2003.

4.25 The requirement for *skilled agricultural and fishery workers* contracted further by an average rate of 2.5 per cent per annum with its share to total employment declining from 15.0 per cent in 2000 to 12.7 per cent in 2003. This can be partly contributed by the conversion of rubber and oil palm plantations to housing estates while many labour-intensive rubber plantations were converted into less labour intensive oil palm plantations. Almost 36 per cent of workers in this category were field crop and vegetable farm workers while another 30 per cent were workers in rubber and oil palm plantations. On the other hand, the *craft and related trade workers* category registered the highest rate of growth averaging 8.8 per cent, thus increasing its share to total employment to 10.7 per cent in 2003 from 9.1 per cent in 2000. This increase was contributed mainly by the increase in construction-related activities.

4.26 The demand for the *plant and machine operators and assemblers* category grew at an average rate of 2.8 per cent per annum due to the high growth of the domestic-oriented industries, particularly transport equipment and food processing. Although the share of total employment declined from 16.1 per cent in 2000 to 16.0 per cent in 2003, this category of workers formed the largest group among the major occupational categories.

4.27 The total number of workers in the *elementary occupations* category contracted by an average annual rate of 0.3 per cent during the period to account for 11.5 per cent of jobs in 2003, lower than that registered in 2000. Of this, the demand for construction and maintenance labourers accounted for 29 per cent due to increased infrastructure activities as well as sustained performance of the housing industry.

Wages and Productivity

4.28 During the review period, most of the industries analysed experienced increases in salaries and wages despite the economic slowdown. Among those registering a higher growth were the chemical industry at an average annual rate of 7.2 per cent, followed by the electrical and electronics industry at 6.7 per cent, the oil palm plantation at 6.4 per cent and the wholesale and retail trades at 6.1 per cent, as shown in *Table 4-4*.

4.29 Productivity as measured by value added per employee also increased for all industries except for selected services subsectors. The oil palm plantation recorded the highest productivity growth averaging 7.6 per cent per annum. Productivity in the rubber and chemical industries grew at 6.5 per cent and 4.7 per cent, respectively, higher than the 3.0 per cent average productivity growth of the manufacturing sector.

4.30 As many industries recorded higher productivity increases compared with salaries and wages, there was a decline in unit labour cost (ULC), which reflected improved competitiveness for these industries. In the rubber industry and the oil palm plantation, ULC declined by 1.3 per cent and 0.9 per cent per annum, respectively. The wholesale industry also registered a decline in ULC by 0.5 per cent.

TABLE 4-4

**SALARIES AND WAGES PER EMPLOYEE, VALUE ADDED PER EMPLOYEE AND UNIT LABOUR COST
BY SELECTED SUBSECTORS, 2000-2003
(RM)**

Sector	Salaries and Wages Per Employee ¹ (SWE)		Value Added Per Employee ² (VAE)		Unit Labour Cost ³ (ULC)		Annual Percentage Change (%), 2001-2003		
	2000	2003	2000	2003	2000	2003	SWE	VAE	ULC
Agriculture									
Oil Palm ⁴	5.40	6.50	14.68	18.31	0.37	0.36	6.4	7.6	-0.9
Manufacturing ⁵	8.84	10.62	168.79	184.26	52.40	57.62	6.3	3.0	3.2
Wood	6.57	7.73	67.03	66.64	97.97	116.50	5.6	-0.2	5.9
Chemical	10.09	12.44	216.04	247.81	46.68	50.20	7.2	4.7	2.5
Rubber	7.43	8.63	75.98	91.85	97.82	93.93	5.1	6.5	-1.3
Textile	7.08	8.10	63.82	57.58	111.01	140.70	4.6	-3.4	8.2
Electrical & Electronics	9.41	11.42	215.32	217.90	43.68	52.40	6.7	0.4	6.3
Construction ⁶	10.08	10.72	16.90	18.16	0.60	0.59	2.1	2.4	-0.6
Selected Services Subsector ⁷	9.29	n.a.	29.24	n.a.	0.32	n.a.	0.5	-0.4	0.9
Transport & Communications	11.82	n.a.	198.71	n.a.	53.48	n.a.	-5.2	-3.9	0.4
Road Haulage	9.19	n.a.	23.36	n.a.	0.39	n.a.	-2.2	-0.9	-1.7
Public Bus Transport	7.47	n.a.	14.96	n.a.	0.50	n.a.	0.9	4.8	-3.7
Sea Transport	14.47	n.a.	100.19	n.a.	0.14	n.a.	2.4	5.1	-4.4
Travel Agencies & Tour Operators	9.88	n.a.	18.02	n.a.	0.55	n.a.	-3.0	-3.9	1.2
Hotels & Other Lodging Places	6.83	n.a.	16.41	n.a.	0.42	n.a.	-2.7	-1.6	-0.8
Real Estate Agents	8.86	n.a.	13.15	n.a.	0.67	n.a.	-5.2	-8.7	3.7
Wholesale & Retail Trade ⁸	5.87	7.00	188.00	200.73	31.20	31.72	6.1	5.5	0.6
Wholesale Trade	9.32	11.09	317.16	382.47	29.38	28.98	6.0	6.4	-0.5
Retail Trade	3.59	4.41	102.69	118.00	34.93	37.35	7.1	4.7	2.3

Notes:

- ¹ Refers to value in thousand ringgit.
 - ² Refers to value added per employee in RM million.
 - ³ Refers to cost of labour per unit of output produced.
 - ⁴ VAE was calculated based on real sales per employee with data from the Malaysian Palm Oil Board.
 - ⁵ VAE was calculated based on real sales per employee with data from monthly surveys on manufacturing industries.
 - ⁶ Data was sourced from census on the construction industry.
 - ⁷ Data was based on Malaysia Economic Census and annual percentage change was for 1997 to 2000.
 - ⁸ VAE was based on real sales per employee from quarterly surveys on wholesale and retail trades.
- n.a. Not available

4.31 In line with efforts to improve competitiveness, the implementation of the Productivity-Linked Wage System (PLWS) was further pursued. Efforts were also undertaken to overcome major constraints in implementing PLWS such as the rigidity of the wage system, which is determined through collective bargaining or contractual agreement; lack of awareness and firm commitment by employers; and reluctance of trade unions to adopt the PLWS. During 2000-2002, from a total of 311 collective agreements signed, 167 or 53.5 per cent contained elements of productivity linkages. Of this, the manufacturing sector accounted for the highest at 57.5 per cent followed by 35.5 per cent from services and 6.6 per cent from the agriculture sector. The majority of these firms were located in the Klang Valley.

Human Resource Development

4.32 During the review period, human resource development programmes continued to give priority, among others, on nurturing creativity and innovativeness as well as developing thinking skills among students at all levels of education and training. Skills training also placed emphasis on market-driven courses to meet the needs of industry. Accordingly, the delivery system was strengthened to ensure supply of highly skilled and knowledgeable human resource imbued with positive values. In addition, utilisation of ICT was intensified to improve the quality of the delivery system.

Education Programmes

4.33 In line with the thrusts of the Education Development 2001-2010, education programmes continued to emphasise on increasing accessibility, equity and quality, strengthening the delivery system, as well as improving the achievement of rural students to reduce the performance gap between rural and urban areas. Improved facilities and additional support were provided to teachers and students to create a conducive teaching and learning environment. The inculcation of positive values and attitudes among students was also given emphasis in the curricular and co-curricular activities. The private sector complemented government efforts by providing places and quality education, especially at the post-secondary level.

4.34 For *pre-school education*, the Education Act 1996 (Amended 2001), provided for the formulation of the National Pre-School Curriculum. The amendment also

gave a standard for curriculum, facilities, training and retraining of teachers as well as instituted a mechanism to coordinate the development of pre-school programmes offered by the public and private providers. In 2003, total enrolment at the pre-school level in public centres was 323,220 or 19.1 per cent of children in the four to six age cohort, compared with 271,596 or 16.7 per cent in 2000, as shown in *Table 4-5*.

4.35 At the *primary education* level, the number of students enrolled increased from 2.9 million in 2000 to 3.0 million in 2003, as shown in *Table 4-5*. To accommodate the increased number of students as well as to provide a more conducive learning environment, 6,254 new classrooms were constructed. Completion of these classrooms improved the overcrowding problem in urban schools. As a result, the percentage of overcrowded schools nationwide declined from 18 per cent in 2000 to 14 per cent in 2003. These additional classrooms also contributed to the improvement in the class-classroom ratio from 1:0.90 in 2000 to 1:0.91 in 2003.

4.36 Efforts to improve accessibility to quality education and provide better teaching and learning facilities were intensified. Accordingly, programmes to increase the participation rates of low-income families were implemented, particularly for students from the disadvantaged group including the *Orang Asli* and children with special needs. Educational support programmes such as scholarship, textbook-on-loan and financial assistance contributed towards the increasing number of students who completed primary education. During the review period, a total of RM728.1 million was spent under these programmes benefiting 2.5 million students, especially from the low-income families in the rural areas.

4.37 In addressing the performance gap between rural and urban schools, various programmes were undertaken. The centralised schools programme was implemented whereby schools with enrolment of less than 150 students were grouped in a single school complex. Two pilot projects were launched, one each in Sabah and Sarawak to accommodate a total of 1,000 students. These school complexes were provided with hostels, quarters for teachers as well as adequate teaching and learning facilities. In addition, 195 hostels were built in rural areas to accommodate 39,000 students, especially from the low-income families. Efforts to attract trained teachers to serve in rural schools were undertaken, including providing more quarters for teachers.

TABLE 4-5

STUDENT ENROLMENT IN LOCAL PUBLIC INSTITUTIONS, 2000-2005
(persons)

Level of Education	Enrolment ¹						Change (%)	
	2000	%	2003	%	2005	%	2001-2003	2004-2005
Pre-school	271,596	4.9	323,224	5.4	424,930	6.8	19.0	31.5
Primary²	2,899,048	51.8	2,990,067	50.2	3,040,643	48.8	3.1	1.7
Lower Secondary	1,254,985	22.4	1,257,960	21.1	1,283,676	20.6	0.2	2.0
Government & Government-aided Schools	1,250,766		1,249,837		1,275,074			
MARA Junior Science Colleges	4,219		8,123		8,602			
Upper Secondary	766,936	13.7	817,341	13.7	827,315	13.3	6.6	1.2
Government & Government-aided Schools	697,717		729,144		733,271			
MARA Junior Science Colleges	8,794		11,568		12,157			
Technical & Vocational Schools	60,425		76,629		81,887			
Post-Secondary	71,117	1.3	118,954	2.0	119,687	1.9	67.3	0.6
Government & Government-aided Schools	47,998		88,827		88,580			
Pre-diploma & Pre-university Courses ³	23,119		30,127		31,107			
Teacher Education (Non-graduates)	14,256	0.3	17,503	0.3	7,948	0.1	22.8	-54.6
Certificate	28,154	0.5	56,105	0.9	88,848	1.4	99.3	58.4
Diploma	92,308	1.6	122,545	2.1	148,025	2.4	32.8	20.8
Degree⁴	201,271	3.6	250,482	4.2	289,806	4.7	24.5	15.7
Total	5,599,671	100.0	5,954,181	100.0	6,230,878	100.0	6.3	4.6

Notes:

¹ Enrolment refers to total student population in that particular year at the particular level of education.

² Includes Government and Government-aided schools. Government schools include fully assisted schools in Peninsular Malaysia, while Government-aided schools include partially assisted schools in Peninsular Malaysia.

³ Includes preparatory courses conducted at the *Universiti Teknologi MARA* (UiTM) and enrolment of matriculation students at the International Islamic University Malaysia.

⁴ Includes enrolment at first-degree and post-graduate levels in public universities and *Kolej Tunku Abdul Rahman*. Enrolment of foreign students at the International Islamic University Malaysia is excluded.

4.38 A programme using English as the medium of instruction for the teaching and learning of Mathematics and Science was implemented in 2003. Under this programme, mathematics and science teachers were trained to teach these subjects in English. These teachers were also supplied with computers, computer-aided teaching and learning materials as well as teaching aids. The implementation of this programme initially involved students in Year 1, Form 1 and Lower Six.

4.39 Enrolment at the *secondary education* level in Government and Government-aided schools increased from 2.0 million in 2000 to 2.1 million in 2003. The enrolment included the increased number of students in secondary technical schools (STSs) from 60,425 in 2000 to 76,630 in 2003. The improved enrolment at the secondary level was due mainly to a better transition rate from the primary to the secondary level, which increased from 88.6 per cent in 2000 to 89.4 per cent in 2003. To accommodate the increase, 6,800 additional classrooms were built, improving the class-classroom ratio from 1:0.83 in 2000 to 1:0.84 in 2003.

4.40 Continuous emphasis was given to the teaching and learning of Mathematics and Science at the secondary level. Besides making English the medium of instruction for these subjects beginning 2003, the curricula were reviewed to make the teaching and learning of these subjects more attractive. A total of 1,005 new science laboratories were built to meet the requirement of the *Kurikulum Bersepadu Sekolah Menengah* (KBSM). In addition, 14 integrated boarding schools were in the early stages of implementation as a measure to provide more places for students in the science stream. These schools, with the capacity of 900 students each, offered science subjects together with religious and technical subjects.

4.41 ICT was used extensively with the implementation of the smart school pilot project in 87 schools. The project involved electronic teaching and learning, development of coursewares, local area networking and wide area networking as well as computerisation of school management. The implementation of this pilot project ended in December 2002 and an assessment was undertaken to evaluate its effectiveness.

4.42 The Computer Infrastructure Project was also launched in 2001 to widen the coverage of computer-aided teaching and learning. The project provided schools with computer laboratories, teaching and learning coursewares and Internet connectivity covering 2,690 or 29 per cent of schools. To further utilise ICT in the teaching and learning processes, a portal, MySchoolNet was developed to enable teachers and students to source educational materials and information.

4.43 Teacher training colleges and public universities conducted pre-service *teacher training* programmes at the diploma and degree levels, respectively. Teachers with diploma qualification were given incentives to further their studies at the degree level in line with the objectives of increasing the number of graduate teachers and enhancing the quality of educators. This would enable the full deployment of graduate teachers to secondary and primary schools, especially to teach Mathematics and Science subjects. In 2003, only 86,600 or 69.5 per cent

of the teaching staff at the secondary level were graduate teachers while 1,010 or 0.6 per cent at the primary level. Shortages of teachers continued to exist for certain subjects due to deployment considerations, especially for subjects such as English at 19.0 per cent, Mathematics at 20.2 per cent and Science at 25.0 per cent.

4.44 To meet the increasing demand for *tertiary education*, especially in technological fields, the capacity of existing universities were expanded and university colleges were established. The focus of these university colleges was on specialised areas of study, particularly in engineering as well as technology and related areas emphasising hands-on experience using the experiential and action learning approach. During the review period, two university branch campuses were upgraded to university colleges, namely, *Kolej Universiti Sains dan Teknologi Malaysia* and *Kolej Kejuruteraan dan Teknologi Malaysia* while *Institut Teknologi Tun Hussein Onn* was upgraded to *Kolej Universiti Teknologi Tun Hussein Onn* (KUiTTHO). At the same time, three new university colleges were established, namely, *Kolej Universiti Islam Malaysia*, *Kolej Universiti Teknikal Kebangsaan Malaysia* and *Kolej Universiti Kejuruteraan Utara Malaysia*. With the expanded capacity, enrolment at the degree level increased from 201,271 in 2000 to 250,480 in 2003, as shown in *Table 4-5*. At the certificate and diploma levels, 110,020 places were made available through 18 polytechnics. Among the new courses offered were tourism management, fashion and apparel as well as hotel and catering.

4.45 Enrolment at the first degree level improved from 170,794 in 2000 to 222,300 in 2003, as shown in *Table 4-6*. Similarly, the number of students enrolled at certificate and diploma levels increased from 28,154 to 56,110 and from 92,308 to 122,550, respectively, as shown in *Table 4-7*. In line with the demand for science and technical courses, enrolment in these fields at all levels increased from 163,142 in 2000 to 241,630 in 2003, especially in engineering, pure sciences and ICT. A large number of qualified students, especially from the low-income families, were able to gain access to higher education as a result of the financial assistance provided by the National Higher Education Fund. The total amount of fund disbursed was RM3.1 billion benefiting 401,130 students. With greater access to tertiary education, the participation rate of the 17-23 age cohort improved from 25.0 per cent in 2000 to 27.9 per cent in 2003.

4.46 Continuous efforts were undertaken to enhance the quality of education in public institutions of higher learning. In this regard, the Quality Assurance

TABLE 4-6

**ENROLMENT AND OUTPUT FOR FIRST DEGREE COURSES
FROM LOCAL PUBLIC EDUCATIONAL INSTITUTIONS, 2000-2005**
(persons)

Course	Enrolment				Change (%)				Output			
	2000	%	2003	%	2005	%	2001-2003	2004-2005	2001-2003	%	2004-2005	%
Arts	81,914	48.0	96,452	43.4	103,846	42.5	17.7	7.7	72,817	50.1	59,173	45.0
Arts & Humanities ¹	27,732		31,097		33,019		12.1	6.2	24,995		18,479	
Economics & Business ²	37,875		46,813		50,522		23.6	7.9	33,223		28,765	
Law	3,909		4,646		5,116		18.9	10.1	2,337		2,438	
Others ³	12,398		13,896		15,189		12.1	9.3	12,262		9,491	
Science	49,575	29.0	66,237	29.8	71,897	29.4	33.6	8.5	43,477	30.0	41,695	31.8
Medicine & Dentistry ⁴	6,908		7,922		8,656		14.7	9.3	3,933		3,339	
Agriculture & Related Sciences ⁵	4,940		5,723		5,961		15.9	4.2	3,934		3,776	
Pure Sciences ⁶	9,081		14,038		14,739		54.6	5.0	8,289		8,767	
Computer Science & Information Technology	15,051		19,810		22,199		31.6	12.1	14,099		13,515	
Others ⁷	13,595		18,744		20,342		37.9	8.5	13,222		12,298	
Technical	39,305	23.0	59,611	26.8	68,784	28.1	51.7	15.4	28,908	19.9	30,448	23.2
Engineering	31,494		49,809		57,684		58.2	15.8	23,881		24,893	
Architecture, Town Planning & Survey	4,682		6,742		7,920		44.0	17.5	3,346		3,915	
Others ⁸	3,129		3,060		3,180		-2.2	3.9	1,681		1,640	
Total	170,794	100.0	222,300	100.0	244,527	100.0	30.2	10.0	145,202	100.0	131,316	100.0

Notes:

¹ Includes Islamic studies, languages, literature, Malay culture, social science and education.² Includes accountancy, agri-business, business management and resource economics.³ Includes arts and communications.⁴ Includes pharmacy.⁵ Includes home science and human development.⁶ Refers to biology, chemistry, mathematics and physics.⁷ Includes applied science, environmental studies, food technology and science with education.⁸ Includes property management.

TABLE 4-7

**ENROLMENT AND OUTPUT FOR DIPLOMA AND CERTIFICATE COURSES
FROM LOCAL PUBLIC HIGHER EDUCATIONAL INSTITUTIONS, 2000-2005**
(persons)

Course	Enrolment				Change (%)		Output	
	2000	%	2003	%	2005	%	2001-2003	%
DIPLOMA								
Arts	39,872	43.2	49,628	40.5	55,961	37.8	30,869	41.9
Arts & Humanities ¹	2,746		3,474		3,621		3,223	
Economics & Business ²	37,126		46,154		52,340		27,646	
Science	17,024	18.4	20,617	16.8	22,945	15.5	19,009	25.8
Agriculture & Related Sciences ³	2,071		2,268		2,400		2,266	
Others ⁴	14,953		18,349		20,545		16,744	
Technical	35,412	38.4	52,300	42.7	69,119	46.7	23,762	32.3
Engineering	27,421		36,610		42,879		17,165	
Architecture, Town Planning & Survey	6,710		12,552		20,711		5,387	
Others ⁵	1,281		3,138		5,529		1,210	
Total	92,308	100.0	122,545	100.0	148,025	100.0	73,640	100.0
CERTIFICATE								
Arts	6,325	22.5	13,244	23.6	21,434	24.1	7,066	20.5
Arts & Humanities ¹	1,392		2,931		4,749		903	
Economics & Business ²	4,933		10,313		16,685		6,163	
Science	1,008	3.5	1,579	2.8	2,110	2.4	2,660	7.7
Technical	20,821	74.0	41,282	73.6	65,304	73.5	24,740	71.8
Engineering	20,396		40,650		64,516		24,242	
Architecture, Town Planning & Survey	425		632		788		498	
Total	28,154	100.0	56,105	100.0	88,848	100.0	34,466	100.0

Notes:

¹ Includes Islamic studies, languages, literature, Malay culture, social science and education.² Includes accountancy, agri-business, business management and resource economics.³ Includes home science and human development.⁴ Includes applied science, environmental studies, food technology and science with education.⁵ Includes property management.

Division was established under the Ministry of Education (MOE) to ensure quality and standards of public higher education are safeguarded and enhanced. During the review period, guidelines for 15 disciplines at the undergraduate level were formulated. In order to assess the employability of graduates and the quality of programmes offered by local institutions, all institutions of higher learning were required to undertake tracer studies on their graduates annually beginning 2002. In addition, the meritocracy policy that placed academic achievement as the main selection criteria for entrance into public institutions of higher learning was introduced in 2002.

4.47 The private sector increased their participation in the provision of higher education as reflected by the increased capacity and enrolment in private institutions of higher learning. Two new private universities were established, namely, *Universiti Tunku Abdul Rahman* and *Universiti Teknikal Kuala Lumpur* while five private colleges were upgraded to university colleges. Total enrolment increased from 232,069 in 2000 to 294,600 in 2003, mainly in ICT, business administration and engineering. During the review period, 462 degree, 872 diploma and 641 certificate level programmes were offered. To sustain the development of private higher education, a strategic plan, the *Perancangan Strategik Pendidikan Tinggi Swasta*, 2001-2010, was formulated. This plan provides the direction and guidance for the development of private higher education focusing on four areas, namely, accessibility, equitable provision of services and facilities, quality assurance and internationalisation of private higher education.

4.48 Efforts were undertaken to develop education as an export industry and as a source of foreign exchange earnings. These included fact-finding missions, government-to-government initiatives on accreditation of qualifications and education promotion activities. As a result, a total of 36,466 foreign students from 150 countries enrolled in local institutions of higher learning in 2002 compared with 26,469 in 2000, a significant increase of 37.8 per cent. The preferred fields of study by foreign students were business administration, ICT and engineering. Students from China and Indonesia formed the highest percentage with 38.8 per cent and 19.4 per cent, respectively.

4.49 In line with the objective to promote lifelong learning, 17 community colleges were established during the review period, providing 5,580 places in technical and vocational courses such as automotive, fashion and apparel as well as hotel and catering. In addition, the *Universiti Terbuka Malaysia*, an open university, offered courses such as ICT, engineering and social science. During the review period, there was an enrolment of 6,000 students. The *Universiti*

Tun Abdul Razak, the first virtual university in Malaysia, was set up to provide accessibility to 8,000 students. A total of 500 coursewares was uploaded into its portal in areas such as humanities and social science, business administration and ICT.

4.50 Efforts to inculcate entrepreneurship among undergraduates were reinforced with the implementation of the Undergraduate Entrepreneurship Training in 13 tertiary institutions under the *Program Pembangunan Usaha Siswa*. This programme contributed to increased awareness among undergraduates on the potential of self-employment.

Skills Training Programmes

4.51 During the review period, efforts were undertaken to ensure that the industrial skills training programmes were market-driven. To meet increasing demand for skills training, existing public skills training institutions were expanded and new institutions were established. In addition, greater private sector participation was encouraged to complement public sector efforts.

4.52 The intake into public training institutions increased at an average annual rate of 12.6 per cent from 27,686 in 2000 to 39,560 in 2003, as shown in *Table 4-8*. The output of skilled human resource from these institutions increased from 25,761 in 2000 to 34,100 in 2003, as shown in *Table 4-9*. Similarly, output from private institutions grew from 18,725 to 26,100, which corresponded with the increased number of these institutions registered with the NVTC from 316 in 2000 to 1,520 in 2003.

4.53 To increase the supply of highly skilled human resource in specialised high technology areas, the Malaysian Institute for Aviation Technology was upgraded and three additional training centres were established, namely, ADTEC Tabuh Naning in Melaka, ADTEC Batu Pahat in Johor and the Malaysia-Spain Institute in Kulim, Kedah. The courses offered were in areas such as electrical and electronics, avionics and automotive-related trades. Consequently, the total intake into advanced training centres, including the German-Malaysian Institute (GMI), Malaysia-France Institute, British-Malaysian Institute and Japan-Malaysia Technical Institute, increased from 1,636 in 2000 to 2,380 in 2003. In addition, state skills development centres provided pre-employment training with a total intake of 4,930 trainees in 2000 and 11,010 in 2003, of which 5.3 per cent was at the diploma level.

TABLE 4-8

**INTAKE OF SKILLED AND SEMI-SKILLED HUMAN RESOURCE IN PUBLIC
TRAINING INSTITUTIONS BY COURSE, 2000-2005**
(persons)

Course	2000	%	2003	%	2005	%	Average Annual Growth Rate (%)	
							2001-2003	2004-2005
Engineering	18,696	67.5	27,423	69.3	40,412	72.4	13.6	21.4
Mechanical	10,594	38.3	15,112	38.3	21,016	37.7	12.6	17.9
Electrical	7,394	26.7	10,794	27.3	16,418	29.4	13.4	23.3
Civil	708	2.6	1,517	3.8	2,978	5.3	28.9	40.1
Building Trades	2,357	8.5	3,538	8.9	4,856	8.7	14.5	17.2
Information & Communications Technology	827	3.0	1,258	3.2	1,884	3.4	15.0	22.4
Others	2,881	10.4	3,559	9.0	4,006	7.2	7.3	6.1
Skills Upgrading	2,925	10.6	3,778	9.6	4,651	8.3	8.9	11.0
Total	27,686	100.0	39,556	100.0	55,809	100.0	12.6	18.8

4.54 In line with the strategy to make skills training more market-oriented, efforts were undertaken to incorporate the dual training approach in the delivery system. In this respect, the Dual System Project was implemented focussing on five core areas for improvement, namely, intensifying industry involvement in training; enhancing the quality of curricula and improving the capacity to develop curricula; increasing the quality of training for vocational and technical teachers; strengthening the networking of technical education and vocational training (TEVT); and enhancing social values, esteem for work and the image of TEVT. Towards this end, various measures were undertaken to develop a national dual traineeship scheme and its implementation strategy, enhance the dynamism of National Occupational Skills Standards (NOSS) with the application of the work process approach and develop the curriculum in line with the revised NOSS. In July 2003, GMI conducted in-service training for teachers and instructors in teaching methods, which emphasised self-reliant learning, action-oriented teaching and learn and work assignments.

4.55 During the review period, more courses were offered using the competency-based training approach with the development of 226 NOSS, of which 20 were

TABLE 4-9
OUTPUT OF SKILLED AND SEMI-SKILLED HUMAN RESOURCE BY COURSE, 2000-2005
(persons)

Course	2000			2003			2005			Average Annual Growth Rate (%)			
	Public	Private	Total	Public	Private	Total	Public	Private	Total	2001-2003		2004-2005	
										Public	Private	Public	Private
Engineering	17,254	9,730	26,984	23,757	13,914	39,271	28,965	17,337	50,272	11.3	12.7	10.4	11.6
Mechanical	9,468	2,232	11,700	14,330	3,545	17,875	18,648	4,866	23,514	14.8	16.7	14.1	17.2
Electrical	7,364	7,378	14,742	8,860	10,183	20,643	9,685	12,221	25,876	6.4	11.3	4.6	9.6
Civil	422	120	542	567	186	753	632	250	882	10.3	15.7	5.6	15.9
Building Trades	1,966	547	2,513	2,313	875	3,188	2,600	1,200	3,800	5.6	17.0	6.0	17.1
Information & Communications Technology	784	7,520	8,304	1,180	9,811	9,991	2,167	11,844	11,541	14.6	9.3	35.5	9.9
Others	2,864	92	3,792	3,070	1,496	3,966	3,674	2,730	4,904	2.3	17.3	9.4	35.1
Skills Upgrading	2,893	n.a.	2,893	3,778	n.a.	3,778	4,651	n.a.	4,651	9.3	n.a.	11.0	n.a.
Total	25,761	18,725	44,486	34,098	26,096	60,193	42,057	33,111	75,168	9.8	11.7	11.1	12.6

Note: n.a. Not available

for Level 4 and 20 for Level 5 in areas such as mechanical production, ICT and advanced computer numerical control (CNC) machining. The coverage of NOSS was also expanded to include agriculture and related areas in order to upgrade the quality of workers in line with the strategy to revitalise the agriculture sector. In this regard, 49 NOSS were developed, of which seven at Level 4 and five at Level 5.

4.56 The Skills Development Fund began operations in 2001 to increase accessibility to TEVT by providing financial assistance to trainees and enhance the participation of the private sector as training providers. During the review period, a total of RM796.6 million was approved, benefiting 121,000 trainees with 97.9 per cent from private training institutions. An additional allocation of RM500 million was provided under the Package of New Strategies in 2003 to enable more school leavers to pursue industrial skills training programmes. The guidelines on the provision of loans were reviewed to ensure effective utilisation of the Fund.

4.57 The Centre for Instructor and Advanced Skills Training (CIAST) increased intake for the National Instructors Training Programme from 135 in 2000 to 260 trainees in 2003 with a total output of 460 during the review period. In addition, CIAST also conducted the pedagogical training programme and as at June 2003, 2,714 instructors were trained. However, due to the limited capacity in CIAST and the increasing need for trained instructors in youth training centres, the Sepang Advanced Youth Training Centre and Pagoh Youth Training Centre also conducted pedagogical training programme for 187 instructors in 2002.

4.58 Rapid technological changes and emergence of new methods of teaching requires constant upgrading of skills and knowledge of instructors. In this regard, the Skills Development Programme for Vocational and Technical Instructors under the Public Services Department contributed significantly to skills upgrading of instructors. During the review period, a total of 2,714 instructors was trained locally and abroad in areas such as safety and health, programmable logic control as well as precision and advanced machining involving a total expenditure of RM14.7 million. Similarly, 935 instructors were trained in Japan and South Korea under the Look East Policy in areas such as CNC, computer-aided design and aviation.

4.59 During the review period, the *Pembangunan Sumber Manusia Berhad* (PSMB) intensified its efforts to encourage employers, especially the small and medium enterprises (SMEs) to retrain and upgrade the skills of their workers.

A total levy of RM452.3 million was collected under the Human Resource Development Fund (HRDF), of which 98.1 per cent was disbursed and accounted for 1.3 million training places. Technical and quality assurance and control courses constituted 36.7 per cent of approved training places and 33.3 per cent of disbursement. PSMB also expanded the coverage of HRDF to include manufacturing-related services such as logistics, market support and ICT. In addition, PSMB also extended the period for employers to utilise their levy contribution from two to five years. The coverage of the training grant for employers in the manufacturing sector was expanded to include the services sector having 10-49 workers with paid-up capital of less than RM2.5 million. To encourage greater utilisation of the levy contribution to HRDF, training grants were provided by the PSMB based on the amount spent on training but not exceeding total levy contribution.

4.60 To upgrade the knowledge and enhance technical and managerial skills of the SMEs, the Skills Upgrading Programme under the Small and Medium Industries Development Corporation was strengthened. In this regard, the financing of training fees incurred by SMEs was increased from 50 per cent to 80 per cent. SMEs contributing to the HRDF were also eligible for an additional 20 per cent financing of training fees from the Fund.

4.61 The PSMB further encouraged the participation and involvement of employers in the apprenticeship scheme by allowing employers to utilise their levy for the payment of monthly allowances immediately upon approval of on-the-job and off-the-job training of their apprentices. In addition, employers with 10-49 workers with paid-up capital of less than RM2.5 million were allowed to finance monthly allowances for off-the-job training from the Apprenticeship Fund. During the review period, a total of 2,033 trainees was trained under the apprenticeship scheme in areas such as machining, mechatronics, and tool and die with financial assistance from PSMB with total expenditure of RM12 million.

Enhancing the Employability and Marketability of the Labour Force

4.62 The Training and Attachment Programme for Unemployed Graduates and the Training Programme for Retrenched Workers and *Sijil Pelajaran Malaysia* (SPM) School Leavers were implemented in November 2001 to increase the employability and marketability of the labour force. Graduates registered under the Training and Attachment Programme for Unemployed Graduates were attached to public and private sector agencies to gain work experience and were trained

in areas such as ICT, the English language and research methodology technique. At the same time, the graduates were given the opportunity to re-skill in specialised areas including network system development, industrial automation engineering, analogue engineering, press tool and mould making as well as furniture manufacturing and design. An allocation of RM256.1 million was provided for this programme. As at September 2003, a total of 37,429 graduates at the diploma and degree levels benefited from this programme. Under the Package of New Strategies in 2003, a new retraining fund was established with an allocation of RM100 million for the retraining and re-skilling of new graduates in selected fields.

4.63 The Training Programme for Retrenched Workers and SPM School Leavers was designed to enable them to acquire new skills in highly demanded fields. An allocation of RM57 million was provided and as at September 2003, a total of 10,820 retrenched workers and SPM school leavers benefited from this programme. Of this total, 83.2 per cent were trained at the certificate level and 16.8 per cent at diploma level with 69.9 per cent in computer-related courses, 15.9 per cent in finance and management and 14.5 per cent in technical and engineering trades. The number of retrenched workers trained under this scheme was low because some workers sought reprieve from the compensations paid under the voluntary separation schemes and others preferred to seek jobs.

III. PROSPECTS, 2004-2005

4.64 During the remaining Plan period, the development of multi-skilled, flexible and adaptable human resource will be further emphasised to enhance productivity and competitiveness to support the productivity-driven growth strategy. Greater focus will be given to develop an efficient and responsive education and training delivery system. This will enable the generation of a knowledgeable and highly skilled labour force imbued with positive values and attitudes to support the transition into a knowledge-based economy. The private sector needs to be proactive in complementing public sector initiatives to increase the supply of knowledge workers as well as develop Malaysia as a regional centre for educational excellence.

Human Resource Policy Thrusts

4.65 Capacity building in human resource will continue to be given priority, particularly in the creation of a strong S&T base capable of undertaking innovative

R&D activities to expand the economic potential. The ability to keep pace with market demand and technological advancement will be achieved through continuous upgrading of the quality of the workforce and by inculcating a knowledge seeking culture in the society. While the strategic thrusts under the Plan will continue to guide the development of human resource, during the remaining Plan period, specific focus will be given to the following:

- ❑ *enhancing the employability of human resource;*
- ❑ *increasing the supply and enhancing the quality of S&T human resource;*
- ❑ *internalising positive values; and*
- ❑ *institutionalising lifelong learning.*

Enhancing the Employability of Human Resource

4.66 The implementation of the market-driven human resource development strategy will be intensified to increase productivity and enhance the employability of human resource, in particular graduates. Existing academic programmes will continue to be reviewed with active involvement of the private sector and the implementation of new academic programmes will be based on market requirement. Tertiary institutions will intensify efforts to incorporate the development of soft skills into the curriculum, assessment system as well as co-curricular activities. These include communications, problem-solving, decision-making, leadership qualities and learning-to-learn. In addition, entrepreneurship programmes will be expanded to develop entrepreneurship abilities. English will be made the medium of instruction for core subjects in undergraduate programmes to improve the proficiency of graduates in the language and to enhance their competitiveness in the labour market. In addition, other foreign languages will be introduced gradually as an elective. Career counselling services will be better structured to enable graduates to understand the potential job market and their future career path.

4.67 Institutions of higher learning will offer more double major and multi-disciplinary programmes as well as introduce double degree programmes for undergraduates to increase their employability. Similarly, cooperative degree programmes, which provide learning both at the tertiary institution and workplace, will also be introduced in public institutions of higher learning. Elements such as management and research skills will be incorporated in undergraduate programmes to equip graduates with analytical, managerial and research competencies. In addition, a well designed industrial attachment and practicum will be implemented

for students and teaching staff in all academic programmes to provide exposure to the working environment as well as to enhance their knowledge and skills. Similarly, the adaptability of graduates from TEVT will be further improved by incorporating social and learning competencies in their programmes.

Increasing the Supply and Enhancing the Quality of S&T Human Resource

4.68 Measures will be taken to ensure an adequate supply of quality S&T human resource to enhance indigenous technological and innovative capabilities, which is critical for the expansion into new business ventures and technology frontiers. In this regard, S&T programmes offered by institutions of higher learning will be strengthened and intake into these programmes will be expanded to increase the supply of quality S&T human resource. More high achievers will be encouraged to pursue programmes in pure sciences. Additional scholarships and financial assistance will be provided including at post-graduate and post-doctoral levels. Institutions of higher learning will also offer a wider range of courses to increase the number of technologists in the labour market. To enhance R&D capability, more post-graduate courses will be offered and more graduate students will be engaged as research assistants. Collaboration between institutions of higher learning, research institutions and industries will be enhanced to intensify R&D activities and ensure the research findings are commercially viable.

Internalising Positive Values

4.69 The inculcation of positive values and good work ethics will be emphasised to create a productive workforce and resilient society. The workforce will be imbued with productive work values through the process of internalisation. This will be achieved through shared practices of the shared values and effectively communicating them through, among others, code of ethics, slogans, logos and symbols and disseminating them through means including workshops. In addition, good human resource management practices will contribute significantly to this process such as giving recognition to workers who adhere to these values and emulate positive role models.

Institutionalising Lifelong Learning

4.70 A mechanism will be established to formulate policies and strategies to ensure effective implementation and development of lifelong learning. During

the remaining Plan period, efforts will be taken to further facilitate the access to and opportunities for lifelong learning programmes. The Malaysian Qualifications Framework will be formulated to enable the recognition of prior learning by awarding credits through the assessment of knowledge, skills and understanding gained outside the formal education and training systems. This recognition will allow individuals to further pursue their education and training. The private sector will also need to be more active in promoting lifelong learning by encouraging the employees to continuously pursue relevant education and training programme, as well as providing the necessary infrastructure and support. Financial institutions will be encouraged to extend financial assistance to support lifelong learning programmes.

Population

4.71 The Malaysian population is projected to increase to 26.16 million in 2005, at an average rate of 2.1 per cent per annum, as shown in *Table 4-1*. The Malaysian citizen population will grow at an average rate of 2.0 per cent per annum with the non-citizen population growing at 4.1 per cent. The total fertility rate of major ethnic groups is expected to further decline. The Bumiputera population with the highest total fertility rate of 3.30 will grow at an average annual rate of 2.3 per cent, accounting for 65.9 per cent of Malaysian citizens in 2005. With a total fertility rate of 2.49, the Chinese population will grow at 1.2 per cent per annum accounting for 25.2 per cent of citizens while the Indians, with a total fertility rate of 2.40, will grow at 1.7 per cent per annum to account for 7.5 per cent of the citizens.

4.72 The population below the age of 15 is expected to grow at an average rate of 1.3 per cent per annum, which is lower than the other age groups, decreasing its proportion to 32.7 per cent in 2005. Those in the working age group 15-64 will grow at 2.5 per cent per annum, raising its proportion to 63.1 per cent in 2005. The population in the age group 65 and above is expected to increase its proportion to 4.2 per cent in 2005 due to longer life expectancy, reflecting the need for increased support for the elderly. Given the changes in the population structure, the dependency ratio is expected to improve further to 58.6 per cent by 2005. Malaysia will continue to have a young population with a median age of 24.2 years in 2005.

4.73 The urban population is expected to grow to 16.47 million in 2005 at an average annual rate of 2.5 per cent during the remaining Plan period. This will lead to its share to total population increasing to 62.9 per cent in 2005. The

proportion of the working age group 15-64 will constitute 64.2 per cent, 31.5 per cent below the age of 15 while 4.3 per cent in the age group 65 and above. The dependency ratio is expected to improve to 56 per cent and the median age is expected to increase to 24.3 years.

4.74 During the remaining Plan period, with a lower growth rate of 1.7 per cent per annum, the share of the rural population will continue to decline to 37.1 per cent in 2005. The proportion of the population in the working age group 15-64 is estimated to increase to 61.1 per cent in 2005, those below the age of 15 will be 34.7 per cent while those 65 years and above is expected to account for 4.2 per cent. The dependency ratio will improve to 64 per cent with the median age of the rural population at 21.5 years.

Labour Force

4.75 The labour force is expected to grow at an average rate of 3.2 per cent per annum during the remaining Plan period to reach 11.2 million by 2005 with an additional 693,400 new entrants into the labour market. There will be continued dependence on foreign workers, particularly in the construction, manufacturing and plantation sectors. The number of foreign workers in Malaysia will constitute 8.9 per cent of the total labour force in 2005. In view of this, the government will continue to encourage industries to shift towards more capital-intensive technologies in the production of high value added output through greater utilisation of automation and computerisation.

4.76 The LFPR is expected to increase from 66.9 per cent in 2003 to 68.0 per cent by 2005 with both female and male LFPR increasing to 46.7 per cent and 88.2 per cent, respectively. A large proportion of the labour force will continue to have a young age profile, more educated and better trained. The share of the labour force with tertiary education will increase to 18.9 per cent by 2005 while those with secondary education will increase to 57.4 per cent. The expansion in education and training facilities and increased opportunities for lifelong learning are expected to further improve the quality of the labour force.

Employment by Sector

4.77 With improving economic outlook in the remaining Plan period, employment is projected to grow at an average rate of 3.4 per cent per annum with a net job creation of 693,900, as shown in *Table 4-2*. With a lower average labour force

growth of 3.2 per cent per annum, the unemployment rate is expected to decline further to 3.3 per cent in 2005.

4.78 The *services sector* is expected to contribute 45.7 per cent of the net jobs created, growing at an average rate of 3.1 per cent per annum over the remaining Plan period. By 2005, the share of the services sector to total employment will account for 49.8 per cent. A large portion of the jobs created will be in the other services subsector, which will grow at 4.5 per cent per annum, contributing 14.2 per cent of the total jobs created due to the rapid expansion in private education and health services. Another subsector contributing to employment creation with 12 per cent of total net jobs created will be the wholesale and retail trade, hotels and restaurants subsector.

4.79 The *manufacturing sector* will remain an important contributor to employment creation. Employment in the sector is expected to increase at an average rate of 6.0 per cent per annum to 3.2 million in 2005, accounting for 50.2 per cent of total net job creation. This corresponds with the expected strengthening of the sector during the remaining Plan period.

4.80 The modernisation and mechanisation of the agriculture sector and improved farm management techniques for large-scale mixed farming enterprises is expected to reduce the demand for workers. Consequently, employment in the sector is expected to contract by an average annual rate of 0.1 per cent and its share to total employment will decline to 12.9 per cent by 2005.

Employment by Occupation

4.81 The continued uncertainty in the world economy is not expected to have a major impact on employment in the country during the remaining Plan period. Almost all occupational categories except skilled agricultural and fishery workers as well as workers in the elementary occupations category, are expected to register positive growth, as shown in *Table 4-3*. The highest growth is expected to be in the professionals category as well as craft and related trade workers category.

4.82 The *legislators, senior officials and managers* category is expected to register an average annual growth of 4.7 per cent with its share to total employment accounting for 7.8 per cent in 2005. This occupational category is expected to

generate 74,400 new jobs or 10.7 per cent of the total jobs created, partly contributed by the growth in engineering and management services as well as finance, insurance and real estate.

4.83 Demand for *professionals* is expected to increase by an average rate of 7.1 per cent per annum to reach 628,800 in 2005 or 5.8 per cent of total employment. The demand for computer-related occupations such as computer engineers and computer systems analysts will continue to increase, especially in the growing business services industries spurred by the rapid advances in computer technology and the continuing demand for new computer applications. The growing demand for health care services will increase the requirement for medical and health professionals, especially physicians, surgeons and allied health professionals.

4.84 The *technicians and associate professionals* category will register an average annual growth of 5.4 per cent, accounting for 20.3 per cent of the total jobs created or 140,900 new jobs. The share of this category to total employment is expected to increase to 13 per cent in 2005. The projected job growth for this category is expected to be more for associate professionals providing computer support services.

4.85 During the remaining Plan period, the requirement for workers in the *clerical workers* category will continue to decline, resulting in a slower growth rate averaging 1.7 per cent per annum and its share to total employment will further decline to 9.3 per cent in 2005. Demand for many occupations in this category is declining due to the impact of office automation and the increased use of word processing equipment by professional and managerial employees. On the other hand, with the expected improved performance of most services subsectors, demand for *service workers and shop and market sales workers* is expected to grow at a faster pace than during the review period. This category is expected to register an average annual growth rate of 5.9 per cent, contributing 24.9 per cent of jobs created. There will be continued demand for salesperson and sales supervisors in retail, accommodation and restaurant industries.

4.86 Although the performance of the agriculture sector is anticipated to improve, overall demand for *skilled agricultural and fishery workers* category will contract by an average rate of 0.8 per cent per annum, resulting in the further decline of its share to 11.7 per cent in 2005. However, there will be an increasing demand for workers with skills in areas such as biotechnology, horticulture and landscaping

activities. The *craft and related trade workers* category will register an average annual growth of 7.2 per cent, accounting for 23.2 per cent of the total jobs created or 161,000 new jobs. Its share to total employment will increase to 11.5 per cent or 1.25 million jobs by 2005 including for machinery and electrical mechanics and fitters as well as construction trades workers.

4.87 The average annual growth rate of workers in the *plant and machine operators* category is projected to increase by 2.1 per cent although its share to total employment is on a declining trend. This category of workers will contribute 9.8 per cent of total net job creation or 67,700 jobs. Assemblers of electrical and electronics equipment is expected to account for a quarter of the jobs in this category. Similarly, *elementary occupations* will continue to show a declining trend with a projected average contraction of 0.8 per cent to account for 10.6 per cent share of total employment. This expected reduction is most significant for unskilled occupations, which are linked to the agriculture, mining and manufacturing sectors of the economy.

Wages and Productivity

4.88 Labour productivity as a whole, is expected to increase by an average rate of 2.5 per cent per annum during the remaining Plan period as a result of increasing demand and higher capacity utilisation in view of the improving economic scenario. Labour productivity in the *manufacturing sector* as measured by GDP per employee in constant 1987 price is expected to grow by an average rate of 1.7 per cent per annum. The productivity improvement can be attributed mainly to various measures undertaken by the industries such as application of new product technology, increased utilisation of ICT as well as innovative utilisation of manufacturing resources resulting in cost reduction.

4.89 Although the agriculture sector is expected to experience labour shortages, labour productivity will increase by an average rate of 2.8 per cent per annum due to enhancement in skills and knowledge of the farming community in mechanisation and utilisation of improved farming techniques. In the *services sector*, labour productivity is expected to improve by an average rate of 2.8 per cent per annum. The highest growth will be in the wholesale and retail trade, hotels and restaurants subsector by 2.9 per cent, followed by the finance, insurance, real estate and business services subsector by 2.8 per cent.

4.90 In line with the strategy to enhance competitiveness and economic resilience, a committee of experts will be established to review the labour legislation to

facilitate the implementation of PLWS and allow flexibility in implementing collective agreements. Firms will be encouraged to further intensify the implementation of PLWS and share their best practices. To promote confidence in the system, efforts will be undertaken to ensure adequate and timely flow of information between employers and workers. In view of the increasing unit labour cost, greater efforts will be undertaken by firms to adopt high technology production processes and continuous skills upgrading of workers.

Human Resource Development

4.91 In the remaining Plan period, increasing the supply of knowledgeable, skilled and creative human resource with positive attributes will continue to be the core strategy in human resource development. Investment in human capital will be intensified to create a pool of highly productive human resource to support a knowledge-based economy. Towards this end, continued efforts will be undertaken to focus on increasing accessibility and improving quality of education and training, particularly among rural students to reduce the performance gap between rural and urban areas.

Education Programmes

4.92 *Pre-school education* will continue to be provided by both the public and private sectors. The coordinating mechanism will be strengthened to achieve a larger coverage of children attending pre-school education. Towards this end, 4,500 additional pre-school centres are expected to be established catering for 112,500 children. The combined efforts by the public and private sectors are expected to increase the coverage of pre-school education to 67 per cent by 2005.

4.93 Enrolment at the *primary education* level is expected to increase to 3.04 million students in 2005, as shown in *Table 4-5*. In line with this, 1,445 additional classrooms are expected to be built to accommodate this increase and provide a better learning environment. Consequently, the class-classroom ratio will improve to 1:0.93 in 2005. Provision of new classrooms will further reduce overcrowding in urban schools to 13 per cent in 2005.

4.94 Continuous efforts will be undertaken to further improve the transition rate of school children, especially among students from the low-income households. In this regard, under the *Kumpulan Wang Amanah Pelajar Miskin*, students from

the low-income households will receive financial aid to lessen the financial burden of their families. In addition, other educational support initiatives such as textbook-on-loan, free tuition, financial assistance as well as nutritional and health programmes will be reviewed to ensure their effectiveness.

4.95 Additional schools will be built, particularly in urban areas to reduce overcrowding including the construction of high-rise school complexes. To maintain quality, student population will not exceed 700 and 1,050 pupils at the primary and secondary school levels, respectively.

4.96 To increase quality and provide a more conducive learning environment for children in rural areas, the centralised school concept will be implemented in 19 schools to accommodate 4,820 children. By the end of the Plan period, a total of 203 school hostels will be built for 40,600 students, especially for those from the remote areas and low-income families.

4.97 The programme to use English as the medium of instruction for the teaching and learning of Mathematics and Science will be continued. In this regard, 190,000 teachers will be trained, of which 25 per cent will be primary school teachers. By the end of the Plan period, 112,000 computers will be supplied to 70,000 primary and 42,000 secondary school teachers to facilitate the teaching of these subjects.

4.98 Enrolment at the *secondary education* level is expected to increase to 2.11 million students in 2005, as shown in *Table 4-5*. To accommodate this increase, a total of 3,965 additional classrooms and 132 new schools will be built. Consequently, the class-classroom ratio will improve to 1:0.86 in 2005. The new schools will include four STSs in, namely, Jengka in Pahang, Pendang in Kedah, Pontian in Johor and Sepang in Selangor, resulting in a higher enrolment of students in science and technical streams at 81,890 in 2005.

4.99 Emphasis will be given to improve quality through the upgrading of teaching and learning materials to KBSM standard. In this regard, syllabi, subject guidebooks and teaching instructions as well as textbooks, reference materials and learning aids, including computer-aided learning will be reviewed periodically. In addition, to generate greater interest and understanding as well as making the teaching and learning of Mathematics and Science more fascinating, electronic coursewares with local orientation will be developed and more emphasis will be given to practical work in science. To make the education system less examination-oriented, a school-based assessment will be incorporated into the existing assessment system as an overall evaluation on the performance of students. Among others,

it will be on coursework, projects as well as oral and school tests. This assessment, which is conducted throughout the year, will create an environment for creativity and independence among students.

4.100 Concerted efforts will be undertaken to cultivate R&D culture among students at all levels. In this regard, a research grant scheme for secondary schools, launched in 2003, will be expanded to all public secondary schools to further tap scientific talents and innovations in areas such as ICT, design, robotics and environment. In addition, national level competition in design and scientific innovation will be organised for secondary schools.

4.101 The computer-aided teaching and learning programme will be further strengthened with the completion of 5,096 computer laboratories. At the end of the Plan period, a total of 6,464 or 84 per cent of the primary schools and 1,616 or 80 per cent of secondary schools will be equipped with computer infrastructure. The use of computers will also be extended to include school management and administration. The smart school project will be expanded to 300 schools beginning 2004.

4.102 Private institutions of higher learning will be encouraged to offer pre-service *teacher training* programmes to complement efforts by public universities and teacher training colleges. Such efforts will increase the supply of qualified candidates to be selected as graduate teachers, particularly for English, Mathematics and Science. These efforts will also contribute to the increased professionalism of the teaching profession. At the end of the Plan period, 30,000 or 16 per cent of the teachers in primary schools will be degree holders while 125,670 or 75 per cent of the teachers in secondary schools will be degree holders. It is expected that by 2010, all teachers at the secondary level will be degree holders. Teacher training programmes will continue to emphasise on creative teaching methods, use of ICT as well as ethics and moral values.

4.103 Accessibility to quality *tertiary education* will be enhanced through increasing the capacity of institutions of higher learning and community colleges. In 2005, total enrolment in polytechnics is expected to increase to 71,950 students at certificate and diploma levels with the establishment of two new polytechnics. In addition, the intake into the existing 34 community colleges will be expanded with a capacity of 14,310 places offering courses in areas such as technical, technology, advertising and interior decoration. In addition, *Pusat GIATMARA* will be upgraded to community colleges to enable more courses to be offered. With the increase in the capacity of both public and private institutions of higher learning, the participation rate in tertiary education of the 17-23 age cohort will improve to 30 per cent in 2005.

4.104 To improve and ensure the quality of education provided by institutions of higher learning, a rating system will be developed to enable institutions of higher learning to make their own assessment. Indicators for assessment of inputs and outputs will include qualification of lecturers, quality of curricula, ICT facilities, library and availability of sufficient reference materials, teaching and learning process as well as performance of students and graduates.

4.105 In addition, the proposed Malaysian Qualifications Framework will provide the criteria for naming, positioning and linking all qualifications based on the general characteristics of education and training at each qualification level and competency standards. In this regard, the Framework will, among others, ensure consistency of nomenclature of qualifications, clarify learning pathways within and across educational sectors and establish a common basis for measuring learning volume to facilitate credit accumulation and transfer.

4.106 Public institutions of higher learning will expand their post-graduate programmes to enhance their research capability and increase the pool of R&D human resource. The number of post-graduate students at masters level is expected to increase to 34,910 and doctoral level to 5,350 in 2005. Undergraduates with outstanding academic achievement and high research competency will be encouraged to take up post-graduate studies and join the academia of public or private institutions of higher learning. Post-doctoral programmes will also be increased in strategic fields of study. In this regard, financial assistance will be provided and existing research funds will be restructured and refocused in line with research in identified priority areas. Academic staff in public institutions of higher learning will be encouraged to drive the research activities by becoming supervisors to post-graduate students.

4.107 In order to encourage institutions of higher learning to increase their participation in fundamental and applied research, researchers will be encouraged to form research teams focussing on specific objectives in priority areas to be identified from the technology foresight study to be undertaken. Joint research between universities, public research institutes and the private sector will be intensified to ensure a synergistic link between fields of study and the needs of industry.

4.108 Efforts to establish Malaysia as a regional centre of educational excellence will be strengthened. In this regard, measures will be undertaken to encourage competition among local institutions of higher learning to become premier educational institutions. These institutions will also need to identify and develop individual areas of specialisation into renowned centres of excellence. These

efforts will attract more foreign students and researchers to study and undertake research at post-graduate as well as post-doctoral levels. In this regard, the Institute of Molecular Medicine at *Universiti Sains Malaysia*, the Borneo Institute of Marine Research at *Universiti Malaysia Sabah* and *Institut Kajian Sains Fundamental Ibnu Sina at Universiti Teknologi Malaysia* are among the centres that will be strengthened.

4.109 The private institutions of higher learning will need to conduct high-end courses such as in the pure sciences, engineering and technology-related areas to produce more S&T human resource. These institutions will also be encouraged to embark on research in collaboration with public institutions of higher learning including through the exchange of teaching staff and sharing of laboratories, facilities and equipments. Private institutions of higher learning will also need to create their own *niches* in specific fields of study to attract more foreign students. To support private sector initiatives, the Government will intensify promotional efforts in China, Indonesia and Vietnam as well as in the Middle East. With the expanded efforts, the number of foreign students is expected to increase to 45,000 by the end of 2005.

4.110 Courses offered under the lifelong learning programmes will be expanded. Private institutions and community colleges as well as other education and training institutions will continue to provide greater access to quality lifelong learning programmes including through the extensive use of ICT. In this regard, institutions offering programmes through e-learning will be encouraged to develop electronic coursewares jointly between a team of content developers and content experts in areas such as medicine, allied health and ICT. These coursewares will be used for teaching and learning by all institutions of higher learning.

Skills Training Programmes

4.111 The public training institutions will continue to be a major provider for skills training. The output of public training institutions is expected to be 42,060 in 2005 with 68.9 per cent in engineering trades. The involvement of private training institutions in skills training will continue to be encouraged, particularly in engineering and technical courses. The expected total output of private training institutions will be 33,110 in 2005, of which 52.4 per cent will be in engineering trades.

4.112 The quality of training programmes provided by public institutions will be standardised through the use of common curricula. For this purpose, the

allocation for curriculum development will be centralised at the NVTC, which will be the national curriculum bank for industrial skills training. This allocation will be utilised to finance the development of curriculum by public training agencies and private training institutions in areas identified by the NVTC. All training institutions will be using this curriculum, thus reducing the cost of curriculum development.

4.113 The relevancy of NOSS in the changing industrial environment will be enhanced by the incorporation of social and learning competencies as well as the requirement for workplace training. The NOSS will be reviewed by the NVTC to take into account the changing skills and knowledge required by industry. Consequently, training providers will be better guided in producing multi-skilled and flexible workers. To enhance the effectiveness of the training delivery system, the NVTC will continuously undertake research and development activities as well as appoint trade-based external verifiers and establish an evaluation panel. In addition, an effective monitoring system will be introduced to ensure training institutions comply with the accreditation criteria and guidelines as well as to enable training providers to award their own certificates. A centralised tracer study will be conducted on the output of public training institutions to improve the quality of the delivery system and employability of their graduates.

4.114 During the remaining Plan period, there will be increasing demand for vocational and technical instructors. In this regard, the capacity in CIAST will be expanded and the advanced training institutes will offer training programmes for instructors. Efforts will also be undertaken to improve the quality of instructors. The student-centred learning approach will be given further emphasis in the curriculum for instructor training to produce a flexible and trainable workforce. In addition, a comprehensive evaluation will be conducted on the Skills Development Programme for Vocational and Technical Instructors to ensure the effectiveness and efficiency of the programme. A well-designed industrial attachment programme will be introduced to expose instructors to working environment and new technologies that will enhance the teaching and learning process. The scheme of service for instructors will be reviewed to enable candidates from non-engineering disciplines to be appointed as instructors.

4.115 Changing economic structure and utilisation of modern and sophisticated production processes will increase the importance of the workplace training as an integral part of the training delivery system. During the remaining Plan period, more efforts will be undertaken to further strengthen the component of workplace training in the TEVT with the implementation of the dual training

approach, which will be adapted to the local context. Measures to intensify private sector participation in training will also be undertaken. The modernisation of NOSS will be intensified while the training curriculum and training programmes for instructors will be improved. KUiTTHO will provide pre-employment training for instructors while the GMI will conduct in-service training for skills upgrading in production engineering and industrial electronics. Efforts will also be undertaken to enhance the management and administration of TEVT.

4.116 The inadequate supply of skilled human resource will affect the utilisation of an optimum skills mix by the industry in their production process. To expedite the process of increasing the supply of skilled human resource and meet the demand for industrial skills training, a fast-track programme will be implemented for three years. Under this programme, public training agencies will conduct skills training through double shifts as well as offering selected courses in rented commercial premises. The development of future skills training institutes will be accelerated with the formulation of a long-term plan by public training agencies, which will identify the number and location of these institutes. In addition, a specific agency will be established to ensure the effective management of the Skills Development Fund.

4.117 Measures to promote training and retraining by employers will be undertaken by the PSMB. In this respect, the coverage of the HRDF will be extended to wholesale services while the apprenticeship programme will be expanded to other areas such as mechanical and electrical fitters as well as industrial sewing machine mechanic. During the remaining Plan period, 1,440 apprentices will be trained under this programme with the involvement of 230 employers. In addition, a study will be conducted by the PSMB on the possibility of offering the apprenticeship programme to the disabled. Measures will also be taken to encourage SMEs to intensify the provision of training to their employees.

IV. ALLOCATION

4.118 The revised development allocation for the Eighth Plan and estimated expenditure for the review period are shown in *Table 4-10*. The revised allocation of RM40.2 billion, which accounts for 25.0 per cent of the total development allocation of the Plan, reflects the priority given to human resource development in line with the aspiration of becoming a knowledge-based economy. Of this total revised allocation, 87.1 per cent is allocated for education with the remaining 12.9 per cent for training programmes.

TABLE 4-10

**DEVELOPMENT ALLOCATION FOR
EDUCATION AND TRAINING, 2001-2005**
(RM million)

<i>Programme</i>	<i>SMP Allocation</i>		<i>Estimated Expenditure, 2001-2003</i>	<i>Balance, 2004-2005</i>
	<i>Original</i>	<i>Revised</i>		
Education	18,660.0	34,977.9	30,834.8	4,143.1
Pre-school	147.4	376.1	202.8	173.3
Primary Education	2,750.0	6,606.0	5,922.2	683.8
Secondary Education	4,862.6	10,801.1	9,164.9	1,636.9
Government & Government-aided Schools	3,262.6	7,891.6	7,030.0	861.6
MARA Junior Science College	700.0	677.0	466.7	210.3
Technical & Vocational Schools	900.0	2,233.2	1,668.2	565.0
Tertiary Education	8,900.0	11,251.6	10,484.0	767.6
Teacher Education	300.0	909.4	801.4	108.0
Other Educational Support Programmes	1,700.0	5,033.0	4,259.5	773.5
Training	4,000.3	5,187.2	3,823.2	1,364.0
Industrial Training	3,760.0	4,357.3	3,227.1	1,130.2
Commercial Training	100.3	149.0	109.0	40.0
Management Training	140.0	680.9	487.1	193.8
Total	22,660.3	40,165.1	34,658.0	5,507.1

V. CONCLUSION

4.119 The development of high quality, competent, disciplined and globally competitive human resource is crucial for Malaysia to transform into a knowledge-based economy and sustain competitive advantage. The education and training system will be continuously re-engineered to be more demand-driven. Greater opportunities for lifelong learning will be provided to ensure sustainable employment. Strategic alliances and collaboration between public and private institutions in the provision of education and training will be further enhanced. Efforts to position Malaysia as a regional centre of educational excellence will be intensified.

Chapter 5

Public Sector Programme and Privatisation

5

PUBLIC SECTOR PROGRAMME AND PRIVATISATION

I. INTRODUCTION

5.01 During the review period, public sector programmes were directed at stimulating domestic demand and enhancing private sector competitiveness in an environment of weak global economic performance, sluggish private sector performance as well as excess capacity in many sectors of the economy. The Federal Government, in particular, pursued an expansionary fiscal policy, which included adopting higher operating and development expenditures to directly stimulate domestic demand. Two fiscal stimulus packages were adopted in 2001 and another package in May 2003 to mitigate the adverse impact of the slowdown in the external economy, stimulate economic growth, and improve the confidence level of investors and consumers. In addition, privatisation programme continued to be implemented in line with the Government's effort to enhance the private sector's contribution to growth and economic development as well as in pursuit of the distributional objectives.

5.02 For the remaining Plan period, the public sector policy will continue to be prudent. Efforts will be made to contain public expenditure and reduce the fiscal deficit. In this connection, the Government will take steps to enhance fiscal discipline by containing the rising cost of projects through several means, including taking a closer look at their standards and costs, reviewing projects with high import content and small multiplier effects, and ensuring maximum benefits from projects. As a move to reduce leakages from the economy, Government projects will maximise the use of local materials and components. In addition, projects will be implemented on a *fast-track* basis only when the timing of their completion is critical. In line with this, the development expenditure for the consolidated public sector is expected to be reduced to the level before the counter-cyclical measures were undertaken. Nevertheless, because of the continued increase in operating expenditure, the public expenditure on the whole is expected to register a moderate growth. This growth, coupled with a stronger increase in private domestic demand, is expected to continue to generate economic growth,

albeit at a lower rate than earlier anticipated in the Plan. In line with the private sector led-growth strategy, the privatisation programme will be continued in consonant with national development priorities and the need to foster greater public-private partnership.

II. PROGRESS, 2001-2003

5.03 During the review period, the operating and development expenditures expanded rapidly in line with the expansionary fiscal policy to cushion the effect of the global economic slowdown and lacklustre performance of the private sector. The Government also introduced the Package of New Strategies in May 2003, which included the provision of funds as well as tax exemptions for selected sectors to mitigate the adverse impact of the invasion of Iraq and the Severe Acute Respiratory Syndrome outbreak on the economy. Nevertheless, in line with prudent fiscal practices, the Government continued to monitor its deficit and debt positions so that they remain at a sustainable level. As such, the level of fiscal deficit was maintained below 6.0 per cent of Gross Domestic Product (GDP) throughout the review period. On the whole, the consolidated public sector account recorded an overall deficit of 0.8 per cent of GDP. Overall, the public sector investment as a percentage of Gross National Product (GNP) was higher at 15.9 percent during the review period compared with the level of private investment at 9.5 per cent. The share of public sector investment to GNP was higher than the share in the Seventh Plan and exceeded the Eighth Plan target of 12 per cent.

5.04 The Government continued to improve the quality of services and its delivery system. The Government introduced the Multipurpose Smart Card, *MyKad*, which incorporates the identification card, driving licence, passport information and functions as an automated teller machine and *Touch 'n Go* card. An electronic procurement system was also introduced to enhance efficiency in procurement management, including faster delivery, reduce costs in the long run, and enable the Government to make timely and accurate payments to suppliers.

Consolidated Public Sector Account

5.05 During the review period, the consolidated public sector account recorded an overall deficit amounting to RM9.1 billion or 0.8 per cent of GDP. This deficit, which was lower compared with the deficit envisaged in the original

Plan, was due to the higher current surplus of the non-financial public enterprises (NFPEs), which was able to partially offset the effect of higher Federal Government expenditure on the consolidated public sector financial position, as shown in *Table 5-1*. The expansionary fiscal policy resulted in the Federal Government recording an overall deficit of RM59.5 billion or 5.5 per cent to GDP during the review period, which was higher than 3.0 per cent to GDP envisaged in the Plan. The public sector deficit was mostly financed by non-inflationary domestic borrowings and a smaller portion from external loans, including global bonds.

TABLE 5-1
**CONSOLIDATED PUBLIC SECTOR EXPENDITURE AND FINANCING,
2000-2005**

Item	RM million				% of GDP			
	2000	2003	2005	2001- 2005	8MP Target		2001- 2003	2004- 2005
					Original	Revised		
General Government ¹								
Revenue	76,002	105,599	119,965	528,515	21.9	27.3	27.2	27.5
Operating Expenditure	64,445	81,732	94,273	412,090	17.4	21.3	21.2	21.4
Current Surplus	11,558	23,867	25,692	116,425	4.5	6.0	6.0	6.1
NFPEs Current Surplus	41,204	46,643	41,950	220,901	8.8	11.4	12.2	10.5
Public Sector Current Surplus	52,761	70,510	67,642	337,326	13.3	17.4	18.1	16.6
Development Expenditure	50,439	76,197	66,819	343,936	12.0	17.8	19.0	16.3
General Government	27,079	40,832	30,836	182,205	6.8	9.4	10.5	8.1
NFPEs ²	23,360	35,365	35,983	161,731	5.2	8.4	8.5	8.2
Public Sector Overall Surplus/Deficit	2,322	-5,687	823	-6,610	1.4	-0.3	-0.8	0.3
% of GDP	0.7	-1.5	0.2	-0.3				
Sources of Financing								
Net Foreign Borrowing ³	8,365	1,706	-247	59,032	0.1	3.1	5.5	-0.1
Net Domestic Borrowing ³	-10,697	3,981	-576	-45,845	0.6	-2.4	-4.1	-0.2
Change in Assets ⁴	-	-	-	-6,576	-2.1	-0.3	-0.6	-

Notes:

¹ General Government comprises Federal Government, State Governments, Statutory Bodies and Local Governments.

² Includes capital transfers and net borrowing from Federal Government during Plan period.

³ A negative sign indicates net repayment.

⁴ A negative sign indicates accumulation of assets.

Federal Government Development Expenditure

5.06 During the review period, the Federal Government spent RM109.2 billion or 99.3 per cent of the Plan allocation of RM110 billion. The higher development expenditure relative to the original development ceiling was a result of the accelerated implementation of existing projects as well as implementation of new projects to stimulate domestic economic activities. The development expenditure reached its peak in 2003, after which it is expected to taper off, as shown in *Table 5-2*. The economic and social programmes accounted for a major part of development expenditure. The expenditure for the social sector amounted to RM50.5 billion or 46.3 per cent, while the expenditure for the economic sector amounted to RM39.4 billion or 36.1 per cent of the total development expenditure. The development allocation and estimated expenditure of the Federal Government by sector are shown in *Table 5-3*.

TABLE 5-2

FEDERAL GOVERNMENT EXPENDITURE AND FINANCING, 2000-2005

Item	RM million				% of GDP			
	2000	2003	2005	2001- 2005	8MP Target		2001- 2003	2004- 2005
					Original	Revised		
Total Revenue	61,864	89,168	99,496	447,340	18.7	23.1	23.3	22.9
Direct Taxes	29,156	46,481	52,250	234,442	8.1	12.1	12.3	11.9
Indirect Taxes	18,017	22,690	26,669	117,113	6.8	6.1	6.0	6.2
Non-tax Revenue	14,093	19,052	19,589	91,203	3.6	4.7	4.8	4.6
Operating Expenditure ¹	56,547	73,237	87,661	373,384	15.2	19.3	19.0	19.7
Current Surplus	5,317	15,931	11,835	73,956	3.5	3.8	4.3	3.2
Gross Development Expenditure ²	27,941	37,963	20,865	160,000	5.2	8.3	10.1	6.0
Direct Expenditure	26,304	36,832	19,665	151,158	5.1	7.8	9.5	5.6
Gross Lending	1,637	1,131	1,200	8,842	0.1	0.5	0.6	0.3
Loan Recoveries	2,909	1,183	1,000	5,094	0.3	0.3	0.3	0.2
Net Development Expenditure	25,032	36,780	19,865	154,906	4.9	8.0	9.8	5.7
Overall Deficit	-19,715	-20,849	-8,030	-80,950	-1.4	-4.2	-5.5	-2.5
% to GDP	-5.8	-5.4	-1.8	-4.2				
Sources of Financing								
Net Foreign Borrowing ³	864	-4,391	2,409	16,352	0.4	0.8	0.9	0.8
Net Domestic Borrowing	12,714	23,250	5,621	57,705	1.3	3.0	4.0	1.8
Change in Assets ⁴	6,137	1,990	-	6,893	-0.2	0.4	0.6	-

Notes:

¹ Excludes transfers to Development Fund.

² Includes transfers to Development Fund.

³ A negative sign indicates net repayment.

⁴ A negative sign indicates accumulation of assets, while a positive sign indicates drawdown of assets.

TABLE 5-3

**FEDERAL GOVERNMENT DEVELOPMENT ALLOCATION
AND EXPENDITURE BY SECTOR, 2001-2005**
(RM million)

<i>Sector</i>	<i>8MP Allocation</i>				<i>Estimated Expenditure, 2001-2003</i>		<i>Balance, 2004-2005</i>	
	<i>Original</i>	<i>%</i>	<i>Revised</i>	<i>%</i>		<i>%</i>		<i>%</i>
Economic	50,514.6	45.9	66,659.8	41.7	39,397.8	36.1	27,262.0	53.6
Agriculture Development	7,860.0	7.1	7,622.2	4.8	4,437.0	4.1	3,185.2	6.3
Mineral Resource Development	50.0	0.0	51.0	0.0	28.8	0.0	22.2	0.0
Commerce & Industry	10,295.4	9.4	11,422.9	7.1	7,920.0	7.3	3,502.9	6.9
Transport	21,818.9	19.8	35,527.6	22.2	20,432.6	18.7	15,095.0	29.7
Communications	146.5	0.1	553.1	0.3	402.6	0.4	150.5	0.3
Energy	2,601.6	2.4	2,288.8	1.4	1,634.3	1.5	654.5	1.3
Water Resources	5,988.4	5.4	7,117.5	4.4	2,911.0	2.7	4,206.5	8.3
Feasibility Study	131.0	0.1	154.6	0.1	94.2	0.1	60.4	0.1
Research & Development	1,622.8	1.5	1,922.0	1.2	1,537.2	1.4	384.7	0.8
Social	37,518.1	34.1	66,244.6	41.4	50,543.1	46.3	15,701.5	30.9
Education & Training	22,660.0	20.6	40,033.4	25.0	34,657.5	31.7	5,375.9	10.6
Health	5,500.0	5.0	9,500.0	5.9	4,873.7	4.5	4,626.3	9.1
Information & Broadcasting	254.1	0.2	450.0	0.3	197.0	0.2	253.0	0.5
Housing	4,223.3	3.8	6,241.1	3.9	4,674.9	4.3	1,566.2	3.1
Culture, Youth & Sports	964.8	0.9	927.5	0.6	467.0	0.4	460.5	0.9
Local Authorities & Welfare Services	2,972.6	2.7	7,931.2	5.0	4,768.0	4.4	3,163.2	6.2
Village & Community Development	943.3	0.9	1,161.5	0.7	905.0	0.8	256.5	0.5
Security	10,750.0	9.8	16,205.9	10.1	10,531.5	9.6	5,674.5	11.2
Defence	8,750.0	8.0	12,664.3	7.9	8,261.2	7.6	4,403.1	8.7
Internal Security	2,000.0	1.8	3,541.6	2.2	2,270.3	2.1	1,271.3	2.5
General Administration	11,217.3	10.2	10,889.7	6.8	8,702.1	8.0	2,187.5	4.3
General Services	10,975.6	10.00	10,675.1	6.7	8,568.6	7.8	2,106.6	4.1
Upgrading & Renovation	241.7	0.2	214.5	0.1	133.6	0.1	81.0	0.2
Total	110,000.0	100.0	160,000.0	100.0	109,174.5	100.0	50,825.4	100.0

Development Expenditure By Sector

5.07 In the *economic sector*, a total of RM7.9 billion or 7.1 per cent of the total development expenditure was allocated for agriculture programmes. The thrust of the sector's programmes was towards improving efficiency and productivity, as well as contributing to better income of the agricultural community. Of the total expenditure for the agriculture sector, 66 per cent was spent for the expansion

of industrial and food crops with particular attention on commercial scale production, adoption of new technologies and provision of related support services. Several new programmes were implemented during the review period to increase food production, including establishment of Permanent Food Production Parks and satellite farms near urban areas for large-scale commercial activities. Substantial amounts were also expended for *in-situ* land development programmes including the modernisation and commercialisation of smallholder agriculture, intensive land consolidation and rehabilitation as well as replanting programmes.

5.08 During the review period, a total amount of RM1.8 billion was utilised to enhance the competitiveness of industries and complement the efforts of the private sector. A major portion of the expenditure was for the establishment of special funds for small and medium enterprises (SMEs) development in the manufacturing sector. The funds were for productivity and quality improvements, product and process certification, training and skills upgrading, technology development as well as market development under the Industrial Linkage Programme. The allocation was also used for the Vendor Development Programme, the Franchise Development Programme and other programmes to promote and upgrade Bumiputera entrepreneurs. The remaining expenditure was used for industrial site and infrastructure development.

5.09 A total amount of RM3.4 billion was expended for the implementation of various programmes to broaden and improve the science and technology (S&T) base. More than 50 per cent was allocated for S&T infrastructure and development. A significant amount was also spent on research and development (R&D) through the Intensification of Research in Priority Areas (IRPA) programme and the commercialisation of R&D findings by the establishment of matching grants that included the Industry Research and Development Grant Scheme (IGS) and Multimedia Super Corridor Research and Development Grant Scheme (MGS). To provide the foundation and support needed to develop the biotechnology industry in Malaysia, three interim laboratories in the field of genomics and molecular biology, agricultural biotechnology as well as nutraceutical and pharmaceutical biotechnology were set up. Strategic partnerships with international research organizations were also established to expedite the development of domestic R&D capability and capacity in biotechnology.

5.10 During the review period, a total amount of RM5.2 billion was allocated for implementing information and communications technology (ICT)-related programmes and projects. Of this amount, 39.6 per cent was spent on the flagship

applications and the computerisation of several ministries and agencies to further enhance the delivery of services to the public. In addition, a significant amount was also expended to reduce the digital divide between the urban and rural areas, Universal Service Provision and computer infrastructure for rural schools.

5.11 A total amount of RM3.4 billion was utilised for the financial subsector. Of this amount, approximately 28.4 per cent was for the provision of Government equity in development financial institutions in order to comply with the capital adequacy requirements as a measure to maintain the financial sector stability and restore investor confidence. The remaining expenditure was for the provision of venture capital and financial assistance to the SMEs.

5.12 During the review period, a total amount of RM758.7 million was utilised for tourism development. About 60 per cent of the allocation was spent on improving facilities and infrastructure, beautification, cleanliness and environmental protection. The remaining expenditure was used for the preservation of national and historical heritage as well as provision of accommodation.

5.13 The distributive trade subsector utilised a total amount of RM638.7 million. Of this amount, more than 40 per cent was spent on the acquisition of business premises and another 30 per cent on funds for promoting distributive trade. The remaining expenditure was used for training and consultancy as well as upgrading and modernisation of trade services.

5.14 In the transport and communications subsector, efforts were focused on increasing capacity and accessibility in the less developed areas as well as enhancing efficiency and improving public transportation, particularly in urban areas. During the review period, RM20.8 billion or 19.1 per cent of the total development expenditure was for this subsector. The major projects completed were the Brinchang-Lojing Road in Pahang, the Beaufort-Sindumin Road in Sabah, the Betong-Kayu Malam Road in Sarawak, the new airports in Tawau, Sabah and Bintulu, Sarawak. Efforts to improve the efficiency of public transport and alleviate traffic congestion included implementation of intelligent transport systems, the operation of KL Monorail and the construction of integrated transport terminals.

5.15 The water resources subsector emphasised better management of the national water resources to ensure adequate supply of safe and clean water. A total of RM2.9 billion or 2.7 per cent of the total development expenditure was spent on this subsector during the review period. Among the projects were source

works, water treatment plants and the replacement of old asbestos cement pipes and faulty water meters. Some of these projects were the Tanjung Malim Water Supply Scheme in Perak, the water treatment plant at Kuala Jelai in Negeri Sembilan and the Jus Dam in Melaka.

5.16 During the review period, a total amount of RM1.7 billion was utilised for the implementation of energy and mineral-related projects. About 33.2 per cent of the allocation was spent for the extension of distribution networks and transmission grids in Sabah, such as the Northern Grid and East Coast Grid. In Sarawak, preliminary works of the Bakun Hydroelectric project such as the river diversion works and coffer dam were also undertaken. In addition, the coverage of rural electricity was expanded and benefited 45,747 housing units, mainly in Sabah and Sarawak.

5.17 In the *social sector*, RM50.5 billion or 46.3 per cent of the total development expenditure was spent for education and training, health, housing and other social services. Education continued to be given priority particularly to provide educational places at the primary, secondary and tertiary levels. Public institutions remained the major provider at the primary and secondary levels where RM15 billion or 13.7 per cent of the total development expenditure was spent on the construction of new classes as well as the building of new schools. Completion of these classrooms eased the over-crowding problem and improved the class to classroom ratio. At the tertiary level, RM10.5 billion was spent on universities and polytechnics.

5.18 In the health subsector, emphasis was given to further improving the health status of the population as well as increasing the scope and quality of primary, secondary and tertiary healthcare. Towards this end, a total of 20 hospitals are in various stages of construction while centres of excellence were established in four hospitals. Expenditure in the health subsector accounted for 4.5 per cent of the total development expenditure during the review period. For the housing subsector, a total of 79,978 units of low-and low-medium cost houses were constructed to cater for the housing needs of the low-income group and public sector employees in essential services. New libraries were also built to encourage wider readership and improve access to information, particularly in the rural areas.

5.19 The expenditure for the *security sector* accounted for RM10.5 billion or 9.6 per cent of the total development expenditure during the review period. A major portion of the expenditure was utilised for procurement of equipment for

modernisation of the security sector to strengthen the capability of the armed forces and the police. In addition, the construction of new logistic facilities and the upgrading of existing logistic facilities were undertaken.

5.20 During the review period, RM8.7 billion or 8.0 per cent of the total development expenditure was expended for the *general administration sector*. The new Federal Government Administrative Centre in Putrajaya, the major project under the sector, is progressing according to plan and eight ministries have shifted to Putrajaya. In addition, seven Road Transport Department offices, 33 Customs offices and housing quarters, 17 Federal Government offices, 14 new court buildings and three foreign missions were completed during the review period. The provision of modern government offices equipped with office automation and ICT facilities is to promote higher productivity and provide more efficient service to the public.

Rural Development

5.21 Development expenditure for the rural sector amounted RM16.6 billion. Of the total, 59 per cent was spent for the provision of social amenities, including education, health and housing, 17.5 per cent for infrastructural facilities and 24.1 per cent for economic activities. In an effort to increase economic activities in rural areas, RM2.8 billion was expended for land development and another RM3 billion was spent for various food production programmes including livestock, fisheries and food crops as well as the industrial crops particularly oil palm and rubber. An additional RM351 million was utilised for the development of rural industries. In addition, measures were taken to provide the rural population with adequate credit facilities totalling RM586 million. In order to improve access of the rural population to basic amenities, an amount of RM2.9 billion was spent to implement major infrastructure and utility projects, including rural electrification, water supply and rural roads as well as village street lighting.

Development Expenditure By State

5.22 The more developed states of Johor, Melaka, Negeri Sembilan, Perak, Pulau Pinang, Selangor and Wilayah Persekutuan spent a total of RM43.9 billion or 40.2 per cent of the total development expenditure of the Federal Government, as shown in *Table 5-4*. The expenditure was mainly for infrastructure projects such as roads, railways, schools and teachers quarters. The expenditure of the

less developed states of Kedah, Kelantan, Pahang, Perlis, Sabah, Sarawak and Terengganu amounted to RM33.3 billion or 30.5 per cent of the total development expenditure with the major portion for agriculture, rural infrastructure, and social and support services. The remaining RM32 billion or 29.3 per cent were for multi-state projects.

TABLE 5-4
**FEDERAL GOVERNMENT DEVELOPMENT ALLOCATION
AND EXPENDITURE BY STATE, 2001-2005**
(RM million)

<i>State</i>	<i>8MP Allocation</i>				<i>Estimated Expenditure, 2001-2003</i>		<i>Balance, 2004-2005</i>	
	<i>Original</i>	<i>%</i>	<i>Revised</i>	<i>%</i>		<i>%</i>		<i>%</i>
Johor	5,937.3	5.4	8,766.0	5.5	5,482.1	5.0	3,284.0	6.5
Kedah	5,179.5	4.7	7,676.1	4.8	5,127.6	4.7	2,548.5	5.0
Kelantan	2,905.4	2.6	3,778.2	2.4	2,934.7	2.7	843.4	1.7
Melaka	2,464.7	2.2	3,811.9	2.4	2,270.3	2.1	1,541.7	3.0
Negeri Sembilan	5,221.2	4.7	5,241.6	3.3	3,163.5	2.9	2,078.1	4.1
Pahang	3,820.7	3.5	7,200.4	4.5	4,539.6	4.2	2,660.8	5.2
Pulau Pinang	4,040.2	3.7	4,926.3	3.1	3,029.2	2.8	1,897.1	3.7
Perak	4,848.9	4.4	6,238.0	3.9	4,585.8	4.2	1,652.2	3.3
Perlis	1,581.0	1.4	1,740.6	1.1	998.0	0.9	742.7	1.5
Selangor	7,847.8	7.1	15,366.4	9.6	9,705.1	8.9	5,661.3	11.1
Terengganu	2,443.3	2.2	4,261.0	2.7	3,244.5	3.0	1,016.4	2.0
Sabah	7,989.7	7.3	12,721.9	8.0	8,431.5	7.7	4,290.4	8.4
Sarawak	8,676.3	7.9	11,825.6	7.4	8,015.6	7.3	3,809.9	7.5
Wilayah Persekutuan	9,868.2	9.0	18,424.5	11.5	15,617.8	14.3	2,806.7	5.5
Multi-state ¹	37,175.8	33.8	48,021.7	30.0	32,029.1	29.3	15,992.6	31.5
Total	110,000.0	100.0	160,000.0	100.0	109,174.5	100.0	50,825.4	100.0

Note: ¹ Multi-state projects are projects that benefit several states or nation as a whole.

Operating Expenditure

5.23 The operating expenditure of the Federal Government increased at an average rate of 9.0 per cent per annum during the review period from RM56.5 billion in 2000 to RM73.2 billion in 2003. The expenditure on emolument expanded at an average rate of 6.4 per cent per annum from RM16.4 billion in

2000 to RM19.7 billion in 2003, accounting for 26.9 per cent of the total operating expenditure. This was mainly due to the increase in the salary of civil servants to boost domestic demand and the salary adjustment following the implementation of the Malaysian Remuneration System (SSM). The SSM is a competency-based system to enhance the productivity of employees in the public service.

5.24 Expenditure on supplies and services, comprising mainly the purchase of supplies and equipment, including computers and network systems, as well as the payment on other items such as utilities, maintenance, repairs and upgrading of Government buildings, rose at an average annual rate of 26.2 per cent from RM7.4 billion in 2000 to RM14.8 billion in 2003. The increase was mainly due to the two fiscal stimulus programmes introduced in 2001, which included the implementation of small projects with strong domestic linkages as well as low import content that contributed to productivity enhancement. Some of the projects included the upgrading of kindergartens run by *Jabatan Kemajuan Masyarakat* (KEMAS), the building of computer laboratories, small rural development projects and training for unemployed graduates and retrenched workers.

Sources of Revenue

5.25 The share of Federal Government revenue as a percentage of GDP increased from 18.1 per cent in 2000 to 23.1 per cent in 2003. *Direct taxes* grew rapidly at an average annual rate of 16.8 per cent per annum and accounted for more than half of total Federal Government revenue and two-thirds of its tax revenue. During this period, collection of corporate tax and individual income tax increased at annual growth rates of 21.5 per cent and 13.9 per cent, respectively. The increase in the collection of direct taxes was mainly attributed to the increase in the number of taxpayers captured by the tax system and increased compliance following the introduction of the self-assessment system for corporate taxpayers. In addition, petroleum income tax registered an average rate of increase of 14.4 per cent per annum, mainly as a result of the higher oil prices. However, other direct taxes such as stamp duties and real property gains tax registered a marginal decline, reflecting the slowdown in economic activities, property overhang as well as the exemption of stamp duty for the purchase of houses worth RM180,000 and below. The Package of New Strategies introduced in May 2003 included the provision of several tax incentives, which resulted in some revenue loss to the Government.

5.26 *Indirect taxes* increased at an annual average rate of 8.0 per cent from RM18.0 billion in 2000 to RM22.7 billion in 2003, contributing to 25.4 per cent of the total revenue of the Federal Government and 32.8 per cent of total tax revenue. The slower rate of growth in indirect taxes compared with the increase in direct taxes was due to a small decline in the collection of export duties following a marginal decline in exports during the review period as well as a moderate increase in the collection of import duties and surtax with the rise in imports of consumption goods and the reduction of tariffs on several items in line with the World Trade Organisation (WTO) and the ASEAN Free Trade Area (AFTA) commitments. The voluntary tax reduction on selected machines and spare parts to enhance competitiveness also contributed to slower growth in import duties collected. Indirect taxes derived from the domestic economy such as sales tax, service tax and excise duties, however, continued to register encouraging growth. This was the result of favourable private consumption performance and bigger turnover in the tourism and hospitality industry as well as wider coverage of taxable services and lower threshold for service tax.

5.27 The *non-tax revenue* increased to RM19.1 billion in 2003 from RM14.1 billion in 2000, growing at an average annual rate of 10.6 per cent and contributing 21.4 per cent of the Federal Government revenue. This was a result of the increase in receipts from the fees for public services as well as the issuance of licences and permits. In addition, revenue from petroleum royalty, dividends and investment income was also higher.

Non-Financial Public Enterprises

5.28 The number of NFPEs decreased from 37 to 35 during the review period. The list of NFPEs is as shown in *Table 5-5*. As a group, the NFPEs recorded an overall surplus of RM11.3 billion or 2.9 per cent of GDP in 2003. This surplus was lower than the surplus of 5.2 per cent of GDP recorded in 2000 as a result of higher operating and development expenditures to improve quality of service and expand capacity. The operating expenditure of NFPEs was higher due to the commencement of operations of completed development projects, such as *Petroleum Nasional Berhad* (PETRONAS) integrated petrochemical complexes in Kertih, Terengganu and Gebeng, Pahang as well as *Tenaga Nasional Berhad's* (TNB) growth in operations and the commissioning of two units of the coal-fired generation plant and transmission line in Manjung, Perak. Similarly, *Telekom Malaysia Berhad* (TMB) completed its Asia Pacific Cable Network 2 that connects Malaysia with seven countries, including China, Japan, South Korea, and the Philippines. The network was equipped with a large bandwidth that can support the growing information and communications needs as well as provide additional broadband services.

TABLE 5-5

LIST OF NON-FINANCIAL PUBLIC ENTERPRISES (NFPEs), 2003

- | | |
|--|--|
| • 1st Silicon (Malaysia) Sdn. Bhd. | • Penang Port Sdn. Bhd. |
| • Bintulu Port Sdn. Bhd. | • Penerbangan Malaysia Berhad |
| • Cement Industries (Sabah) Sdn. Bhd. | • Petroliaam Nasional Berhad (PETRONAS) |
| • Central Spectrum (M) Sdn. Bhd. | • PPES Works (Sarawak) Sdn. Bhd. |
| • Felda Agricultural Services Sdn. Bhd. | • Rakyat Berjaya Sdn. Bhd. |
| • Golden Hope Plantations Berhad | • Sabah Energy Corporation Sdn. Bhd. |
| • Indah Water Konsortium Sdn. Bhd. | • Sabah Ports Sdn. Bhd. |
| • Keretapi Tanah Melayu Berhad | • Sarawak Electricity Supply Corporation |
| • Kontena Nasional Berhad | • Sebor (Sabah) Sdn. Bhd. |
| • Kuching Port Authority | • Sergam Berhad |
| • Kulim (Malaysia) Berhad | • Silterra Malaysia Sdn. Bhd. |
| • Kumpulan Guthrie Berhad | • Sinora Sdn. Bhd. |
| • MA (Sepang) Sdn. Bhd. | • Syarikat Prasarana Negara Berhad |
| • Malaysian Airline System Berhad | • Telekom Malaysia Berhad |
| • Malaysia Airports Sdn. Bhd. | • Tenaga Nasional Berhad |
| • Marconi (Malaysia) Sdn. Bhd. | • TH Plantations Sdn. Bhd. |
| • Multimedia Development Corporation Sdn. Bhd. | • UDA Holdings Berhad |
| • Northport (Malaysia) Bhd. | |

Note: From the original list of 37 entities, the current list excludes 11 entities which were privatised or sold, merged or ceased operation and includes nine new entities. The criteria of an NFPE remain unchanged, i.e. having Government equity of at least 51 per cent and sales turnover of at least RM100 million or having a significant impact on the economy including large borrowing needs and huge capital expenditure.

5.29 The development expenditure of NFPEs as a group increased at an average rate of 14.8 per cent per annum from RM23.4 billion in 2000 to RM35.4 billion in 2003. Several major NFPEs continued to expand their capacities, including increasing their investments abroad. Malaysia Airports Sdn. Bhd., completed a number of development projects, including a new terminal building and parking apron at the Sultan Ismail Petra Airport in Kota Bharu in Kelantan, extension and renovation of the main terminal at the Bayan Lepas International Airport in Pulau Pinang and the extension of the parking apron at the Kota Kinabalu International Airport in Sabah.

5.30 On the international front, PETRONAS acquired Mobil Oil Sudan Limited and entered into a joint venture arrangement with PETROVIETNAM and TRAMATSUCO to operate in a polyvinyl chloride plant in Vietnam. TMB also expanded its international and local networks by signing collaboration agreements with Dell Computer Corporation and B-Global Corporation on the development and marketing of the RosettaNet Standard, dedicated to the development and deployment of e-commerce interfaces to align processes between supply chain partners on a global basis. TNB signed a Memorandum of Understanding with the Tokyo Electric Power Company, which among others involved the sharing of technical guidelines, expertise and technology.

PRIVATISATION PROGRAMME

5.31 Despite the generally weak private sector performance in the economy, the privatisation programme received favourable response from the business community and was able to contribute towards the expansion of needed infrastructure and services during the review period. Projects that were implemented were mainly in the transportation, construction and utilities sectors. By continuing to adopt the guidelines in the Privatisation Master Plan in processing privatisation proposals with respect to equity holdings and contract works, the programme contributed to the attainment of distributional objectives.

Programme Achievement

5.32 A total of 14 projects was approved for privatisation during the review period, including four projects privatised through the build-operate-transfer (BOT) and three projects through the land swap method. The list of projects and their associated costs is shown in *Table 5-6*. In addition, several BOT projects approved during the Seventh Malaysia Plan were implemented during this period. These included the commencement of the Butterworth Outer Ring Road, the Kajang Outer Ring Road (SILK), the Kajang-Seremban Highway, the Kuala Lumpur-Shah Alam-Kuang Expressway, the New Pantai Expressway and the Western Kuala Lumpur Traffic Dispersal Scheme (SPRINT Package C), involving an expenditure of RM3.28 billion. Apart from this, several BOT projects were completed during this period. These included the New North Klang Straits Bypass, which provided an alternative route, particularly for heavy vehicles travelling to and from Port Klang. Similarly, the Kuala Lumpur Traffic Dispersal Scheme

(SPRINT Package A and B), which was completed in 2001, eased traffic congestion along the Federal Highway to Damansara. The completion of these two road projects added 38 kilometres of roads to the existing 1,182 kilometres of toll road network. To complement the road transportation network in Kuala Lumpur, the completion of the Kuala Lumpur Sentral Station, a modern transportation hub, offered an integrated rail transportation system that brought together the airport express rail network, light rail transit systems and both the KTMB inter-city and commuter services. The completion of these projects enabled the Government to expand public facilities while at the same time provided returns to the private sector through collection of revenues.

TABLE 5-6

APPROVED PRIVATISATION PROJECTS, 2001-2003

<i>Entity/Project</i>	<i>Project Cost (RM million)</i>	<i>Mode of Privatisation</i>
1. Supply of Chilled Water to Government Buildings in Putrajaya	198.1	BOO
2. Maintenance of Government Buildings - Northern Region, Sabah and Labuan	-	MC
3. Maintenance of Government Buildings - Eastern Region	-	MC
4. Construction of Hostels for <i>Universiti Malaysia Sabah</i>	84.0	BOT
5. Construction of Hostels for <i>Universiti Kebangsaan Malaysia</i>	37.3	BOT
6. Construction of Government School in Rawang, Selangor	12.6	LS
7. Construction of Police Logistic Complex and Quarters in Ipoh, Perak and Shah Alam, Selangor	63.0	LS
8. Printing and Marketing Services of <i>Dewan Bahasa dan Pustaka</i>	-	SOA
9. Privatisation of MARDEC Berhad	-	SOE
10. Management and Operations of the Museum of Islamic Arts	-	MC
11. Privatisation of Commercial Activities of Sabah Ports Authority	-	BOT/LOA
12. Kuala Lumpur-Putrajaya Highway	420.0 ¹	BOT
13. Construction of Federal Government Quarters in Jalan Jelatek, Kuala Lumpur	61.6	LS
14. Privatisation of the Federal Road Maintenance in Sabah, Sarawak and Labuan	-	MC
<i>Notes:</i> SOE = Sale of Equity BOT = Build-Operate-Transfer SOA = Sale of Assets BOO = Build-Operate-Own		
LOA = Lease of Assets MC = Management Contract LS = Land Swap		
¹ Refers to the amount funded by private sector and not the total project cost.		

Gains From Privatisation

5.33 As envisaged in the Privatisation Master Plan, the privatisation projects approved during the review period continued to generate *savings* in capital expenditure and reduce the administrative burden to the Government, as shown in *Table 5-7*. Based on the estimated project cost, the private sector's undertaking on capital expenditure amounted to RM876.6 million. The Government also benefited from the sale of assets and equity by transferring or divesting its holdings to the private sector. The sale of assets from the privatisation of the printing and marketing services of *Dewan Bahasa dan Pustaka* generated proceeds of RM20.3 million and the sale of equity in MARDEC Berhad generated RM40.5 million. In addition, a total of 499 employees was transferred to the private sector, generating savings in operating expenditure as well as reducing administrative burden in terms of recruitment, promotion and training.

TABLE 5-7		
PROCEEDS, SAVINGS AND REDUCTION IN PUBLIC SECTOR EMPLOYEES, 1983-2003		
<i>Item</i>	<i>2001-2003</i>	<i>1983-2003</i>
Proceeds (RM million)		
Sale of Equity	40.5	4,567.3
Sale of Assets	20.3	1,506.7
Savings (RM million)		
Capital Expenditure ¹	876.6	125,708.0
Number of Public Sector Employees Transferred	499	110,759
<i>Note:</i> ¹ Based on estimated project cost.		

5.34 Privatisation continued to provide opportunities for privatised entities to gain experience and exposure to *new technologies, skills and expertise*, especially in the field of engineering, procurement, operations and maintenance. In addition,

the acquisition of new technologies enabled privatised entities to participate and expand their activities overseas. During the review period, several privatised entities were successful in undertaking highway construction and engaging in airport related services in other countries. Companies undertaking privatised projects were also able to acquire expertise in high technology activities such as producing coaches for the monorail system as well as road construction and maintenance. In addition, Malaysia acquired the technology to produce offshore patrol vessels locally following the privatisation of the naval dockyard in Lumut, Perak.

5.35 Malaysians also benefited from *training programmes* stipulated in the terms and conditions of the privatisation agreement. The allocation for training programmes of selected privatised companies is shown in *Table 5-8*. The companies conducted training programmes tailored to meet the needs of their respective sectors such as technical, finance, marketing, personnel management and public relations. Training was not only extended to current employees of concessionaires but also included new entrants to the labour market. In addition, training institutions established for specialised areas in accordance with the privatisation agreements, such as the Marine Technology Academy, spurred strategic alliances and collaborations with local and foreign institutions.

TABLE 5-8			
ALLOCATION FOR TRAINING UNDERTAKEN BY SELECTED PRIVATISED COMPANIES, 2001-2003 (RM million)			
<i>Company</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>
Tenaga Nasional Berhad	47.4	42.0	46.4
Pos Malaysia and Services Holdings Berhad	2.0	2.8	1.6
Pelabuhan Tanjung Pelepas Sdn. Berhad	1.0	2.5	2.2
Indah Water Konsortium Sdn. Berhad	2.5	2.5	2.2
Perusahaan Otomobil Nasional Berhad	3.3	3.7	5.1

5.36 Privatisation resulted in increased *efficiency and productivity*, as resources were optimised following the centralisation of activities such as project management, data collection, operation and maintenance as well as monitoring and evaluation. In addition, privatised entities improved the quality of services and management systems, expanded capacity as well as acquired modern equipment and technology. The improvement in the Cold In Place Recycling technique using cement reduced the time for rehabilitation of pavement structural failures, which was convenient to road users. In addition, the merger of TM Touch and Celcom business network enhanced efficiency and productivity of the telecommunication services.

Bumiputera Participation

5.37 Privatisation continued to be an effective mechanism in meeting the objectives of the National Vision Policy, particularly in raising Bumiputera equity ownership. It continued to be one of the vehicles used by the Government to enhance Bumiputera participation in the corporate sector. The equity structure for 14 companies approved during the review period showed that Bumiputera owned 17.4 per cent of the total equity holdings. In addition, the equity structure for 175 selected companies privatised since the inception of the privatisation programme, as shown in *Table 5-9*, also reflected an increase of Bumiputera equity ownership from 20.8 per cent to 25.5 per cent.

TABLE 5-9		
EQUITY OWNERSHIP OF SELECTED PRIVATISED ENTITIES (%)		
<i>Equity Ownership</i>	<i>Upon Privatisation</i>	<i>October 2003</i>
Government	60.2	55.3
Bumiputera	20.8	25.5
Non-Bumiputera	10.0	11.2
Foreign	9.0	8.0
Total	100.0	100.0

5.38 In line with the objective to ensure *wider distribution of economic benefits*, the policy of requiring the concessionaires to allocate at least 30 per cent of contractual works to Bumiputera contractors continued to be implemented. In three road projects implemented during the review period, 11 Bumiputera contractors were given contracts valued at RM822.9 million, representing 57.7 per cent of total contract value. In the road maintenance project for Peninsular Malaysia, an average of RM288.2 million or 84.3 per cent of total value of contract works was awarded to Bumiputera contractors annually. This undertaking assisted Government's efforts in ensuring wider distribution of economic benefits to Bumiputera entrepreneurs through privatisation. In addition, some privatised entities were required to undertake vendor development programme, which also benefited Bumiputera entrepreneurs, as shown in *Table 5-10*.

TABLE 5-10		
VENDOR PROGRAMMES UNDERTAKEN BY SELECTED PRIVATISED COMPANIES, 2001-2003		
<i>Company</i>	<i>Contract Value for Bumiputera (RM million)</i>	<i>Programme</i>
Telekom Malaysia Berhad	996.6	Entrepreneurial Development
Indah Water Konsortium Sdn. Berhad	34.7	Refurbishment, Civil Works, Supply, Services and Maintenance
Pos Malaysia and Services Holdings Berhad	11.6	Entrepreneurial Development
Pelabuhan Tanjung Pelepas Sdn. Berhad	1.3	Maintenance
Tenaga Nasional Berhad	0.6	Entrepreneurial Development

5.39 Privatisation also benefited non-Bumiputera through joint ventures, contracting and sub-contracting activities as well as listing of the privatised entities on the Kuala Lumpur Stock Exchange (KLSE). However, due to the slowdown in the economy, some of the privatised companies that were approved for listing were unable to proceed with the listing exercise. During the review period, three privatised entities and one infrastructure project company (IPC) were listed, namely, the direct listing of Bintulu Port Holdings Berhad, PBA Holdings Berhad and the indirect listing of Pos Malaysia and Services Holdings Berhad as well as the direct listing of Ranhill Utilities Berhad as an IPC.

Implementation Strategies

5.40 During the review period, the implementation of the privatisation programme continued to be guided by the need to balance the interest of the Government, the public and the private sector. The assessment of commercial viability in privatisation projects as well as public affordability and willingness to pay was further emphasised. Training was also provided to improve negotiation skills and technical knowledge of the relevant public servants and a checklist for evaluating projects was introduced.

5.41 The Government also undertook measures to lower the cost of funds to privatised entities, so as to reduce the cost borne by consumers. In this regard, the Government through *Bank Pembangunan dan Infrastruktur Malaysia Berhad* disbursed RM3.1 billion under favourable terms and conditions to the privatised entities. In addition, recognising that the application of a full cost recovery principle will increase charges to consumers, the Government provided assistance, particularly for the acquisition of land for road projects. A total of RM510 million was allocated for the acquisition of land in respect to the privatisation of the SILK, the Kuala Lumpur-Putrajaya Highway and the Assam Jawa-Templer Park Highway.

5.42 During the review period, the viability of certain privatised projects were adversely affected by the economic slowdown. In this regard, the Government through *Penerbangan Malaysia Berhad*, acquired 69.3 per cent equity of the Malaysian Airline System Berhad, and the operations and management of light rail services operated by *Sistem Transit Aliran Ringan Sendirian Berhad* (STAR LRT) and *Projek Usahasama Transit Ringan Automatik Sendirian Berhad* (PUTRA LRT). The takeover was necessary due to the strategic nature of these services and the need to ensure the continuation of efficient and affordable transportation services to the public.

5.43 The Government strengthened privatisation procedures during the review period by introducing more rigorous legal and administrative procedures in order to protect the public and national interest including introducing a standard format for privatisation agreement governing build-operate-transfer and land development projects. Stringent terms and conditions were also incorporated including, among others, provision for termination procedures. In line with efforts to strengthen the regulatory framework, the Government initiated steps to restructure the existing regulatory authorities into sector-based regulators and established the Energy Commission in 2001, which commenced operation in January 2002.

III. PROSPECTS, 2004-2005

5.44 During the remaining Plan period, the public sector will consolidate its financial position and be prudent while providing support to private sector initiatives. The private sector is expected to regain its dynamism and become the engine of growth in the economy. The public sector expenditure will continue to focus on projects that can facilitate private domestic economic activities, enhance exports and improve competitiveness such as education, skill development and training, export promotion and SMEs development. In addition, public sector expenditure will focus on enhancing the quality of service to meet the higher expectation of the public and ensuring that the socio-economic needs of the nation are met.

Consolidated Public Sector Account

5.45 During the remaining Plan period, the overall balance of the consolidated public sector account is expected to turnaround to register a surplus of RM823 million or 0.2 per cent of GDP in 2005. This is mainly attributed to the lower development expenditure of the Federal Government and the moderate increase in the development expenditure of statutory bodies, state governments and NFPEs. The development expenditure of the consolidated state government is expected to grow at an average rate of 1.7 per cent, reflecting the move towards consolidation by the state governments.

Federal Government Development Allocation

5.46 Due to the expansionary fiscal policy adopted during the review period, 99.3 per cent of the original development allocation will be spent in the first three years of the Plan. As such, the development ceiling of the Federal Government will be increased by RM50 billion from RM110 billion to RM160 billion. This will result in development expenditure in the remaining Plan period to be RM50.8 billion or an average of RM25.4 billion per year, which is in line with the development expenditure pattern during the 1998-2000 period. Out of the new ceiling, 41.7 per cent will be allocated for the economic sector, 41.4 per cent for the social sector, 10.1 per cent for the security sector and 6.8 per cent for general administration. The higher development ceiling will result in a fiscal deficit of 1.8 per cent of GDP in 2005, which is lower compared with the deficit of 5.8 per cent of GDP in 2000.

Development Allocation By Sector

5.47 During the remaining Plan period, economic and social programmes will continue to receive the major portion of the revised allocation, as shown in *Table 5-3*. Allocation in the economic sector will be mainly channelled for infrastructure and utility development, while social programmes will focus on human resource development and improvement of social amenities. Emphasis will be given to programmes that improve socio-economic conditions, especially of the poor. In the general administration sector, public sector efficiency and productivity will continue to be improved.

5.48 In the *economic sector*, agricultural development expenditure will continue to be directed towards greater modernisation and commercialisation of industrial and food crop production. Towards this end, the implementation of the various programmes will be expedited through increased farm mechanisation, modern farming practices, wider adoption of new technologies and upgrading product quality. A total of RM3.2 billion will be allocated to the agriculture sector in the remaining Plan period, of which 32 per cent will be utilised for *in-situ* development programmes, particularly land rehabilitation and consolidation as well as replanting of oil palm, rubber and cocoa with high yielding clones. Priority will also be accorded to provision of basic infrastructural facilities and the implementation of extensive food production programmes under the MoA Inc. concept through collaboration with the private sector as well as the identification of new growth areas in the agriculture sector.

5.49 For the remaining Plan period, a total of RM1.1 billion will be allocated for industrial development. Of this amount, RM100 million will be provided for the building of the Malaysian Trade and Exposition Centre in Bahrain to enhance the penetration of Malaysian products and services to the Middle East market. To further develop the SMEs into a competitive and resilient community, funds will continue to be provided to assist domestic investment, enhance the use of electronic commerce and expand training and consultancy services. To develop the rural industries, the 'one district one industry' concept will be expanded to cover more areas while the use of technology in production processes will be increased and links with corporate and international clients will be established.

5.50 A total of RM1.8 billion will be allocated for S&T development. A substantial amount will be used to establish three institutes under the Bio-Valley project to provide for a more integrated development of the biotechnology industry. A Near Equatorial Low Earth Orbit satellite will be built and launched

for remote sensing applications. To further strengthen the nation's competitiveness through R&D, the IRPA programme will continue to focus on research projects that have greater potential for commercialisation. To facilitate the development of high value added and knowledge-intensive industries, emphasis will also be given to the commercialisation of technology through the IGS, MGS, Demonstrator Applications Grant Scheme and the Commercialisation of Research and Development Fund as well as the Technology Acquisition Fund.

5.51 A total of RM2.5 billion will be allocated for ICT-related programmes and projects. A major portion will be spent on the flagship roll-out, especially E-Government, telehealth, Multipurpose Smart Card and cross flagship applications. Efforts will also focus on enhancing measures to bridge the digital divide by expanding existing programmes such as *InfoDesa* and *Internet Desa* to more states in the Peninsular, Sabah and Sarawak, promoting the development of local content, continuing the computerisation of Government agencies, equipping rural schools with computer infrastructure as well as R&D.

5.52 For the remaining Plan period, a total of RM608.5 million will be provided for the finance subsector. Of this amount, 51.5 per cent will be spent on Government equity, 25.6 per cent on the provision of loans to SMEs and 18 per cent on venture capital. These projects are aimed at developing a core of strong and competitive domestic institutions that will provide a new source of growth for the economy, develop alternative modes of financing to complement the traditional financing sources and promote potential industries in the areas of biotechnology and ICT.

5.53 For the tourism subsector, a total allocation of RM359.6 million will be provided. Of this amount, about 79.3 per cent will be used for upgrading infrastructure and facilities, preservation and conservation of national historical sites, beautification as well as environment protection. Emphasis will also be given to tourism product development to cater for the changing and varied needs of the diverse tourist market and the provision of medium-budget accommodation. This distributive trade subsector will be allocated a total of RM252.6 million to provide loans and financing for SMEs, support the purchase of business premises in strategic locations and undertake studies on the distributive trade sector.

5.54 To finance the newly approved infrastructure projects in the transport and communications subsector, an allocation of RM15.2 billion will be provided. Of this amount, RM8.3 billion or 54.6 per cent will be for roads to further improve accessibility and open new corridors for development. Greater emphasis will be

given to the alleviation of traffic congestion, among others, by improving public transport services, using real-time information for efficient traffic management and promoting multimodal transport with the completion of integrated transport terminals. To support tourism, access by air to the island resorts of Pulau Tioman in Pahang and Pulau Pangkor in Perak will be improved with the completion of the new airport in Pulau Tioman and the expansion of the existing airport in Pulau Pangkor. In addition, the utilisation of national ports will be enhanced by improving their capacity and competitiveness. Additional berths will be constructed at West Port, Port Klang in Selangor; Port of Tanjung Pelepas in Johor; and Bintulu Port in Sarawak. A single port authority will be established to improve the quality and efficiency of services at all ports.

5.55 For the remaining Plan period, a total allocation of RM676.7 million will be provided for the energy and mineral subsector. Of this amount, about 51.2 per cent will be utilised to facilitate the integration of the three major transmission grids and distribution networks in Sabah to further improve the security and reliability of electricity supply. Emphasis will also be given for the expansion of the rural electricity coverage particularly in Sabah and Sarawak, development of mineral resources and improvement of information systems of the relevant agencies. The Government will continue its effort to ensure adequate supply of water to meet the increasing demand. In this connection, the Inter-state Raw Water Transfer from Pahang to Selangor and Federal Territories of Kuala Lumpur and Putrajaya will be constructed in 2004.

5.56 In the *social sector*, public educational facilities will be expanded to accommodate the increase in demand for places. Existing facilities will be upgraded and new classes, universities and polytechnics will be constructed while the capability of the education and training delivery system will be strengthened to ensure the supply of skilled and knowledgeable human resource. Educational support programmes will continue to be given, especially to students from low-income families. Emphasis will also be given to improving further the health status of the population. Priority will continue to be given to the implementation of promotive and preventive programmes. Towards this end, existing policies and programmes will be reviewed and refined to address new and emerging challenges in the health subsector. The completion of 20 hospitals and 110 clinics will further contribute towards improving access to healthcare. In the housing subsector, the implementation of the low-cost housing projects under the *Program Perumahan Rakyat* for rental and *Perumahan Awam Kos Rendah* will be intensified. This is in line with the Government's policy to eliminate squatters in all major towns by 2005 as well as to provide adequate, affordable and quality houses for all Malaysians.

5.57 During the remaining Plan period, the *security sector* will be provided an allocation of RM5.7 billion, of which RM4.4 billion will be allocated to defence and RM1.3 billion to internal security. The modernisation of the security sector will continue to be given priority, particularly in strengthening and enhancing capabilities to safeguard national security. Procurement of defence equipment through counter trade and offset programmes will be emphasised in order to reduce the effects of direct capital outflow and to facilitate technology transfer respectively. Emphasis will also be given to various training programmes for the armed forces, especially in the utilisation of sophisticated equipment to enable them to perform their duties effectively. Internal security requirement will also be better addressed by providing the police with new equipment and relevant training programmes. Existing police stations will be upgraded and new police stations will be constructed throughout the country to strengthen the capability of the police, especially in addressing drug abuse and reducing the crime rate. To gain the support and co-operation of the general public and to promote better police-public relationship, programmes such as Neighbourhood Watch Scheme and Crime Prevention Foundation will be continued. The National Service initiative aimed at instilling patriotism among the younger generation will utilise the existing facilities for its training programme.

5.58 An allocation of RM2.2 billion will be provided for the *general administration sector*. New Federal Administrative Complexes will be built in Kedah and Sarawak to house federal departments at the state level. The ongoing development of the Federal Government Administrative Centre at Putrajaya as a garden city will continue with the construction of various types of gardens and specially designed buildings. New Federal Government offices for various federal departments at state and district levels will continue to be built throughout the country while existing premises will be upgraded to meet growing needs of the general public. Office automation and computerisation programmes will be implemented to further enhance the efficiency of services to the public. New quarters will be constructed to provide housing facilities to government employees.

Rural Development

5.59 During the remaining Plan period, rural development programmes will be continued. In order to increase access of the rural community to better income-generating opportunities, various programmes, particularly agriculture-related activities, will be further expanded. In this regard, the scope of development programmes will be expanded to provide better access of the rural community to new technologies and improved farming practice, as well as increased credit

facilities for agriculture-related trade and services activities. In addition, the provision of the requisite physical and social infrastructure will be continued to further improve the quality of life of the rural population. Rural health and education facilities will be further developed with the construction of new facilities as well as the provision of better services.

Development Allocation By State

5.60 Under the revised allocation, distribution of development allocation by state is as shown in *Table 5-4*. The revised allocation takes into account the constraints in the implementation capacity in the states. The more developed states, namely Johor, Melaka, Negeri Sembilan, Perak, Pulau Pinang, Selangor and Wilayah Persekutuan will receive RM62.8 billion or 39.2 per cent of the Federal Government development allocation. For the less developed states of Kedah, Kelantan, Pahang, Perlis, Sabah, Sarawak and Terengganu a sum of RM49.2 billion will be allocated, accounting for 30.8 per cent of the total Federal Government development allocation.

5.61 The allocation for multi-state programmes and projects will be increased by 29 per cent from RM37.2 billion to RM48 billion. This represents 30 per cent of the total revised allocation. Programmes and projects classified under this category include feasibility studies, airports, highways, railways and purchase of military hardware.

Operating Expenditure

5.62 The operating expenditure of the Federal Government is expected to increase at an average rate of 9.4 per cent per annum during the remaining Plan period. Emoluments will continue to account for the largest portion, constituting 25.8 per cent of the operating expenditure and growing at an average rate of 6.6 per cent per annum. This increase is mainly due to the annual increment in salaries for civil servants and the reorganisation exercise to be carried out by several Government ministries and departments in line with the need to improve the quality of the delivery system. The expenditure on supplies and services is expected to increase at an average rate of 12.3 per cent per annum, much lower than the review period. The increase is mainly attributed to the higher rental expenditure following the second phase of relocation of Federal Government offices to Putrajaya.

5.63 Debt service charges are projected to increase at an average rate of 11.6 per cent per annum during the remaining Plan period as a result of higher borrowings by the Federal Government to stimulate the economy during the review period. However, debt service charges will remain at a sustainable level of 12.6 per cent of operating expenditure in 2005. For the Eighth Malaysia Plan period, the operating expenditure is expected to grow at an average rate of 9.2 per cent per annum, compared with 9.1 per cent per annum recorded during the previous Plan.

Sources of Revenue

5.64 As a result of more robust economic activities expected during the remaining Plan period, Federal Government revenue is expected to increase at an average rate of 5.6 per cent per annum to RM99.5 billion in 2005, as shown in *Table 5-2*. The collection of direct taxes is expected to increase at an average rate of 6.0 per cent per annum, with corporate tax and individual income tax increasing at 9.9 per cent and 7.2 per cent, respectively. Petroleum income tax is expected to decline by an average rate of 7.0 per cent per annum in line with the price of crude petroleum. For the remaining Plan period, direct taxes will contribute 52 per cent of the total revenue of the Federal Government.

5.65 Indirect taxes are expected to register a growth of 8.4 per cent per annum during the remaining Plan period. This is mainly due to the collection of excise duties, sales tax and service tax, which are expected to register double digits growth in line with a higher economic growth expected during the remaining Plan period. The collection of import duties are also expected to continue to increase in line with higher imports, albeit at a slower rate due to the reduction in import tariffs, consistent with further liberalisation under WTO and AFTA. Indirect taxes are expected to contribute 26.9 per cent of the total revenue during the remaining Plan period.

Non-Financial Public Enterprises

5.66 The current surplus of NFPEs is expected to record a smaller surplus of RM42.0 billion in 2005 compared with a surplus of RM46.6 billion in 2003. This is due to higher increase in the operating expenditure of NFPEs. The development expenditure of NFPEs as a whole is expected to increase, at an average rate of 0.9 per cent per annum to RM36 billion in 2005. As a result, the overall balance of NFPEs is expected to record a lower surplus of RM6.0 billion in 2005 compared with RM11.3 billion in 2003.

5.67 Major NFPEs such as PETRONAS, TMB and TNB are expected to continue with their development programmes. PETRONAS will continue with its ongoing exploration and production projects for oil and gas, both on its own and on production sharing basis. TMB is expected to increase its investment in telecommunications infrastructure to support the growing demand from the private and commercial consumers, including in rural areas in line with the objective of bridging the digital divide. TNB will continue with the construction of new generation plants, which will utilise mainly coal as the source of fuel as well as expand the transmission and distribution networks to ensure adequate and reliable supply of electricity.

PRIVATISATION PROGRAMME

5.68 The implementation of the privatisation programme during the remaining Plan period will primarily depend on the strength of private sector participation. The completion of six road projects expected during this period will generate economic growth and improve traffic dispersal through an additional 149.6 kilometres of toll road network. Efforts will be undertaken to foster greater partnership with the private sector to ensure effective implementation of this programme. Emphasis will also continue to be given to projects that are in consonant with national development priorities. In this regard, the privatisation programme during this period will focus on the following strategies:

- ❑ *identifying projects which can spur economic growth;*
- ❑ *fostering greater public-private partnership;*
- ❑ *strengthening the monitoring and evaluation mechanisms; and*
- ❑ *enhancing Bumiputera participation.*

Identification of Projects

5.69 During the remaining Plan period, emphasis will be given to identify projects that have strong multiplier and spillover effects on the economy. Selection of projects as well as the application of the appropriate method of privatisation will continue to take into consideration factors such as the necessity of the project, the relative level of efficiency between the public and the private sector in the delivery of the required services as well as the viability and sustainability of the project. The Government will also undertake studies on the privatisation

of selected entities and services to determine their commercial viability as well as social impacts. In this regard, projects that are approved in principle and expecting to be implemented during this period are as shown in *Table 5-11*.

<p>TABLE 5-11</p> <p>IMPLEMENTATION OF MAJOR PRIVATISED PROJECTS, 2004-2005</p>	
<i>Entity/Project</i>	<i>Mode of Privatisation</i>
1. Construction of Road Tunnel from Kg. Pandan to Sungei Besi, Kuala Lumpur	BOT
2. Construction of Jalan Travers Police Station, Kuala Lumpur	LS
3. Construction of Marine Police Base in Lumut, Perak	LS
4. Construction of Immigration Complex in Shah Alam, Selangor	LS
5. Construction of Government Complex and Quarters in PGA Limbang, Sarawak	LS
6. Corporatisation of Malacca Water Authority	COR
7. Corporatisation of Malaysia External Trade Development Corporation	COR
8. Corporatisation of Radio Televisyen Malaysia	COR
9. Management and Operations of Carcosa Seri Negara, Kuala Lumpur	MC
10. National Solid Waste Management	MC
11. Privatisation of Negeri Sembilan Water Supply Department	—
12. Kuala Lumpur North-East Expressway (KLNEE)	BOT
13. Penang Outer Ring Road (PORR)	BOT
14. Senai-Desaru Highway	BOT
15. South Klang Valley Expressway (SKVE)	BOT
16. West Coast Highway (Taiping-Banting)	BOT
<p><i>Notes:</i> BOT = Build-Operate-Transfer LS = Land Swap</p> <p> COR = Corporatisation MC = Management Contract</p>	

Fostering Greater Public-Private Partnership

5.70 The Government will continue to foster greater partnership with the private sector in the implementation of development projects as well as in the delivery of public services. This is expected to encourage greater contribution by the private sector in financing development projects, ensure cost-effectiveness and value-for-money in the utilisation of resources as well as improve operational efficiency. As a measure to harness additional resources from the private sector, restrictions affecting land swap projects in the Klang Valley will be reviewed.

5.71 Under the public-private partnership, priority will be given to projects that were deferred due to the public sector budgetary constraints. In this respect, projects such as those in the education, health and infrastructure sectors will be identified aimed at expediting implementation, and improving the quality and delivery of services. Primarily based on a build-lease-transfer model, this new arrangement may involve several modes such as design-build-finance-operate, build-operate-transfer and build-transfer. The private sector will procure funding from institutional investors, construct the required capital works and operate the facilities on a long-term basis. Proceeds will be obtained direct from consumers or the Government or both depending on the type and viability of projects. This arrangement also enables the Government to incorporate the construction of the physical works and deliver required services as a total package of the project where payments will be in the form of lease rentals.

Strengthening the Monitoring and Evaluation Mechanisms

5.72 The establishment of the National Port Authority and the Sanitation Commission will strengthen the economic and safety regulations of the respective sectors, particularly with respect to pricing, quality of services and by ensuring a competitive environment among industry players. This will ensure the interest of the public is adequately protected. In addition, existing regulatory authorities such as the Energy Commission as well as the Malaysian Communications and Multimedia Commission will continue to be strengthened.

5.73 In areas where there is no sector-based authority, efforts will be directed towards improving the project monitoring and evaluation mechanisms of implementing agencies to ensure the concessionaires adhere to the terms of their privatisation agreement. These agencies will also undertake continuous evaluation of privatisation projects. Lessons learned from the evaluation of privatisation projects will be used to further improve and strengthen future projects to enhance the benefits of all stakeholders. In this regard, several studies to evaluate the performance of privatisation projects will be carried out including hospital support services as well as medical supply stores and laboratories.

Enhancing Bumiputera Participation

5.74 Privatisation will continue to be used as a vehicle to enhance Bumiputera participation in the corporate sector by providing greater opportunities for

Bumiputera entrepreneurs to be involved in equity holdings, contract works and the vendor development programme. In order to sustain equity ownership, capable Bumiputera entrepreneurs will be selected based on the assessment of their commitment and past performance. In addition, the proposed listing of the Federal Land Development Authority on the KLSE will increase Bumiputera equity ownership in the corporate sector.

5.75 The Government will also continue to encourage the involvement of Bumiputera entrepreneurs in construction works, consultancy, procurement and supplies. The terms and conditions of the privatisation agreement will continue to include provisions for contracts to be given to Bumiputera professionals and entrepreneurs. In this regard, measures will be undertaken to ensure that these requirements are met and effectively monitored throughout the concession period. Companies undertaking privatisation projects will also be required to offer employment opportunities to Bumiputera individuals especially in the management, professional and technical areas.

IV. CONCLUSION

5.76 The global economic downturn during the review period, which saw a sharp reduction in economic growth from 8.5 per cent in 2000 to 0.3 per cent in 2001 made it necessary for the Government to adopt counter-cyclical measures to stimulate domestic demand. Although this resulted in fiscal deficit, the Government maintained fiscal discipline to ensure that the deficit and debt levels continued to be sustainable. Similarly, during the remaining Plan period, the Government is committed to enhancing fiscal prudence and increasing the efficient management of the economy, which will include measures to ensure cost-effectiveness, emphasise better quality investments and enhance project selection and implementation to achieve maximum returns. The Government will also continue to promote a pro-business environment through the public-private partnership as well as encourage private investment and privatisation. At the same time, efforts will be made to strive for a higher quality of service and improve the effectiveness of the delivery system in line with higher expectations of the people as well as to narrow the gap between urban and rural areas.

Chapter 6

Agriculture Development

6

AGRICULTURE DEVELOPMENT

I. INTRODUCTION

6.01 The agriculture sector continued to contribute to the overall development of the economy and remained resilient despite the economic slowdown. The development thrust of the sector was to improve the levels of productivity, competitiveness and dynamism, and hence incomes, through greater commercial orientation and the wider adoption of new technologies and modern management systems. The agriculture development programmes were aimed at expanding production of food commodities to improve the food trade balance, increasing export of industrial commodities and ensuring sustainable supply of raw materials to support the growth of domestic agro-based industries.

6.02 During the remaining Plan period, the continued improvements in productivity through the enhancement of commercialisation and technological intensity as well as greater participation of the private sector are envisaged to contribute to the better performance of the agriculture sector. Improved coordination between relevant ministries and agencies as well as stronger collaboration between public and private sectors will facilitate the more efficient utilisation of existing resources and more importantly on exploring and venturing into new sources of growth in order to expand the agriculture and export base.

II. PROGRESS, 2001-2003

6.03 During the review period, the agriculture sector recorded positive growth as reflected by the increases in value added, output and export earnings. The positive performance was largely attributed to the increases in the output of palm oil, rubber and food commodities as well as higher prices of major agricultural

commodities amidst tight global supplies. In contrast, the production of cocoa declined on account of the impact of protracted low prices, prior to 2000, while that of sawlogs and sawn timber was further reduced in compliance with the guidelines on sustainable forest management issued by the International Tropical Timber Organisation (ITTO).

Growth

6.04 During the review period, the agriculture sector grew at 1.5 per cent per annum, lower than the Plan target of 3.0 per cent, as shown in *Table 6-1*. In absolute terms, the sector's value added increased by 4.4 per cent from RM18.1 billion in 2000 to RM18.9 billion in 2003. The industrial commodity subsector remained the largest contributor accounting about 60 per cent of the agriculture value added. The food subsector contributed approximately 40 per cent with significant increases in production of livestock, fisheries, fruits and vegetables.

TABLE 6-1										
AGRICULTURE VALUE ADDED, 2000-2005										
(RM million in 1987 prices)										
Commodity	2000	%	2003	%	2005	%	Average Annual Growth Rate (%)			
							8MP Target		2001-2003	2004-2005
							Original	Revised		
Industrial Commodities	11,376	63.0	11,357	60.2	11,766	59.1	1.1	0.7	-0.1	1.8
Rubber	1,269	7.0	1,272	6.7	1,338	6.7	-2.7	1.1	0.1	2.6
Palm Oil	5,860	32.4	6,491	34.4	6,937	34.9	3.5	3.4	3.5	3.4
Forestry & Logging	3,055	16.9	2,475	13.1	2,293	11.5	-2.2	-5.6	-6.8	-3.7
Cocoa	1,192	6.6	1,119	5.9	1,198	6.0	0.6	0.1	-2.1	3.4
Food Commodities	6,686	37.0	7,512	39.8	8,135	40.9	6.2	4.0	4.0	4.1
Padi	590	3.3	655	3.5	675	3.4	4.8	2.7	3.6	1.5
Livestock	1,159	6.4	1,439	7.6	1,554	7.8	5.6	6.0	7.5	3.9
Fisheries	2,493	13.8	2,711	14.4	3,051	15.3	4.8	4.1	2.8	6.1
Miscellaneous ¹	2,444	13.5	2,707	14.3	2,855	14.3	8.2	3.2	3.5	2.7
Total	18,062	100.0	18,869	100.0	19,901	100.0	3.0	2.0	1.5	2.7

Note: ¹ Includes coconuts, coffee, flowers, fruits, herbs, pepper, pineapple, tea, tobacco, vegetables and others.

6.05 The total export earnings from the agriculture sector increased by 26.1 per cent from RM23 billion in 2000 to RM29 billion in 2003, with palm oil accounting for more than half of the total agricultural export value. The strong performance of palm oil was due to its competitiveness vis-à-vis other competing vegetable oils and fats, higher demand from new markets as well as significant increases in price and counter trade activities. During the review period, the average price of crude palm oil increased from RM1,000 per tonne in 2000 to RM1,400 per tonne in 2003, a significant rise of 40 per cent. The export revenue from cocoa increased substantially from RM33 million in 2000 to RM120 million in 2003 as a result of the more than double increase in the average export price of dried beans. The price increased to RM7,209 per tonne in October 2002, the highest in 17 years, due to tight global supplies following production constraints, particularly in the Ivory Coast and Ghana, the two major cocoa producing countries in the world.

6.06 With increasing investments in larger scale food production activities, there was significant improvement in the exports of food commodities which expanded at 7.1 per cent per annum during the review period, outpacing growth in food imports, as shown in *Table 6-2*. However, the trade balance in the food subsector was maintained at about the same level in absolute value terms. With new patterns of consumption and changing lifestyles, arising to a large extent from the urbanisation process, significant food imports included temperate vegetables and fruits, a variety of dairy and meat products and animal feed. In addition, about 650,000 tonnes of rice were imported annually, mainly from Thailand, China, Vietnam and Pakistan to meet the domestic demand of 1.93 million tonnes.

Employment

6.07 Employment in the agriculture sector decreased from 1.41 million in 2000 to 1.40 million in 2003, a decline of 0.1 per cent per annum. Consequently, its share in total employment continued to decrease from 15.2 per cent to 13.8 per cent during the same period. This was largely attributed to out-migration of workers from agriculture to other sectors of the economy as well as the adoption of labour-saving technologies and farming practices. With productivity gains, the value added per agriculture worker rose by 1.5 per cent per annum, as shown

TABLE 6-2

EXPORTS AND IMPORTS OF FOOD, 2000-2005
(RM million)

Commodity	2000	%	2003	%	2005	%	Average Annual Growth Rate (%)	
							2001-2003	2004-2005
Exports	6,422.4	100.0	7,972.6	100.0	8,989.5	100.0	7.1	5.9
Live Animals	357.4	5.6	371.8	4.7	379.2	4.2	1.4	1.0
Meat & Meat Preparations	64.6	1.0	117.5	1.5	158.5	1.8	22.0	16.1
Dairy Products	410.2	6.4	414.0	5.2	415.1	4.6	0.3	0.1
Vegetables	278.4	4.3	380.1	4.8	444.1	4.9	10.9	8.1
Fruits	512.4	8.0	538.7	6.8	569.0	6.3	1.7	2.8
Coffee, Cocoa, Tea & Spice	1,153.9	18.0	1,647.5	20.7	1,968.5	21.9	12.6	9.3
Sugar, Sugar Preparations & Honey	353.7	5.5	548.4	6.9	682.8	7.6	15.7	7.1
Cereal & Cereal Preparations	610.8	9.5	611.6	7.7	612.0	6.8	0.04	0.03
Fish, Crustaceans, Molluscs & Preparations thereof	1,263.3	19.7	1,342.3	16.8	1,383.6	15.4	2.0	1.5
Feeding Stuff for Animals	375.3	5.8	515.0	6.5	603.2	6.7	11.1	8.2
Others	1,042.5	16.2	1,485.7	18.6	1,773.5	19.7	12.5	9.3
Imports	11,357.4	100.0	12,963.9	100.0	13,997.8	100.0	4.5	3.9
Live Animals	154.6	1.4	230.6	1.8	281.7	2.0	14.3	10.5
Meat & Meat Preparations	771.4	6.8	823.2	6.4	850.4	6.1	2.2	1.6
Dairy Products	1,176.5	10.4	1,196.3	9.2	1,206.3	8.6	0.6	0.4
Vegetables	1,023.6	9.0	1,256.9	9.7	1,392.7	9.9	7.1	5.3
Fruits	561.6	4.9	685.2	5.3	756.9	5.4	6.9	5.1
Coffee, Cocoa, Tea & Spice	813.9	7.2	1,437.1	11.1	1,909.6	13.6	20.8	15.3
Sugar, Sugar Preparations & Honey	1,085.2	9.6	1,021.2	7.9	990.6	7.1	-2.0	-1.5
Cereal & Cereal Preparations	2,782.0	24.5	1,895.8	14.6	1,924.8	13.8	-12.0	0.8
Fish, Crustaceans, Molluscs & Preparations thereof	1,085.8	9.6	1,167.6	9.0	1,211.0	8.7	2.5	1.8
Feeding Stuff for Animals	938.0	8.3	2,234.8	17.2	2,405.8	17.2	33.6	3.8
Others	964.8	8.5	1,015.2	7.8	1,068.0	7.6	1.7	2.6

in *Table 6-3*. Efforts to utilise mechanical harvesting technology in the plantation sector met with limited success. Thus, the sector continued to experience a tight labour situation and consequently was dependent on 327,490 registered foreign workers which constituted about 23 per cent of the total agriculture workforce in 2003.

Agricultural Production

6.08 The agriculture sector recorded mixed performance in output growth, as shown in *Table 6-4*. Despite the lower growth rate experienced by the agriculture sector, the implementation of various strategies and programmes further strengthened the overall market-orientation of the sector, particularly among the smallholders. This trend augured well for the industrial crops sector as integrated smallholdings could better reap the benefits of economies of scale. In addition, the diversification strategies established a strong basis for the development of high-value food products encompassing downstream activities.

Agricultural Industrial Commodities

6.09 Crude *palm oil* production recorded a significant increase of 4.2 per cent per annum during the review period, surpassing the Eighth Malaysia Plan target of 2.8 per cent. The rise to 12.3 million tonnes was due to the increased hectareage

TABLE 6-3										
AGRICULTURE EMPLOYMENT AND VALUE ADDED PER WORKER, 2000-2005										
	2000	2001	2002	2003	2004	2005	Average Annual Growth Rate (%)			
							8MP Target		2001-2003 2004-2005	
							Original	Revised		
Agricultural Employment ('000)	1,407.5	1,406.5	1,405.6	1,404.8	1,396.8	1,403.0	-1.5	-0.2	-0.1	-0.1
Percentage to Total Employment	15.2	14.8	14.3	13.8	13.3	12.9				
Value Added per Worker (RM in 1987 prices)	12,833	12,724	13,118	13,432	13,827	14,185	4.5	2.1	1.5	2.8

TABLE 6-4

PRODUCTION OF AGRICULTURAL COMMODITIES, 2000-2005
(‘000 tonnes)

Commodity	2000	2003	2005	Average Annual Growth Rate (%)			
				8MP Target		2001-2003	2004-2005
				Original	Revised		
Industrial Commodities							
Rubber	615.0	622.0	670.0	-1.9	1.7	0.4	3.8
Crude Palm Oil	10,842.0	12,250.0	13,320.0	2.8	4.2	4.2	4.3
Palm Kernel Oil	1,384.0	1,600.0	1,868.0	2.3	6.2	5.2	8.4
Sawlogs ¹	23,074.0	20,132.0	18,227.0	-2.4	-4.6	-4.4	-4.8
Cocoa	70.0	50.0	51.0	7.4	-6.3	-10.9	1.0
Food Commodities							
Padi	2,141.0	2,145.0	2,164.0	4.7	0.2	0.1	0.4
Fisheries	1,402.9	1,644.1	1,985.2	4.2	7.2	5.4	9.9
Marine ²	1,285.7	1,447.2	1,713.6	1.6	5.9	4.0	8.8
Aquaculture	117.2	196.9	271.6	14.4	18.3	18.9	17.4
Livestock							
Beef	17.5	32.7	40.0	7.5	18.0	23.2	10.6
Mutton	0.9	1.3	1.5	5.9	11.0	13.5	7.4
Pork	159.8	202.2	219.6	4.8	6.6	8.2	4.2
Poultry	714.3	859.8	899.8	4.0	4.7	6.4	2.3
Eggs ³	6,642.0	7,690.8	8,080.0	3.9	4.0	5.0	2.5
Milk ⁴	29.6	40.9	45.3	5.5	8.9	11.4	5.2
Miscellaneous							
Pepper	24.0	29.0	32.0	4.6	5.9	6.5	5.0
Pineapple	431.0	461.0	475.0	7.5	2.0	2.3	1.5
Tobacco	7.4	11.3	14.0	6.4	13.6	15.2	11.3
Flowers ⁵	120.4	137.7	141.6	7.0	3.3	4.6	1.4
Fruits ⁶	885.5	1,485.2	1,612.6	7.6	3.1	18.8	4.2
Vegetables	458.3	813.0	936.5	6.4	0.6	21.1	7.3
Coconut	460.9	473.6	475.6	8.4	0.6	0.9	0.2

Notes:

¹ Measured in thousand cubic meters.² Refers to fish landing.³ Measured in million units.⁴ Measured in million litres.⁵ Measured in thousand stalks.⁶ Refers to commercial cultivation.

in matured areas, improvement in yields and prices as well as higher oil extraction rate (OER) rising to 20 per cent in 2003. Sabah and Sarawak recorded a higher OER of between 21 to 22 per cent generally due to environmental factors including better soil conditions, more efficient harvesting and handling of fresh fruit bunches as well as better management practices by the estate sector. Overall, planted hectareage recorded an increase of 3.6 per cent per annum to reach 3.8 million hectares in 2003, as shown in *Table 6-5*. Of this total, 360,000 hectares or about 10 per cent comprised of smallholdings. In early 2001, with lower palm oil prices, the Government provided financial assistance amounting to RM400 million under its economic stimulus package to mitigate the adverse impact of the lower prices on production and incomes, especially of smallholders. A total of 6,080 smallholders, including the Federal Land Development Authority (FELDA) settlers, involving about 19,240 hectares, benefited from the financial assistance. This financial package was also used to encourage replanting of oil palm utilising high yielding clones by both smallholders and estates.

TABLE 6-5
AGRICULTURAL LAND USE, 2000-2005
(‘000 hectares)

Commodity	2000	2003	2005	Average Annual Growth Rate (%)			
				8MP Target		2001-2003	2004-2005
				Original	Revised		
Oil Palm	3,377	3,750	3,950	2.8	3.2	3.6	2.6
Rubber	1,431	1,315	1,250	-1.9	-2.7	-2.8	-2.5
Padi ¹	699	684	680	0.6	-0.5	-0.7	-0.3
Fruits	289	336	371	5.0	5.1	5.2	5.1
Coconut	158	153	153	-1.8	-0.6	-1.1	0.0
Cocoa	76	66	67	2.8	-2.4	-4.6	1.1
Vegetables	39	44	48	8.5	4.2	4.1	4.4
Tobacco	15	17	17	-3.6	2.5	4.3	0.0
Pepper	13	14	15	1.7	2.1	2.5	3.5
Total	6,097	6,379	6,551	1.2	1.5	1.5	1.3

Note: ¹ Based on harvested area.

6.10 The production of *rubber* increased by an average of about 0.4 per cent per annum on account of more favourable rubber prices in 2001 and 2003 consequent to the lowering of world stocks as well as market intervention by the International Tripartite Rubber Co-operation pact, comprising Indonesia, Malaysia and Thailand. The price of RSS1 rubber increased from RM2.61 per kilogramme in 2000 to above RM3.00 per kilogramme in 2003. Planted hectareage of rubber, however, continued to decline by about 2.8 per cent per annum between 2001 to 2003 as shown in *Table 6-5* as smallholders in particular moved into other more remunerative crops.

6.11 In order to secure an adequate supply of rubber and rubber wood to local industries, the rubber replanting programme was reviewed to ensure that at least half of the annual target of 40,000 hectares was replanted with latex timber clones, particularly in the designated rubber zones. For this purpose, grants amounting to RM330 million were provided to encourage smallholders to replant rubber as well as diversify their activities. The G++ rubber replanting system, which integrates on-farm rubber and off-farm alternative activities, mainly food production, was introduced as a measure to encourage rubber replanting as well as supplement the income of smallholders. In addition, a group farming model, namely the *Projek Kampung Teknologi Getah*, involving 739 smallholders from 11 villages, was launched by the Malaysian Rubber Board (MRB). This was a pilot project to augment production and income through integrated farming and improved farming methods and technologies, including the adoption of the Low Intensity Tapping System (LITS). In order to further encourage the widespread utilisation of LITS, a special allocation of RM180 million was provided to assist smallholders to apply LITS particularly on matured trees above 15 years.

6.12 With the protracted price stagnation of *cocoa* beans prior to 2000, its production continued to decline by about 11 per cent per annum during the review period. Despite the turnaround in the prices since 2002, the cocoa subsector could not respond immediately due to supply rigidities.

6.13 *Tobacco* growing activities continued to supplement the incomes of the rural population especially in Kelantan, Terengganu, Kedah and Perlis providing employment to 20,500 farm families and 1,900 tobacco grower-curers. Yield improvements, contributed by the restructuring of the tobacco growing-curing system and better support facilities, increased the production of dried leaves to 11,300 tonnes valued at RM157 million in 2003. Production of *pepper* increased to 29,000 tonnes in 2003, despite lower prices and increasing world stocks, due to good harvests.

6.14 As a member of the ITTO and consistent with Malaysia's commitment to the implementation of sustainable forest management, logging activities were planned and predetermined based on an annual allowable cut rate (ACR) to ensure that the extraction of forest resources remained within specified limits. Towards this end, the ACR was reduced further to 272,870 hectares per year from the previous level of 276,040 hectares. As a result, the production of *sawlogs* declined by 4.4 per cent per annum to 20.1 million cubic metres in 2003. In order to ensure the sustainable supply of logs for downstream industrial activities, increased efforts were undertaken to further reduce dependence on natural forests for the raw material supplies. Apart from the reafforestation and rehabilitation of productive forest reserves with fast growing timber species during the review period, a total of 164,000 hectares of pilot forest plantations was established in a number of states including Johor, Kedah, Pahang, Perak, Sabah and Sarawak in collaboration with the private sector. In addition, measures were taken to convert unproductive forest reserves into rubber-forest plantations. In this regard, a total of 4,300 hectares was rehabilitated by private companies in Johor while another 2,200 hectares were rehabilitated by Government agencies in Pahang, Sarawak and Negeri Sembilan. The Malaysian Timber Certification Council (MTCC), established criteria based on ITTO guidelines to operate a national timber certification scheme for certifying timber and timber products for export, particularly to the European market.

Food Commodities

6.15 Food production increased significantly with the operationalisation of the Third National Agriculture Policy (NAP3) to meet national food requirements as well as to broaden the export capacity of the agricultural sector. The overall impressive growth was largely due to benefits from economies of scale as relatively larger projects were established with innovative production and management systems. As a result, the self-sufficiency levels (SSLs) for all major food commodities, with the exception of rice, improved as shown in *Table 6-6*. The inclusion of the food subsector as a promoted sector in the Promotion of Investments Act 1986, resulted in a favourable response from the private sector, as potential investors could avail themselves to incentives such as pioneer status, investment tax allowances and reinvestment allowances. A total of 156 project proposals with investments amounting to RM5.5 billion was received by the Ministry of Agriculture during the 2001-2003 period, of which 113 were in aquaculture, 29 for food crops and 14 for livestock.

TABLE 6-6			
SELF-SUFFICIENCY LEVELS IN FOOD COMMODITIES, 2000-2005			
(%)			
<i>Commodity</i>	<i>2000</i>	<i>2003</i>	<i>2005</i>
Rice	73	72	71
Fruits	99	105	109
Vegetables	75	78	80
Fisheries	89	90	90
Beef	16	22	23
Mutton	6	8	9
Poultry	113	123	123
Eggs	116	109	109
Pork	99	100	100
Milk	3	3	3

6.16 The *livestock* subsector recorded impressive growth mainly attributed to expansion in the production of beef, mutton, milk and poultry. *Beef* and *mutton* recorded higher annual growth rates of 23.2 per cent and 13.5 per cent per annum, respectively, due to improvements in animal husbandry and the gradual shift from traditional to commercial farming practices. The wider use of the feedlot system and the expansion of integrated livestock farming in rubber and oil palm plantations resulted in significant increases in the number of cattle, goats and sheep. Land development agencies such as FELDA, Rubber Industry Smallholder Development Authority (RISDA) and Federal Land Consolidation and Rehabilitation Authority Berhad (FELCRA Bhd.) successfully reared these animals on some of their plantations, which also helped to reduce maintenance costs of the plantations. The production of *milk* increased by 11.4 per cent per annum to 40.9 million litres in 2003, mainly from improved farm techniques and more efficient handling of fresh milk as well as availability of quality dairy cows. In addition, with the Government's efforts to regulate and reorganise pig farming activities after the outbreak of Japanese Encephalitis (JE) and the *Nipah Virus*, *pork* production increased by 8.2 per cent per annum, to fully meet domestic demand as well as exports.

6.17 *Poultry* production increased by 6.4 per cent per annum to 860,000 tonnes in 2003, driven by more favourable farm-gate prices, consumer preference for white meat, increased demand from local processing industries as well as exports. The increase in production was contributed in part by integrated poultry activities on plantations of FELDA, FELCRA Bhd., RISDA as well as *Lembaga Kemajuan Kelantan Selatan* and *Lembaga Kemajuan Terengganu Tengah*. Though production of *eggs* increased only by 5.0 per cent per annum to 7.7 billion units in 2003, it surpassed the SSL by 9.0 per cent, as shown in *Table 6-6*. The expansion in the poultry subsector was further boosted with increasing demand from Brunei Darussalam, Hong Kong and Singapore.

6.18 The *fisheries* subsector recorded an increase in production with the aquaculture activity achieving the highest annual growth rate of 18.9 per cent during the review period. This was attributed to efforts by the Government to promote *aquaculture* activities and increase marine fish landings. The production of aquaculture increased from 117,000 tonnes in 2000 to 197,000 tonnes in 2003 to meet rising demand from local and overseas markets. *Marine* catch recorded an annual growth rate of 4.0 per cent during the review period, largely due to measures taken to modernise fishing methods and increased enforcement to ensure that local fishing vessels land their catch and undertake downstream processing within Malaysia.

6.19 During the review period, *fruits* and *vegetables* subsectors recorded significant growth registering 18.8 per cent and 21.1 per cent per annum, respectively. This was mainly attributed to intensive cultivation on new and existing hectareage with larger scale units, as well as the use of recommended technologies and agricultural practices. For this purpose, the Department of Agriculture (DOA), in particular, facilitated the implementation of a number of programmes including the growing of a variety of food crops based on the *Projek Berkelompok* or group farming concept. Among others, the consolidation and rehabilitation of traditional orchards into larger organised units of production facilitated the adoption of better farming methods and increased output. In addition, more farming land was made available through 22 Permanent Food Production Parks (PFPPs) covering 2,650 hectares as well as six satellite farming areas involving 492 hectares near major urban areas. These areas were specifically designated for private sector participation in land intensive large-scale commercial food cultivation activities.

6.20 *Padi* production increased slightly by 0.1 per cent per annum to 2.15 million tonnes in 2003. The harvested padi area declined from 699,000 hectares to 684,000 hectares, as a result of unfavourable weather conditions as well as land conversion to other alternative uses. The eight designated granaries, under the Integrated Agricultural Development Projects (IADPs), covering a total area of 212,000 hectares, produced about 68.5 per cent of the total padi production. The average yield in these granaries increased from 3.7 tonnes per hectare in 2000 to 4.0 tonnes per hectare in 2003, above the national average of 3.3 tonnes per hectare.

6.21 In an effort to further increase padi yields, a number of programmes were implemented. These included the *Projek Penyatuan Tanah Sawah*, which consolidated small padi holdings to enable commercial scale operations. Further, in order to increase incomes of padi farmers outside the granary areas, *Projek Integrasi Sawah* was implemented where these farmers were encouraged to plant other remunerative cash crops during the off-seasons. In addition, the Ministry of Agriculture launched the Ten Tonnes per Hectare Project, which utilises high yielding seed varieties, as well as highly sophisticated precision technology and farming techniques to expand future production.

6.22 The contribution of agricultural commodities to industrial production continued to be important. There was increased utilisation of agricultural produce in resource-based industries like palm oil and rubber processing, processed foods and wood products. In the case of rubber, more than 62 per cent of total domestic consumption was used by industries such as gloves, catheters, tyres and tubes. The usage of rubber in these industries rose from 375,000 tonnes in 2000 to 433,000 tonnes in 2003. The utilisation of palm oil was largely in the oleochemical sector, which produced oleochemical products such as fatty acid, methyl ester and glycerine. Other intermediate and finished products utilising palm oil included margarine and shortening, soaps and shampoos as well as motor vehicle oils and lubricants. Among the wood-based industries using local timber were the home and office furniture products as well as panel products for interior décor. The growth in food processing activities was contributed in part by the increased availability of local inputs of meat, fish, fruits and vegetables.

New Sources Of Growth

6.23 During the review period, new sources of growth that have potential to increase agricultural value added were identified. Specific studies indicated

untapped potential in upstream processing and biotechnology activities as well as downstream utilisation of oil palm biomass, herbs, floriculture, seaweed, tuna and ornamental fish. Towards this end, action plans and investment guidelines were formulated and disseminated in several seminars and exhibitions to inform investors on new opportunities and prospects in the agriculture sector.

6.24 The abundant supply of biomass, particularly from oil palm such as trunks, fronds and empty fruit bunch (EFB) as well as by-products of milling activities, has been identified as potential raw materials for high value agro-based industries. In this regard, initiatives were taken to establish a pilot pulping plant in Sabah utilising 30 million tonnes of EFB with high fibre content for the production of chemical pulp for use in paper production. Another new area still in the early stages of development included the growing of herbs and spices on a commercial scale.

6.25 An estate-based pilot project for seaweed (*Euchema cottoni*) cultivation, involving 200 hectares and 150 fishermen, was implemented off Semporna, Sabah to create new income generating opportunities. During the review period, more than 48,000 kilogrammes of locally produced dried seaweed were processed into a specialty natural product, namely, the Semi-Refined Carrageenan (SRC). Malaysia also took steps to take advantage of its strategic location vis-à-vis the rich tuna fishing grounds off the Indian Ocean and the Pacific Ocean not only to increase tuna supplies, but to ensure increased landings in Pulau Pinang for further downstream processing activities and marketing. In order to develop the capacity to harvest the vast potential of the deep sea fishing industry, a special training programme was conducted in collaboration with the private sector to train skippers, deckhands and entrepreneurs. The content and standards of these training programmes conformed with international guidelines and requirements. At the same time, production of ornamental fish increased from 306 million pieces in 2000 to 408 million pieces valued at RM93 million in 2003. Efforts have been initiated to promote the development of ornamental fish as a major export industry.

Support Services

6.26 The adequate provision of support and extension services contributed to the expansion of the agriculture sector and increased opportunities for better incomes. In this regard, the support services provided by various agencies were extended to more than 500,000 beneficiaries. Within the Ministry of Agriculture,

the adoption of MoA Incorporated (MoA Inc.) approach gave new dynamism and direction to its agencies to increase the business orientation of agricultural activities. Under this strategy, all relevant agencies and departments pooled their resources to jointly plan, coordinate, implement and monitor commercial-based agriculture projects together with participating entrepreneurs.

6.27 During the review period, efforts were intensified to provide adequate *drainage and irrigation* facilities to support increased agriculture production on more than 300,000 hectares of padi land, of which 68.4 per cent was within the eight granary areas. A total of RM1.6 billion was spent, mainly in IADP areas, for the construction and upgrading of drainage and irrigation systems, development of water resources as well as improvements to farm roads and crossings. Further, a number of existing dams in padi areas including those at Ahning, Pedu and Muda were rehabilitated.

6.28 The focus on market-oriented production was backed by sufficient *marketing* networks and systems to realise better returns and improve incomes of farmers. Towards this end, various Government agencies involved in the development of food and industrial crops established new and strengthened existing distribution and marketing channels to assist farmers, smallholders, fishermen and entrepreneurs. As part of the efforts to promote more organised marketing of food and food products, the Federal Agricultural Marketing Authority (FAMA) set up contract farming arrangements between farmers and major supermarkets. Under this strategic arrangement, 10,500 tonnes of fruits and 10,800 tonnes of vegetables with a combined value of RM25.5 million were marketed to benefit about 1,000 farmers during the review period. In addition, the use of *Malaysia's Best* as a quality seal for fruits and vegetables and *Agromas* as a trademark for processed products were promoted extensively.

6.29 The marketing of fish and fish products, through the *Lembaga Kemajuan Ikan Malaysia* (LKIM), continued to be given increased emphasis with the upgrading of fish landing facilities, improvement of the auctioning system as well as diversifying outlets to ensure fair prices for fishermen and high quality fish for consumers. The Technical Advisory Support Service units of the Malaysian Palm Oil Board (MPOB) continued their efforts to improve market acceptance and the consumption of Malaysian palm oil and related products in overseas markets by enhancing awareness of the technical attributes of palm oil. The Malaysian Timber Industries Board, among others, organised seminars to counter the anti-tropical timber smear campaigns in order to increase market share of Malaysian timber products and wood-based furniture in the United States and European markets.

6.30 To ensure the adoption of advanced technologies and management systems in agriculture, measures were undertaken to improve *training* for trainers, extension workers as well as farmers and potential entrepreneurs. The goal was to produce more skilled and knowledgeable manpower that could contribute towards enhancing productivity and efficiency levels as well as innovation in agricultural activities. Towards this end, existing agricultural training institutions were upgraded and their curriculum reviewed to include agricultural entrepreneurship training, new and improved automation and mechanisation methods, best practices in farm management including usage of information and communications technology (ICT) for precision farming.

6.31 In terms of access to *credit*, commercial banks and financial institutions approved RM2.6 billion or 1.9 per cent of the total loans disbursed in 2002 for agriculture projects. *Bank Pertanian Malaysia* (BPM) continued to be a major source of funding for the agriculture sector. Of the RM244 million allocation provided to BPM by the Government, 45.1 per cent or RM110 million was disbursed through several agriculture credit schemes benefiting 30,000 smallholders, fishermen, livestock rearers and farmers. Apart from credit facilities, the Government extended special financial assistance amounting to RM1 billion, in early 2001, to assist more than 400,000 rubber and oil palm smallholders adversely affected by the sharp drop in commodity prices.

6.32 During the review period, public sector research and development (R&D) institutions undertook *research* activities in new and potential growth areas in collaboration with the private sector. This arrangement ensured that research was relevant and market-driven as well as contributed towards the commercialisation of research findings. R&D in the food subsector focused on animal and plant breeding; biotechnology, especially in herbal and specialty natural products; post-harvest handling and delivery management systems as well as food processing and packaging. The Malaysian Agricultural Research and Development Institute (MARDI) introduced new seed varieties with commercial potential such as MRQ 50 padi; CM 19 ciku; and *Dendrobium Tuanku Fauziah* orchid.

6.33 The MPOB continued its wide spectrum of research activities on oil palm, covering seedling, harvesting, mechanisation, milling and refinery technologies, product development and diversification of uses. In addition, research was also undertaken in the fields of biomass management, biotechnology, bio-diesel as an alternative source of fuel, as well as the integration of food crops and animal breeding in oil palm plantations. Among others, MPOB introduced new clones

for commercialisation, including *Elaeis oleifera* in the PS4 series, which had high carotene oil content as well as the planting of *Cassia cobanensis*, a nectar producing plant that attracts parasitoids to control bagworm caterpillars in oil palm plantations.

6.34 The MRB focused research activities on improving rubber clones and rubber products. Several clones were developed to increase latex supply as well as timber for the rubber-based and wood-based industries including latex timber clones such as RRIM 2026 and RRIM 2027. R&D on rubber products includes development of rubberised asphalt for use on roads, rubber bearings such as seismic bearings and shock cell bearings, marine fenders and rubber automotive engineering parts as well as the production of high quality rubber gloves. In addition, MRB extended its research on planting systems, farm management and rubber tapping technology to improve the viability of rubber cultivation. In the forestry subsector, the Forest Research Institute of Malaysia (FRIM) continued to focus its research on sustainable forest management including greater utilisation of wood-wastes and by-products.

6.35 In consonance with the policy to optimise land utilisation and realise economies of scale, *consolidation and rehabilitation* of existing smallholdings continued to be a major programme. Under this programme, uneconomic sized holdings in the oil palm, rubber and cocoa subsectors as well as forestry, were consolidated to be managed professionally by experienced private companies or enterprising farmers on a group basis. During the review period, a total of 27,661 hectares was consolidated and rehabilitated mainly with oil palm by land development agencies as shown in *Table 6-7. Replanting* programmes, comprising a total of 177,821 hectares, involved major industrial commodities as well as food crops. As for the replanting of rubber, of the 102,000 hectares of rubber area earmarked for replanting, only 45 per cent or 46,000 hectares were replanted with rubber while the remaining hectareage was converted to other crops, mainly oil palm.

6.36 During the review period, *rural development* programmes emphasised the provision of basic infrastructure and social services, while at the same time strengthening human resource development and increased participation of the rural population in economic activities. Measures were undertaken to incorporate new features that improved standards of living and promoted potential rural areas for commercial activities. This was in consonance with the Government's efforts to spread economic benefits to all segments of the population, especially the rural community.

TABLE 6-7

**REPLANTING, LAND CONSOLIDATION AND REHABILITATION
PROGRAMMES BY AGENCY, 2001-2005**
(hectares)

<i>Programme/Agency</i>	<i>8MP Target</i>		<i>2001-2003</i>	<i>% of Target</i>	<i>2004-2005</i>
	<i>Original</i>	<i>Revised</i>			
Replanting	226,800	306,532	177,821	58.0	128,711
Rubber Industry Smallholder Development Authority	60,000	120,000	72,128	60.1	47,872
Federal Land Development Authority	97,100	134,383	83,970	62.5	50,413
Department of Forestry, Sarawak	7,500	7,500	3,912	52.2	3,588
Sabah Land Development Board	22,600	19,190	5,991	31.2	13,199
Sabah Rubber Fund Board	6,000	6,000	2,464	41.0	3,536
Department of Agriculture, Sabah	2,500	320	200	62.5	120
Department of Agriculture, Peninsular Malaysia	16,800	5,000	2,719	54.4	2,281
Department of Forestry, Peninsular Malaysia	11,300	11,139	6,437	57.8	4,702
Sarawak Land Consolidation & Rehabilitation Authority	3,000	3,000	0	0.0	3,000
Land Consolidation & Rehabilitation	103,300	74,585	27,661	37.1	46,924
Federal Land Consolidation & Rehabilitation Authority	15,000	11,000	3,336	30.3	7,664
Sarawak Land Consolidation & Rehabilitation Authority	14,300	14,300	4,100	28.6	10,200
Department of Forestry, Sabah	70,000	33,135	13,135	39.6	20,000
Department of Agriculture, Peninsular Malaysia	2,000	500	440	88.0	60
Malaysia Cocoa Board	2,000	15,650	6,650	42.5	9,000
Total	330,100	381,117	205,482	53.9	175,635

6.37 In order to ensure adequate accessibility to rural areas, the focus was on the upgrading of rural roads as well as the provision of electricity and water, particularly in Sabah and Sarawak. The village street lighting programme was first introduced during the Eighth Plan period with a view to creating a more comfortable living environment similar to that enjoyed by urban dwellers. Further, to facilitate participation of the rural population in potential economic activities, within and around their villages, the scope of credit facilities under the rural economic development scheme was further extended to cover non-agriculture

activities particularly agriculture-related trade and services as well as the tourism sector. The DOA also introduced special programmes to increase the participation of the female members of rural communities in economic activities, largely in micro and small-scale agro-processing businesses.

6.38 In terms of human resources development, a number of education and training programmes were initiated to upgrade knowledge and skills of existing farmers as well as potential farmers. In this regard, the Institute For Rural Advancement in Bandar Baru Bangi, Selangor undertook, among others, village management training programmes and ICT-related skills development. In addition, entrepreneurship development courses were conducted through collaboration with relevant Government agencies and institutions.

III. PROSPECTS, 2004-2005

6.39 The agriculture sector is targeted to record a higher growth at 2.7 per cent per annum during the remaining Plan period. The achievement of this target will be dependent on external demand for major commodities, the increase in food production and improved upstream food processing activities as well as new product development. These efforts will need to be supported by greater market orientation of the activities alongside efficiency and productivity improvements.

Strategic Thrusts

6.40 As the nation moves up to higher levels of development, rising factor prices, especially labour, become more apparent. The availability of agricultural labour from domestic sources will become increasingly scarce given the attractive wages in other sectors coupled with changing preferences of the labour force away from agriculture. Concerted efforts will be made towards improving the prospects for the agriculture sector in the context of the changing structure of the economy and competitive environment. It will be imperative to raise the capacity to earn higher incomes in the agriculture sector vis-à-vis the incomes in the other economic sectors. Towards this end, the main strategies will be:

- ❑ *creating new commercial and business opportunities and prospects from agriculture-based activities;*

- ❑ *enhancing competitiveness of agricultural produce by further increasing efficiency and productivity through utilisation of better technologies and modern agricultural systems;*
- ❑ *promoting active participation of the private sector in large-scale production of food and industrial crops;*
- ❑ *developing increased linkages between agriculture and agro-based industries;*
- ❑ *improving product development capabilities of agricultural entrepreneurs to face a more competitive and liberalised economic and trading environment;*
- ❑ *identifying and developing new sources of growth to expand the agriculture base and the export capacity of the sector; and*
- ❑ *strengthening logistics support and marketing to enhance competitiveness in existing and new markets.*

6.41 A major concern will be to ensure that agriculture remains competitive, and therefore, only economically viable existing and new crops and agricultural produce will be explored for their potential. For products that are currently not competitive, R&D will be emphasised towards enhancing their viability. Priority will also be given to further reorientating the smallholder sector towards greater commercial operations to reap the benefits of economies of scale as well as increased opportunities for better incomes.

Employment

6.42 With the gradual restructuring of the economy, the share of employment in the agriculture sector to total employment is expected to further decline to 12.9 per cent in 2005. As agriculture will continue to be affected by the availability of labour, productivity increases will be emphasised through training programmes, greater use of machinery and automation and improved labour-saving technologies. Nevertheless, foreign workers will still be required in labour-intensive activities, particularly on plantations. In line with structural adjustments of the sector to become more efficient and productive, labour productivity, as reflected by the value added per worker is expected to improve to RM14,185 in 2005.

Agricultural Production

6.43 In view of the strategies outlined for the remaining Plan period, the value added of most agricultural commodities is expected to increase, enabling the sector to expand at a higher growth rate of 2.7 per cent per annum, as shown in *Table 6-1*. Industrial commodities will continue to be a significant source of the sector's growth with palm oil as the largest contributor. However, the share of industrial commodities in agriculture value added is expected to decline to 59.1 per cent in 2005, as a result of lower production of sawlogs and timber in compliance with the sustainable forest management practices. The value added in food commodities is expected to expand at a rate of 4.1 per cent per annum and contribute 40.9 per cent of the agricultural value added in 2005.

Agricultural Industrial Commodities

6.44 *Palm oil* production is projected to expand by 4.3 per cent per annum reaching 13.3 million tonnes in 2005. This expansion is anticipated to result mainly from increase in matured areas and improvements in yield as well as higher OER, especially on estates in Sabah and Sarawak. The listing of FELDA, a prime contributor to increased palm oil production, on the Kuala Lumpur Stock Exchange is expected to give a further boost to the oil palm subsector as well as give settlers the opportunity to hold equity in the listed company. The higher utilisation of oil palm biomass, particularly EFB for pulp and paper production as well as the expansion of palm oil-based downstream activities will further stimulate the growth of the sector. With favourable prices, palm oil export earnings are anticipated to increase by 7.0 per cent per annum to reach RM20 billion in 2005. Combined with other palm oil-based products, export earnings are expected to reach RM23 billion. The Government will intensify efforts to promote the wider acceptance and utilisation of palm oil-based oils and fats through more targeted marketing strategies, improvements in product quality as well as product differentiation to meet specific needs and tastes of end-users in new and existing markets.

6.45 The hectareage under *rubber* is expected to decline by a further 65,000 hectares on account of more conversions to oil palm and other uses. However, due to anticipated yield improvements from 900 kilogrammes per hectare in 2003 to 1,500 kilogrammes per hectare by 2005, the production of rubber is projected to increase by about 3.8 per cent per annum from 622,000 tonnes to 670,000 tonnes during the same period. Efforts will continue to focus on ensuring

long-term sustainable supply of rubber wood and natural rubber especially for the downstream furniture and rubber-based industries. Appropriate measures will be undertaken to increase supply of rubber wood to meet the rising demand for furniture made from renewable resources, particularly from Europe, with a view to increasing future export earnings. This will include, a rubber forest plantation programme that will ensure that about 25,000 hectares are planted annually, for a duration of 15 years, using improved latex timber clones, among others, the RRIM 2000 series. For this purpose, the Government will formalise the establishment of a Rubber Forest Plantation Fund with an initial allocation of RM200 million in the form of soft loans. In addition, alternative ways will be considered to address problems of rubber smallholders related to uneconomic-sized and unproductive hectarages as well as abandonment of holdings coupled with an ageing labour force.

6.46 *Cocoa* production is expected to increase slightly to 51,000 tonnes in 2005 with gradual rehabilitation of existing holdings and new planting with high yielding clones. *Pepper* production is projected to record a growth rate of 5.0 per cent per annum during the remaining Plan period, on account of increased hectarage and yields. The production of *tobacco* is anticipated to increase to 14,000 tonnes in 2005 through yield improvements and mechanisation.

6.47 In line with the ACR, the production of *sawlogs* is expected to decline to 18.2 million cubic metres during the remaining Plan period. In response to the requirement for certified or *green timber* by major export markets, particularly the European Union, the timber certification scheme operated by the MTCC will be expanded to all states. To widen the acceptance of the MTCC-certified timber products in the overseas market, MTCC will adopt a standard that is compatible with the principles and criteria of the Forest Stewardship Council. In addition, forest and rubber forest plantations will be expanded to provide alternative sources of quality timber in the effort to reduce the pressure on natural forests.

Food Commodities

6.48 The *food* sector is expected to further contribute to the economy in terms of food supply, incomes and export earnings. The emphasis will be on the modernisation of the sector, shifting away from fragmented system of production to larger-scale production units and backed by extension, advisory and consultancy services. The programmes will include increased consolidation of uneconomic-

sized holdings under group farming, the opening of more PFPPs, the horizontal integration of food production activities within plantations as well as the greater use of rehabilitated ex-mining and idle land for food production. Efforts will focus on improving efficiency and competitiveness of food production through the adoption of new technologies embedded in the Good Agriculture Practices (GAP) guidelines. This will enable more farms to qualify for farm accreditation scheme. The additional allocation of RM1 billion for the Fund For Food (3F) under The Package of New Strategies in 2003, and the availability of other micro-credit facilities through BPM and other development financial institutions will improve access to financing for food production.

6.49 In the *livestock* subsector, the output of beef and mutton is expected to increase by 10.6 per cent and 7.4 per cent per annum, respectively. Efforts will be intensified to produce higher quality breeds through improvements in genetic selection and better animal husbandry methods through the Good Animal Husbandry Practices (GAHP).

6.50 *Beef* production is expected to increase from 32,700 tonnes in 2003 to 40,000 tonnes in 2005. Production will be focused in 23 targeted areas involving 842,000 hectares and 240,000 breeders as well as through integrated cattle farming in oil palm plantations. In addition, a new scheme known as *Transformasi Usahawan Sektor Ternakan* will be promoted whereby small livestock farmers will be assisted to upgrade their operations to more viable levels. Similarly, the production of *mutton* will be increased through mixed farming on rubber and oil palm plantations as well as the adoption of an intensive stall-feeding system. Production of *milk* is targeted to increase from 40.9 million litres in 2003 to 45.3 million litres in 2005, meeting a 3.0 per cent self-sufficiency level.

6.51 Production of *pork* is expected to grow after being adversely affected by the outbreak of JE and *Nipah Virus* prior to 1999. Its production is likely to expand by 4.2 per cent per annum from 202,200 tonnes in 2003 to 219,600 tonnes in 2005 to maintain full self-sufficiency level. The increase in output is attributed to improvements in productivity and increased capacity due to the relocation of farming activities in specified pig farming areas.

6.52 *Poultry* production is expected to level off to 2.3 per cent per annum during the remaining Plan period, after an impressive growth of 6.4 per cent. Efforts in the sector will be focused to further upgrade the quality and hygienic aspects to fulfill both domestic as well as export market requirements. In line with this effort, a new hygienic closed system, that is environmental-friendly,

will be implemented to upgrade production capacity and improve product quality. New permanent poultry production areas with the requisite infrastructure will be established to facilitate the relocation of existing small farms, adoption of labour-saving technology and implementation of relevant accreditation schemes. In this regard, a total of 1,800 hectares will be developed in Johor, Kelantan, Pahang and Terengganu producing an additional 18,000 tonnes of poultry meat.

6.53 *Fisheries* production is expected to grow by 9.9 per cent with the aquaculture subsector growing by 17.4 per cent and marine catch by 8.8 per cent per annum. Among others, the increase is expected to be contributed by the large-scale expansion of *aquaculture* activities in gazetted Aquaculture Industrial Zones (AIZs). Towards this end, an additional 4,500 hectares is expected to be developed as AIZs in Kedah, Melaka, Pahang, Perak, Sabah, Sarawak and Terengganu. The strong demand from overseas markets for high value fresh fish will further stimulate the growth of local aquaculture activities, including the downstream processing of Tilapia into fish- and surimi-based products.

6.54 *Marine fish* landing is anticipated to increase from 1.4 million tonnes in 2003 to 1.7 million tonnes in 2005. A total of 800 artificial concrete reefs will be constructed to improve fish stock and increase the catch, benefiting about 40,000 coastal fishermen. In addition, new integrated fishing complexes complete with landing, maintenance, repairs and other related services as well as marine product processing facilities will be made available at Tanjung Manis, Sarawak and Batu Maung, Pulau Pinang. These facilities are expected to attract more trawlers, including foreign vessels, to land their catch in Malaysia.

6.55 To further improve performance of the fisheries subsector, better facilities and equipment will be made available through the *Persatuan Nelayan Kebangsaan*. Towards this end, more than 1,000 fishing boats of metal or composite materials with modern equipment to replace wooden boats will be built. This will help to modernise and upgrade fishing fleets, and is expected to significantly increase the fish catch and boost the incomes of about 8,000 fishermen.

6.56 The production of *fruits* and *vegetables* during the remaining Plan period is expected to expand by 4.2 per cent and 7.3 per cent per annum, respectively. This expansion will be largely due to the increased land availability comprising 3,200 hectares of PFPPs, 380 hectares of satellite farms, 121 agriculture flagship projects as well as 3,000 hectares of consolidated and rehabilitated idle land. The production of fresh *pineapples* is expected to increase due to the continued

higher farm-gate prices. The area planted with pineapples is anticipated to increase in Pahang and Johor in order to be able to supply the expanding canning industry, which currently needs about 70,000 tonnes of fresh pineapple annually.

6.57 *Padi* production is projected to increase marginally to 2.2 million tonnes in 2005. Of significance will be the development of 10,000 hectares in Sabah and 25,000 hectares in Sarawak as new granary areas in the country. The new Ten Tonnes per Hectare strategy to increase padi yields, using improved technologies such as Low Input Sustainable Agriculture, will be implemented more extensively.

New Sources of Growth

6.58 While industrial crops will continue to be the mainstay of agriculture, the policy for food product development under the NAP3 will provide greater opportunities and better prospects for new agricultural activities and related services. Tapping into the potentials of the identified sources of growth is expected to further widen the agriculture base, strengthen the growth of the agriculture sector and provide for more lucrative activities and improved incomes. The goal is not only to concentrate on the production aspects but on the whole integrated value chain of activities promoting related services such as market intelligence, distribution, marketing, packaging and exports. In this respect, efforts will be channelled towards improving the requisite support and infrastructural facilities.

6.59 An important area with high growth potential will be *fish farming or aquaculture*. Increased efforts will be undertaken to develop new infrastructure, skills and technologies to promote modern aquaculture, involving the breeding of a variety of marketable and highly demanded fish such as Humpback Seabass, Tilapia, Tiger Grouper and River Carp as well as crustaceans such as tiger prawns, lobsters and shrimps. A key requirement will be *fish and prawn fry* production on a much larger scale and using modern technology to support and sustain the expansion of modern aquaculture activities. Towards this end, the Government will accelerate the implementation of the National Seedling Programme and the Action Plan for Hatchery Development to support commercial scale fish fry and related fish farming activities. In addition, the Government will consider other measures to promote aquaculture, especially in the provision of infrastructure related to logistics and specialised transportation required for fish produce. This will complement existing incentives under the PIA, 1986 to boost the growth of aquaculture activities.

6.60 Among the other new activities, will be the establishment of four Tuna Regional Development Centres in strategic locations within the states of Federal Territory of Labuan, Johor, Pulau Pinang and Sabah to provide support services in encouraging investments in the *tuna* industry. In addition, the large-scale commercial cultivation of *seaweed* and processing of SRC will be further promoted through joint ventures with the private sector. *Ornamental fish* production is also expected to feature significantly as a possible new source of growth contributing towards agriculture value added and export earnings.

6.61 The production of *sago* on commercial basis will be undertaken with new planting of about 19,300 hectares and the rehabilitation of 2,400 hectares of peat areas to further exploit the potentials of the sago-based industry. Efforts will also be intensified to further explore and develop the potentials of biomass and biotechnology products for domestic and export markets. To further develop specialty natural products such as herbs, spices and medicinal plants, several programmes will be developed to explore the potential of integrated development and commercial prospects for this industry. The National Botanical Garden project, apart from being a recreational and touristic site, will also be a showcase for new investment opportunities available in the agriculture sector.

Support Services

6.62 During the remaining Plan period, efforts will be intensified to improve support services to ensure the achievement of policies and development priorities of the agricultural sector. Thus, more effective support and extension services to assist and facilitate farmers towards greater adoption of new technologies and modern mixed farming systems will be provided. Ongoing measures will be intensified to encourage farmers to produce quality products that are competitive and meet local requirements as well as export standards. Greater interaction among extension workers, researchers and farmers as well as potential investors and entrepreneurs will be necessary in order to enhance the performance of the agriculture sector and better serve the needs of the agricultural community, particularly in terms of improved income levels and quality of life.

6.63 Continued efforts to expand and upgrade *drainage and irrigation* facilities as well as farm roads and crossings will enable greater mechanisation and more efficient delivery of extension services to improve, in particular, padi production and yields. In this regard, the construction of Beris Dam in Sik, Kedah, together with works on Naok, Reman and Jeniang, will provide adequate water supply

for domestic consumption as well as irrigation of agricultural land. This project will cover about 97,000 hectares and 13,000 hectares of padi fields in the Sungai Muda and Seberang Perai schemes, respectively.

6.64 Increased efforts will be undertaken to facilitate greater participation by the private sector in large-scale commercial food production. This will, among others, involve implementing of the MoA Inc. approach of forming strategic alliances to increase investments in upstream production as well as post-harvest activities. Apart from land availability to expand production of crops including padi, fruits, floriculture, vegetables and roselle, other related support services will be strengthened. The coverage of the Malaysia Farm Accreditation Scheme, which regulates *standards*, *product quality* and *food safety*, will be expanded to include more activities and areas. The proposed Breeding and Seedling Act will promote the production and supply of quality seeds as well as planting and breeding materials required for the expansion of aquaculture activities. Safety aspects including Hazard Analysis Critical Control Point, GAP and GAHP will be emphasised to ensure sustainable production systems with quality products. In addition, a certification system for organic farming will be introduced to promote production of organic-based food and food products to meet potential demand.

6.65 In order to further strengthen the *marketing* and distributive channels for agriculture produce, FAMA will improve its supply chain management with the establishment of 43 Farm Collection Centres and four National Food Terminals. These designated market outlets will undertake the whole range of post-harvest activities including collection, grading, certification, packaging and downstream distribution. The goal is to ensure stable and fair prices and greater value added for smallholder produce as well as adequate supply of food to consumers at reasonable prices. In addition, the ongoing contract farming and strategic arrangements with major supermarkets will be extended, while back-up services in terms of dissemination of market information through the use of ICT services will be further enhanced. The Pepper Marketing Board (JPLH) will continue to assist smallholders, among others, to produce specialty pepper that fetch premium prices in overseas markets while at the same time meeting the requirements of local consumers.

6.66 Agricultural *training* programmes will be improved to ensure farmers and extension workers are equipped with updated knowledge and technological know-how in various agriculture-related fields. The National Agricultural Training Centre will be entrusted to plan, coordinate and evaluate skill-training programmes

in line with the National Occupational Skill Standards with a view to creating more knowledgeable agriculture entrepreneurs and skilled workers. Apart from this, measures will be taken to address the shortage of agricultural professionals such as soil scientists, microbiologists, biotechnologists and nutritionists required for sustained technological advances in commercial agriculture.

6.67 In order to boost developments in the agriculture sector, more effective enabling technologies will be promoted. Among the new initiatives, will be the extensive promotion of the use and applications of *ICT related technologies and adoption of e-commerce*. This is with the view to expanding and creating new businesses using more pervasive ICT-based technologies that will facilitate effective interaction not only among stakeholders within the agriculture sector, such as producers, farmers, retailers and exporters but also interlinkages with other sectors of the economy.

6.68 In this regard, the Technology-Industry-Government for e-Economic Revolution (TIGeR) project will be further extended into the agriculture sector to benefit agricultural businesses. Towards this end, the AgriTIGeR project, aimed at enhancing productivity and increasing competitiveness in the agriculture sector, which has commenced as a pilot project, will be extended to more areas including Sabah and Sarawak. Under AgriTIGeR, a cost-effective business-to-business supply chain management application and a portal called Agribazaar, will be further developed. The Agribazaar will function as an exchange gateway for agricultural communities and traders to conduct online transactions, mainly the food sector. The Agribazaar will be further expanded to include add-ons such as e-market intelligence, e-plan, e-payment and e-support.

6.69 In line with the emphasis to encourage greater investments in the agriculture sector, the disbursement of agricultural *credit* by development financial institutions and commercial banks is expected to be more widespread especially with the additional resources made available to the banking sector under The Package of New Strategies. A larger cross section of enterprising farmers, smallholders, fishermen and businesses is expected to benefit from this increased accessibility to credit. A special assistance programme will be considered for first timers, including small start-up companies and individuals, who wish to venture into agribusiness.

6.70 Further measures will be undertaken to facilitate potential investors in obtaining relevant information particularly on investment prospects in agriculture as well as land availability. Towards this end, apart from strengthening existing

information outlets, the newly established Agri-food Business Development Centre will be the one-stop resource and information centre to help support and develop the agri-food business community. The Centre will be equipped to provide extensive information, technical assistance as well as business consultancy. As for land availability, a database system and an agricultural land use plan will be established to match supply and demand for arable land.

6.71 R&D activities will focus on improvement of planting materials, agronomic practices and post-harvest handling of high value crops that will contribute to higher levels of productivity, expand product development and expedite development of new sources of growth. The collaborative *research* with private sector will be intensified to ensure greater commercialisation of R&D findings. MPOB will continue its research on increasing productivity of oil palm, oil extraction and development of palm oil-based products, farm mechanisation as well as rearing of animals in plantations. The MPOB will also intensify research on recovery of new high-value products from oil palm mesocarp, biomass and palm oil mill effluent for nutraceutical, pharmaceutical and cosmetic applications. MRB will continue its research on rubber forest plantations, product development, plant breeding for specialised latex, as well as improved labour-saving technology for tapping and for use on the integrated farming system of rubber planting with other income generating activities.

6.72 FRIM will intensify its research on development of herbs and medicinal plants, agro-forestry and optimum utilisation of forestry and forest products. A manual on farm management and production technology of selected medicinal plants will be prepared to assist potential investors. MARDI will further strengthen its R&D competence in the production of herbs, and simultaneously undertake collaborative research with the private sector on herbal and medicinal plants to produce high-value food and medicinal supplements as well as health care and cosmetic products. In the fisheries subsectors, the Department of Fisheries will intensify R&D efforts in fish and fish fry production while LKIM will concentrate on downstream fish-based products. In addition, R&D will continue to focus on breeding of fish fry, fish and shrimp diseases as well as seaweed and related product development to promote aquaculture. The Department of Veterinary Services will intensify research on vaccines for disease control in livestock while JPLH will focus its R&D on wide ranging applications of pepper and pepper products especially in culinary preparations.

6.73 To reduce the incidence of animal diseases and emergence of new diseases, the existing preventive measures including the surveillance and response mechanism will be further strengthened. Veterinary centres, laboratories and R&D facilities

will be further modernised and equipped, together with sufficient manpower to provide more effective delivery of veterinary support services. Apart from this, biosafety and the Sanitary and Phytosanitary (SPS) Plan will be promoted to enhance food safety, food quality and competitiveness of the livestock subsector for domestic consumption as well as export markets. The SPS Plan will be implemented through the application of modern approaches, techniques and technologies in controlling animal and zoonotic diseases. The concept of quality assurance from *farm to table* will be widely practised through accreditation schemes as well as regulatory and stringent veterinary inspections at livestock farms, feed mills, abattoirs, processing plants, quarantine stations and at entry points into the country.

6.74 During the remaining Plan period, *in-situ* land development will continue to be emphasised as new arable land becomes scarce. *Replanting, land consolidation and rehabilitation* through integration and mix-farming systems will be implemented to optimise land use and increase agriculture production. At least 30 per cent of the 40,000 hectares targeted for rubber and oil palm replanting per annum will be integrated with food production, planting of herbs and livestock rearing. The use of remote sensing and Geographic Information System technology will be intensified to improve assessment of agro-ecological zoning and agro-suitability for precision farming and improve crop production.

6.75 Apart from the physical expansion of projects, emphasis will be placed on improving the quality of life of the *rural community*. Accessibility to rural areas through improvements in the infrastructure network will be enhanced to promote economic and social activities of the rural population. Better health as well as education and training facilities will be continued largely through increased availability of public facilities and social services. In terms of employment and income-generating opportunities, the RM300 million to be provided under The Package of New Strategies will help to fund a variety of agriculture projects, including food production. Other financing facilities will include the special loans provided under the Food Production Credit Scheme administered by BPM, which, among others, aims to assist rubber smallholders to implement the G++ rubber replanting projects. Grants will also continue to be provided under the *Skim Pembangunan Kesejahteraan Rakyat* to help rural communities to participate in economic activities.

6.76 Efforts to empower community leaders and the rural population will be further intensified under the new *Gerakan Daya Wawasan* approach to rural development. Under this approach, efforts will be placed on involving community

TABLE 6-8

DEVELOPMENT ALLOCATION FOR AGRICULTURE, 2001-2005
(RM million)

<i>Programme</i>	<i>8MP Allocation</i>		<i>Estimated Expenditure, 2001-2003</i>	<i>Balance, 2004-2005</i>
	<i>Original</i>	<i>Revised</i>		
Land Development ¹	2,539.3	2,502.7	1,466.0	1,036.7
Support Services	719.0	1,347.4	821.3	526.1
Irrigation & Drainage ²	533.9	793.5	422.2	371.3
Regional Development	570.1	576.9	405.0	171.9
Forestry	200.2	200.4	97.8	102.6
Fishery	414.3	686.8	334.6	352.2
Livestock	127.5	221.2	141.0	80.2
Other Programmes ³	1,119.4	1,293.3	749.2	544.1
Total	6,223.7	7,622.2	4,437.1	3,185.1

Notes:

¹ Includes IADPs, replanting schemes and land consolidation and rehabilitation programmes as well as new land development of the JHEOA.

² Excludes allocation for flood mitigation projects.

³ Includes allocation for economic, housing and health care programmes of the JHEOA, poverty eradication programmes of the KPLB (training, nutrition, PPRT housing and small economic activities), training and studies under the MOA as well as land preparation and initial project works under MOA and KPLB.

leaders directly in the decision making and implementation processes of projects affecting their villages. In addition, training programmes will be intensified to equip rural communities with increased capabilities to participate and venture into new commercial-oriented activities not only in productive agriculture-related activities but also in other growing areas of industry, trade and services sectors.

IV. ALLOCATION

6.77 The revised development budget to support agriculture development in the Eighth Malaysia Plan is RM7.6 billion, as shown in *Table 6-8*. A total of RM4.4 billion was spent comprising 57.9 per cent of the total allocation. The emphasis on *in-situ* development as a more cost-effective strategy was backed by increased expenditure on IADPs, replanting and rehabilitation and related support services. Priority was also given to increasing food production to ensure higher SSLs as well as exports. During the remaining Plan period, about

RM3.2 billion will be allocated to further advance the implementation of ongoing development programmes, strengthen support services as well as to create a more conducive environment for greater participation by the private sector in commercial agriculture and the search for new sources of growth.

V. CONCLUSION

6.78 In view of the importance of the agriculture sector in terms of its contribution to the GDP, export earnings and in providing raw materials to the industrial sector, it is vital that the targeted growth rate for the agriculture sector be realised. In the remaining years of the Eighth Plan, the attention will be on strengthening existing or *in-situ* development with increased emphasis on market-led strategies and backed by adequate support services. A significant feature in the efforts to provide improved services will be implementing the new initiatives to promote the use and application of modern as well as ICT-based technologies to boost efficiency, productivity and competitive levels in the agriculture sector. As part of the efforts to generate new sources of growth, there will be stronger focus on promotional strategies to encourage commercial scale investments in high value added activities as envisaged in the NAP3. Given the ongoing structural changes in the economy, agriculture is on the threshold to move towards higher levels of development. It will be necessary to take more concerted efforts to move agricultural activities up the value chain to high-technology and knowledge-intensive activities.

Chapter 7

Industrial Development

7

INDUSTRIAL DEVELOPMENT

I. INTRODUCTION

7.01 The manufacturing sector continued to be the key sector in the Malaysian economy during the review period. The performance of this sector was influenced by external factors including the global economic slowdown and the downturn of the electrical and electronic subsector in 2001. To minimise the impact and maintain competitiveness, various measures were implemented. The stimulus packages introduced during the review period assisted the affected industries by among others, further liberalising foreign investment guidelines, increasing funding sources and their accessibility as well as improving tax incentives.

7.02 During the remaining Plan period, in view of the competitive global environment, focus will continue to be given to strengthening the manufacturing sector and accelerating the shift to high technology and knowledge-based industries. While continuing to attract foreign investment, emphasis will also be given to mobilising higher levels of domestic investment, including introducing measures to strengthen the small and medium enterprises (SMEs) to serve as a catalyst for growth. Efforts will also be made to identify new sources of growth in areas such as manufacturing-related services and the biotechnology industry. Local manufacturers will be encouraged to participate in the global supply chain by establishing strategic alliances with foreign manufacturers.

II. PROGRESS, 2001-2003

7.03 During the review period, due to the global economic downturn, the manufacturing sector grew at 1.5 per cent per annum, much lower than the Eighth Plan target of 8.9 per cent, as shown in *Table 7-1*. Despite a decline in

TABLE 7-1

MAJOR INDICATORS OF THE MANUFACTURING SECTOR, 2000-2005

<i>Indicator</i>	<i>2000</i>	<i>2003</i>	<i>2005</i>	<i>8MP Target</i>		<i>2001-2003</i>	<i>2004-2005</i>
				<i>Original</i>	<i>Revised</i>		
Manufacturing Value Added (RM million in 1987 prices)	67,250	70,225	81,651	459,488 ¹	356,379 ¹	199,479 ¹	156,900 ¹
Annual Growth Rate (%)	18.3	6.5	8.5	8.9	4.0	1.5	7.8
Share to GDP (%)	32.0	30.6	31.7	35.5	30.8	30.3	31.4
Share to Total Export (%)	85.2	83.0	84.0	88.5	84.0	84.2	83.6
Share to Total Employment (%)	27.6	27.9	29.3	29.5	29.3	27.3	28.9

Note: ¹ Cumulative figure.

2001, the sector recovered to achieve a growth of 6.5 per cent in 2003, contributing 30.6 per cent to Gross Domestic Product (GDP), 83.0 per cent to total exports, and 27.9 per cent to total employment.

7.04 The main contributor in terms of value added in the manufacturing sector was the non-resource-based industries, which contributed 54.7 per cent to total manufacturing value added in 2003, as shown in *Table 7-2*. The major contribution came from the electronics subsector, which contributed 26.5 per cent of the total manufacturing value added in 2003 followed by the transport equipment subsector, which contributed 13.7 per cent. In terms of growth, the non-resource-based industries grew at an average rate of 0.5 per cent per annum during the review period. Among the subsectors under the non-resource-based industries, the transport equipment subsector experienced the highest growth at an average rate of 9.0 per cent per annum. The resource-based industries contributed 43.4 per cent to total manufacturing value added in 2003 and grew at 2.6 per cent per annum during the review period. The main contribution of the resource-based industries came from the petroleum products including crude oil refineries and coal subsector as well as the industrial chemical including fertilizer subsector, contributing 6.8 per cent and 6.3 per cent to the total manufacturing value added, respectively.

TABLE 7-2
MANUFACTURING VALUE ADDED, 2000-2005

<i>Industry</i>	<i>Value Added (RM million in 1987 prices)</i>			<i>Share of Total Value Added (%)</i>			<i>Average Annual Growth Rate (%)</i>	
	<i>2000</i>	<i>2003</i>	<i>2005</i>	<i>2000</i>	<i>2003</i>	<i>2005</i>	<i>2001- 2003</i>	<i>2004- 2005</i>
Resource-Based	28,210	30,500	35,914	41.9	43.4	44.0	2.6	8.5
Vegetables and Animal Oils & Fats	2,526	2,971	3,436	3.7	4.2	4.2	5.6	7.5
Other Food Processing, Beverages & Tobacco	4,010	4,132	4,438	6.0	5.9	5.4	1.0	3.6
Wood Products including Furniture	2,934	2,588	3,028	4.4	3.7	3.7	-4.1	8.2
Paper & Paper Products, Printing & Publishing	2,293	2,328	2,711	3.4	3.3	3.3	0.5	7.9
Industrial Chemical including Fertilizer	3,795	4,437	5,530	5.6	6.3	6.8	5.3	11.6
Other Chemical & Plastic Products	2,968	3,651	4,721	4.4	5.2	5.8	7.1	13.7
Petroleum Products including Crude Oil Refineries & Coal	4,521	4,742	5,598	6.7	6.8	6.9	1.6	8.7
Rubber Processing & Products	1,821	2,052	2,287	2.7	2.9	2.8	4.1	5.6
Non-Metallic Mineral Products	3,342	3,599	4,165	5.0	5.1	5.1	2.5	7.6
Non-Resource-Based	37,878	38,424	44,273	56.4	54.7	54.2	0.5	7.3
Textile, Wearing Apparel & Leather	2,324	2,089	2,297	3.5	3.0	2.8	-3.5	4.8
Basic Metal Industry	594	640	690	0.9	0.9	0.8	2.5	3.8
Metal Products	2,879	2,567	2,922	4.3	3.6	3.6	-3.8	6.7
Manufacture of Machinery Except Electrical	3,063	3,671	4,478	4.6	5.2	5.5	6.2	10.5
Electronics	19,863	18,606	21,613	29.5	26.5	26.5	-2.2	7.8
Electrical Machinery	1,738	1,238	1,426	2.6	1.8	1.7	-10.7	7.3
Transport Equipment	7,417	9,613	10,847	11.0	13.7	13.3	9.0	6.2
Others	1,162	1,301	1,464	1.7	1.9	1.8	3.8	6.1
Total	67,250	70,225	81,651	100.0	100.0	100.0	1.5	7.8

Exports of Manufactured Goods

7.05 Although the share of manufactured exports to total gross exports remained high at 84.2 per cent during the review period, the exports of manufactured

goods declined by 1.2 per cent, as shown in *Table 7-3*. This was due mainly to the decrease in the exports of electrical and electronic products, which accounted for 66.2 per cent of the total export of manufactured goods in 2003.

7.06 Malaysia ranked as the 18th largest exporting country in the world in 2001. The major markets for manufactured exports were ASEAN countries, mainly Singapore, followed by the United States, the European Union, Japan and China, as shown in *Chart 7-1*. While maintaining export in traditional markets, Malaysia expanded into new markets in West Asia and Latin American countries.

TABLE 7-3
EXPORTS OF MANUFACTURED GOODS¹, 2000-2003
(RM million)

<i>Industry</i>	<i>2000</i>	<i>%</i>	<i>2001</i>	<i>%</i>	<i>2002</i>	<i>%</i>	<i>2003</i>	<i>%</i>	<i>Average Annual Growth Rate (%), 2001-2003</i>
Resource-Based	42,925	13.5	42,202	14.8	45,301	15.2	53,443	17.5	7.6
Food	4,509	1.4	4,643	1.6	5,412	1.8	6,429	2.1	12.6
Beverages & Tobacco	1,207	0.4	1,302	0.5	1,267	0.4	1,531	0.5	8.2
Petroleum Products	8,131	2.6	8,408	2.9	7,650	2.6	9,490	3.1	5.3
Chemical & Chemical Products	15,011	4.7	14,879	5.2	17,285	5.8	21,430	7.0	12.6
Rubber Products	4,695	1.5	4,466	1.6	4,512	1.5	5,204	1.7	3.5
Wood Products	6,801	2.1	6,017	2.1	6,314	2.1	6,429	2.1	-1.9
Non-Metallic Mineral Products	2,571	0.8	2,487	0.9	2,861	1.0	2,930	1.0	4.5
Non-Resource-Based	252,382	79.4	220,480	77.3	229,482	76.8	226,370	73.9	-3.6
Textile, Clothing & Footwear	10,433	3.3	9,054	3.2	8,587	2.9	8,572	2.8	-6.3
Manufactures of Metal	8,618	2.7	8,692	3.0	8,827	3.0	11,633	3.8	10.5
Electrical & Electronic Products	230,429	72.5	200,307	70.2	209,137	70.0	202,797	66.2	-4.2
Transport Equipment	2,902	0.9	2,427	0.9	2,931	1.0	3,368	1.1	5.1
Other Manufactures	22,601	7.1	22,634	7.9	24,142	8.0	26,328	8.6	5.2
Total	317,908	100.0	285,316	100.0	298,925	100.0	306,141	100.0	-1.2
Total (US\$) ²	83,660		75,083		78,664		80,563		
% of Total Gross Exports	85.2		85.4		84.3		83.0		84.2

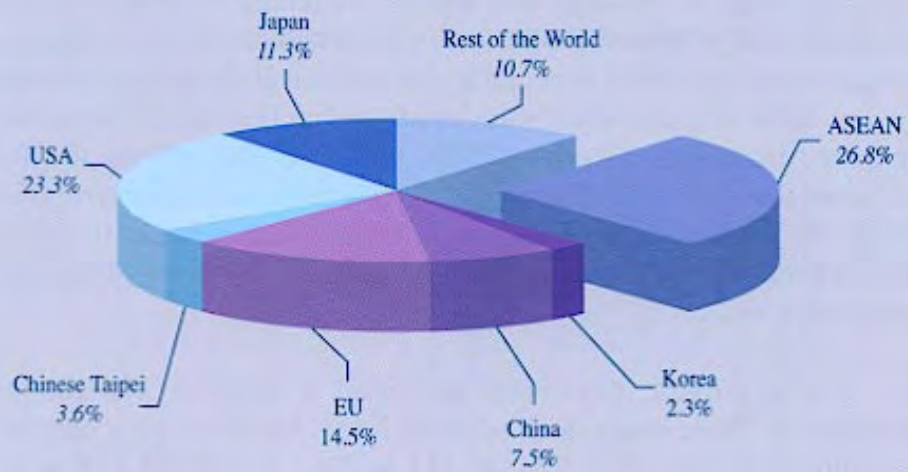
Notes:

¹ Excludes exports of processed palm oil and other edible oil products.

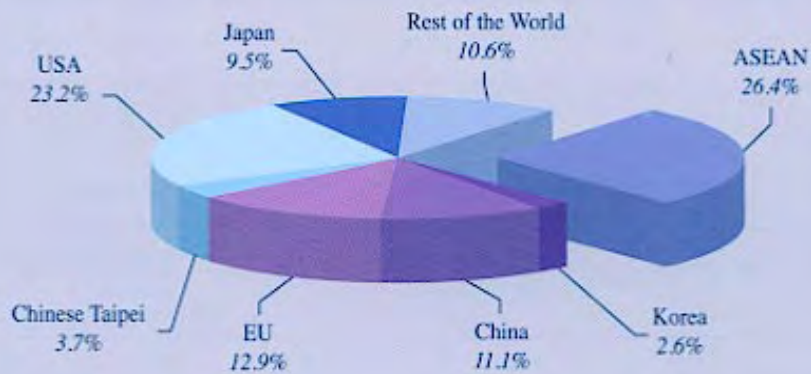
² Based on the exchange rate of US\$1.00=RM3.80.

CHART 7-1

**MAJOR EXPORT DESTINATIONS FOR MANUFACTURED
PRODUCTS, 2000 AND 2003**



2000
RM317.9 billion



2003
RM306.1 billion

Investment in the Manufacturing Sector

7.07 During the review period, the manufacturing sector continued to account for the largest portion of private investment at RM54.8 billion, representing 57.4 per cent of the total private investment. A total of 2,380 manufacturing projects was approved, as shown in *Table 7-4*. Of this total, RM34.5 billion or 63.0 per cent were for new projects and the remainder for the expansion and diversification of existing projects. Foreign investment accounted for RM35.8 billion or 65.3 per cent of total proposed capital investment and continued to focus on the non-resource-based industry, especially the electrical and electronic products, as shown in *Table 7-5*. The main sources of foreign investment were from the USA, Singapore, Japan and Germany. This indicated that efforts to attract foreign investment were well received and Malaysia remained attractive to investors. To enhance the nation's competitiveness, the Government continued to liberalise policy on foreign equity participation and further expanded it to the manufacturing-related services.

7.08 The approved investment provided a total of 208,202 employment opportunities. There was a decline of 28.7 per cent in terms of capital investment per employee (CIPE) from RM288,181 in 2001 to RM205,574 in 2003, mainly due to increased investment emanating from the expansion and diversification of existing projects rather than new projects which will normally require greater capital investment. However, between 1990 and 2002, the CIPE increased by 66 per cent, indicating a discerning trend of investment towards high value added and high technology projects and the employment of highly skilled manpower.

TABLE 7-4					
APPROVED MANUFACTURING PROJECTS, 2001-2003					
	<i>No. of Projects</i>	<i>Potential Employment</i>	<i>Capital Investment (RM million)</i>		
			<i>New</i>	<i>Expansion/ Diversification</i>	<i>Total</i>
2001	928	89,440	15,562.4	10,212.5	25,774.9
2002	792	64,744	11,853.5	6,023.4	17,876.9
2003 ¹	660	54,018	7,092.3	4,012.4	11,104.7
Total	2,380	208,202	34,508.2	20,248.3	54,756.5
<i>Note:</i> ¹ Refers to the period January-August 2003.					

TABLE 7-5

APPROVED MANUFACTURING PROJECTS BY INDUSTRY, 2001-2003

Industry	Number of Approvals				Domestic Investment (RM million)				Foreign Investment ¹ (RM million)				Total Capital Investment (RM million)			
	2001	2002	2003 ²	Total	2001	2002	2003 ²	Total	2001	2002	2003 ²	Total	2001	2002	2003 ²	Total
Resource-Based	335	345	265	945	4,490.3	2,968.4	1,901.4	9,360.1	6,793.1	6,656.7	2,102.0	15,551.8	11,283.7	9,625.1	4,003.4	24,912.2
Food Manufacturing	53	70	73	196	383.5	789.9	425.1	1,598.5	516.0	431.0	263.1	1,210.1	899.6	1,220.9	688.2	2,808.7
Beverages & Tobacco	3	1	3	7	14.3	0.0	15.9	30.2	12.0	97.6	0.1	109.7	26.3	97.6	16.0	139.9
Wood & Wood Products	35	41	23	99	285.4	286.7	252.4	824.5	122.2	172.5	276.9	571.6	407.6	459.2	529.3	1,396.1
Furniture & Fixtures	36	37	35	108	119.7	279.6	221.7	621.0	66.5	25.4	33.6	125.5	186.2	305.0	255.3	746.5
Paper, Printing & Publishing	24	17	14	55	1,938.7	136.8	112.3	2,187.8	3,084.2	177.6	54.6	3,316.4	5,023.0	314.4	166.9	5,504.3
Chemical & Chemical Products	61	51	29	141	678.8	422.6	483.7	1,585.1	746.1	496.0	306.9	1,549.0	1,424.9	918.6	790.6	3,134.1
Petroleum Products	6	13	9	28	13.7	74.6	6.3	94.6	115.5	4,791.0	417.1	5,323.6	129.2	4,865.6	423.4	5,418.2
Natural Gas	0	1	0	1	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0
Rubber Products	42	25	15	82	342.9	161.5	84.6	589.0	310.7	220.5	88.4	619.6	653.7	382.0	173.0	1,208.7
Plastic Products	50	58	46	154	317.1	390.0	193.9	901.0	216.7	146.2	349.4	712.3	533.8	536.2	543.3	1,613.3
Non-Metallic Mineral Products	25	31	18	74	396.2	376.7	105.5	878.4	1,603.2	98.9	311.9	2,014.0	1,999.4	475.6	417.4	2,892.4
Non-Resource-Based	578	436	381	1,395	2,335.2	3,318.2	3,790.6	9,444.0	12,033.1	4,909.9	3,071.2	20,014.2	14,368.4	8,228.0	6,861.8	29,458.2
Textiles & Textile Products	43	30	17	90	109.1	163.4	99.7	372.2	320.4	33.6	51.0	405.0	429.5	197.0	150.7	777.2
Leather & Leather Products	2	2	0	4	0.1	38.2	0.0	38.3	0.2	2.5	0.0	2.7	0.3	40.7	0.0	41.0
Basic Metal Products	28	25	20	73	183.4	205.8	327.9	717.1	421.7	158.6	214.9	795.2	605.1	364.4	542.8	1,512.3
Fabricated Metal Products	56	58	70	184	132.6	262.9	510.5	906.0	379.9	212.5	298.5	890.9	512.5	475.5	809.0	1,797.0
Machinery Manufacturing	115	84	62	261	341.0	405.7	384.3	1,131.0	376.0	300.8	291.7	968.5	717.0	706.5	676.0	2,099.5
Electrical & Electronic Products	267	178	135	580	815.6	1,645.5	1,151.3	3,612.4	9,509.4	4,005.4	1,896.5	15,411.3	10,325.0	5,650.9	3,047.8	19,023.7
Transport Equipment	48	49	63	160	628.4	556.9	1,138.4	2,323.7	499.1	141.4	157.4	797.9	1,127.5	698.2	1,295.8	3,121.5
Scientific & Measuring Equipment	19	10	14	43	125.0	39.8	178.5	343.3	526.4	55.1	161.2	742.7	651.5	94.8	339.7	1,086.0
Miscellaneous	15	11	14	40	42.2	12.3	142.4	196.9	81.0	11.4	97.1	189.5	122.8	23.7	239.5	386.0
Total	928	792	660	2,380	6,867.7	6,298.9	5,834.4	19,001.0	18,907.2	11,578.0	5,270.3	35,755.5	25,774.9	17,876.9	11,104.7	54,756.5

Notes:

¹ Refers to sum of foreign equity and loans attributed to foreign interest. Loans attributed to foreign interest is apportioned from the total loans according to the percentages of the foreign share in the equity of each project.² Refers to the period January - August 2003.

7.09 During the review period, 1,599 projects or 67.2 per cent of total approved projects were located in Johor, Pulau Pinang and Selangor, as shown in *Table 7-6*. The well-developed infrastructure and the availability of trained and skilled work force were the main determinant factors in locating projects. About 57.0 per cent of the projects were in operation and 39.1 per cent in the various stages of implementation.

7.10 Commercial banks continued to be the major source of financing for the manufacturing sector with 92.6 per cent of total loans outstanding in the banking and financial institutions extended to the sector during the review period, as shown in *Table 7-7*. The major portion of the loans were for the wood and wood products; iron and steel products; electrical machinery and appliances; food, beverages and tobacco; and textile and wearing apparel subsectors, as shown in *Table 7-8*.

TABLE 7-6								
APPROVED MANUFACTURING PROJECTS BY STATE, 2001-2003								
State	Number of Projects				Proposed Capital Investment (RM million)			
	2001	2002	2003 ¹	Total	2001	2002	2003 ¹	Total
Johor	191	191	145	527	2,462.7	2,333.4	1,591.3	6,387.4
Kedah	70	47	39	156	698.5	532.1	848.5	2,079.1
Kelantan	10	6	7	23	181.7	9.5	52.2	243.4
Melaka	37	23	24	84	3,453.0	573.2	212.1	4,238.3
Negeri Sembilan	34	34	30	98	2,309.9	767.8	1,752.5	4,830.2
Pahang	22	13	13	48	347.3	271.3	572.6	1,191.2
Perak	48	46	45	139	964.5	452.0	898.1	2,314.6
Perlis	4	3	2	9	14.1	6.4	30.4	50.9
Pulau Pinang	124	111	89	324	3,837.3	2,418.1	1,101.9	7,357.3
Sabah	24	20	16	60	4,789.4	348.6	126.4	5,264.4
Sarawak	31	33	22	86	637.7	476.0	604.0	1,717.7
Selangor	302	238	208	748	5,825.3	3,823.2	2,582.5	12,230.9
Terengganu	7	4	5	16	15.3	4,740.3	461.1	5,216.7
Wilayah Persekutuan Kuala Lumpur	23	22	15	60	229.4	1,112.6	271.1	1,613.1
Wilayah Persekutuan Labuan	1	1	0	2	9.0	12.5	0.0	21.5
Total	928	792	660	2,380	25,774.9	17,876.9	11,104.7	54,756.5
<i>Note:</i> ¹ Refers to the period January-August 2003.								

TABLE 7-7

**LOANS¹ APPROVED BY THE BANKING SYSTEM
TO THE MANUFACTURING SECTOR BY INSTITUTION, 2001-2003**
(RM million)

<i>Institution</i>	<i>2001</i>	<i>2002</i>	<i>2003²</i>	<i>Total</i>	<i>%</i>
Commercial Banks	57,312.4	56,750.3	61,962.8	176,025.5	92.6
Finance Companies	3,004.3	2,515.0	2,678.3	8,197.6	4.3
Merchant Banks	2,205.0	2,012.1	1,684.7	5,901.8	3.1
Total	62,521.7	61,277.4	66,325.8	190,124.9	100.0

Notes:

¹ Includes loans extended by Islamic banks.

² As at the end of July 2003.

TABLE 7-8

**LENDING OF COMMERCIAL BANKS TO THE MANUFACTURING
SECTOR BY INDUSTRY, 2001-2003**
(RM million)

<i>Industry</i>	<i>2001</i>	<i>%</i>	<i>2002</i>	<i>%</i>	<i>2003¹</i>	<i>%</i>	<i>Total</i>	<i>%</i>
Rubber Processing & Rubber Products	353.8	0.6	472.4	0.8	535.3	0.9	1,361.5	0.8
Tin	77.1	0.1	34.3	0.1	30.9	0.1	142.3	0.1
Palm Oil Processing	2,051.2	3.6	2,128.2	3.8	2,004.1	3.5	6,183.5	3.6
Food, Beverages & Tobacco	4,746.9	8.3	4,673.2	8.2	4,704.8	8.2	14,124.9	8.2
Textile & Wearing Apparel	4,503.3	7.9	4,417.2	7.8	4,701.6	8.2	13,622.1	8.0
Wood & Wood Products	5,988.0	10.4	6,045.2	10.7	5,952.2	10.4	17,985.4	10.5
Paper & Paper Products	1,550.2	2.7	1,805.3	3.2	1,941.4	3.4	5,296.9	3.1
Printing & Publishing, etc.	2,004.2	3.5	1,622.0	2.9	1,578.6	2.8	5,204.8	3.0
Industrial Chemicals	2,676.6	4.7	2,632.9	4.6	2,855.2	5.0	8,164.7	4.8
Plastic Products	2,558.5	4.5	2,740.6	4.7	2,918.3	5.0	8,217.4	4.7
Non-Metallic Mineral Products	3,978.9	6.9	3,638.4	6.4	4,121.0	7.2	11,738.3	6.9
Building Materials	1,938.3	3.4	1,895.4	3.3	2,262.0	4.0	6,095.7	3.6
Iron & Steel Products	5,708.0	10.0	5,171.4	9.1	4,750.2	8.3	15,629.6	9.1
Metal Products	3,326.6	5.8	3,380.6	6.0	3,139.8	5.5	9,847.0	5.7
Non-Electrical Machinery	981.1	1.7	862.1	1.5	875.6	1.5	2,718.8	1.6
Electrical Machinery & Appliances	5,173.8	9.0	4,430.9	7.8	5,054.2	8.8	14,658.9	8.6
Transport Equipment	1,803.2	3.1	1,860.3	3.3	1,765.8	3.1	5,429.3	3.2
Others	7,892.6	13.8	8,939.7	15.8	8,043.9	14.1	24,876.2	14.5
Total	57,312.4	100.0	56,750.3	100.0	57,234.9	100.0	171,297.6	100.0

Note: ¹ As at the end of June 2003.

Employment in the Manufacturing Sector

7.11 The contribution of the manufacturing sector in terms of employment creation remained the highest among the sectors of the economy, with an average growth of 3.4 per cent per annum, during the review period. The sector created a total of 270,700 new jobs or 30.9 per cent of total new jobs created in the country. Out of the total number of 2,679,800 workers in the manufacturing sector in 2002, 1,717,800 or 64.1 per cent were in the skilled categories, as shown in *Table 7-9*. Although the total number of workers in this category increased from 1,514,500 in 2000 to 1,717,800 in 2002, the increase was insufficient to meet the rising demand for this category of workers that was required for the high value added and high technology projects.

7.12 During the review period, overall productivity in the manufacturing sector declined by 1.9 per cent, attributed to the slowdown in the economy resulting in the workers not being fully utilised. The textiles, clothing and footwear and the wood products subsectors contributed to the decline in productivity. However, productivity in the rubber products and chemicals industries grew at 4.7 per cent

<p>TABLE 7-9</p> <p>EMPLOYMENT IN THE MANUFACTURING SECTOR</p> <p>BY CATEGORY OF WORKERS, 2000-2002</p> <p>('000 persons)</p>					
<i>Occupation Group</i>	<i>2000</i>	<i>%</i>	<i>2002</i>	<i>%</i>	<i>Average Annual Growth Rate (%), 2001-2002</i>
Managerial & Professionals	184.2	7.2	190.3	7.1	1.6
Technical & Supervisory	337.7	13.2	343.0	12.8	0.8
Clerical Workers	245.6	9.6	219.7	8.2	-5.4
General Workers	125.4	4.9	50.9	1.9	-36.3
Skilled	1,514.5	59.2	1,717.8	64.1	6.5
Unskilled	150.9	5.9	158.1	5.9	2.4
Total	2,558.3	100.0	2,679.8	100.0	2.3

and 6.5 per cent, respectively. Among measures undertaken to improve productivity were the establishment of the Grant for Upgrading Engineering Design for design and product development, the launch of the Grant for RosettaNet Standard Implementation to encourage industries to use information and communications technology (ICT) in their business transactions as well as skills upgrading for workers by the various state skills development centres and other training institutions. In line with efforts to improve competitiveness of the manufacturing sector, the Productivity-Linked Wage System was further encouraged, where out of the 311 collective agreements signed during 2000-2002, 167 were linked to productivity components such as bonus based on the profit level, contractual and non-contractual bonus, piece-rate and skills allowance.

7.13 To ensure that industrial skills training programmes were market-driven, efforts were undertaken to enhance the capability of public skills training institutions as well as encourage greater private sector participation. The total intake into existing training centres increased from 1,636 in 2000 to 2,380 in 2003. In addition, the total intake by skills development centres for pre-employment training increased from 4,930 in 2000 to 11,010 in 2003. To intensify industry orientation and involvement in training, initiatives were also taken to develop specific programmes, enhance the quality of curricula and training for instructors. In addition, the Malaysian Institute for Aviation Technology was upgraded and two additional training centres were established, namely, Advance Technology Centre (ADTEC) Tabuh Naning in Melaka and the Malaysia-Spain Institute in Kulim, Kedah to increase the supply of highly skilled workers in specialised high technology areas. The courses offered were in areas such as avionics, electrical and electronics and automotive-related trades.

7.14 To increase their employability and marketability, retrenched workers were retrained while unemployed graduates were provided pre-employment training including attachments at companies to acquire new skills required by the industry. An additional RM500 million was allocated to the Skills Development Fund to increase accessibility to technical education and vocational training. The scope of the Human Resource Development Fund was also expanded to include training in manufacturing-related services such as logistics, market support as well as ICT and the period for employers to utilise their levy contributions was extended from two to five years. In addition, the coverage of the training grant for employers in the manufacturing sector was expanded to include the services

sector having 10 to 49 workers with paid-up capital of less than RM2.5 million. A Retraining Fund was established with an allocation of RM100 million to retrain and re-skill new graduates in selected areas such as ICT and accountancy.

R&D and Technology Development

7.15 As part of the efforts to achieve productivity-driven growth and enhance competitiveness, the promotion of science and technology (S&T), research and development (R&D) as well as technological innovation continued to be given priority. In order to provide a policy framework for the advancement of S&T towards building a competitive and knowledge-based economy, the Science and Technology Policy II was launched in June 2003. This Policy provided new dimensions and greater emphasis on strengthening research and technological capacity and capability, promoting commercialisation of research outputs, developing human resource, nurturing a culture for science, innovation and entrepreneurship as well as ensuring a greater diffusion and application of technology.

7.16 In order to establish an effective linkage between R&D and commercialisation activities, efforts were made to adopt a holistic view and improve the entire value chain from R&D to commercialisation. In this regard, workshops, seminars and dialogues were organised on a regular basis to ensure a more effective management of R&D resources. These activities provided training to key managers and researchers on best practices in R&D management as well as obtained feedback to improve existing R&D funding and grant schemes. A Business Development Unit was established under the Ministry of Science, Technology and the Environment (MOSTE) in January 2002 to enhance linkages between R&D and commercialisation activities. In addition, the stimulus package introduced during the review period provided matching grants for the commercialisation of research findings and innovations in selected growth areas.

7.17 Recognizing that R&D activities provide the foundation to transform ideas into products and services, the Government continued to allocate substantial funds to R&D projects. During the review period, a total of 1,793 projects amounting to RM956.8 million was approved under the various R&D funding schemes, as shown in *Table 7-10*. The Intensification of Research in Priority Areas (IRPA) mechanism was realigned to provide funding for applied, strategic and prioritised research that were more industry-relevant and had greater potential for commercialisation. A R&D fund was established under the National Biotechnology Directorate and a total of RM70.5 million was approved for biotechnology research on plants, animals, food, molecular, biopharmacy and natural products.

7.18 An allocation of RM98.6 million was approved under the Industry Research and Development Grant Scheme (IGS) that enabled private sector companies to collaborate with public universities and research institutions to conduct R&D in areas such as advanced manufacturing, electronics, photonics as well as machinery and equipment. A sum of RM57.2 million was approved under the MSC Research and Development Grant Scheme (MGS) for MSC-status companies to undertake research on ICT, while an allocation of RM80.1 million was approved under the Demonstrator Applications Grant Scheme (DAGS) to foster wider participation of the community in using ICT.

7.19 To facilitate the commercialisation of R&D findings, 16 projects amounting to RM18.3 million were approved under the Commercialisation of Research and Development Fund (CRDF) during the review period. A sum of RM21.3 million was approved for 15 projects under the Technology Acquisition Fund (TAF) to promote the development of indigenous technological capabilities. The approved CRDF and TAF projects were in a broad range of industries such as electrical and electronics, chemicals and pharmaceuticals.

TABLE 7-10				
RESEARCH AND DEVELOPMENT GRANTS, 2001-2003				
<i>Name of Grants</i>	<i>Revised 8MP Allocation (RM million)</i>	<i>No. of Projects</i>	<i>Amount Approved (RM million)</i>	<i>Amount Disbursed (RM million)</i>
Intensification of Research in Priority Area (IRPA)	840	1,573	650.4	426.9
Experimental Applied		1,325	233.6	131.9
Strategic Research		204	199.9	118.3
Prioritised Research		44	216.9	176.7
Biotechnology Research and Development Fund	103	102	70.5	45.2
Industry Research and Development Grant Scheme (IGS)	230	40	98.6	102.5
MSC Research and Development Grant Scheme (MGS)	100	28	57.2	43.1
Demonstrator Applications Grant Scheme (DAGS)	90	50	80.1	41.7
Total	1,363	1,793	956.8	659.4

7.20 Biotechnology was identified as one of the key technologies that will contribute towards Malaysia's transformation into a developed nation by 2020. To provide the support to develop the biotechnology industry in Malaysia, three interim laboratories in the fields of genomics and molecular biology, agricultural biotechnology as well as nutraceutical and pharmaceutical biotechnology were set up at *Universiti Kebangsaan Malaysia* (UKM), Malaysian Agricultural Research and Development Institute and *Universiti Putra Malaysia* respectively. In addition, the strategic partnership with the Massachusetts Institute of Technology (MIT) under the Malaysian-MIT Biotechnology Partnership Programme provided the foundation to promote the development of domestic R&D capability and capacity in biotechnology. As part of the efforts to promote biotechnology, *BioMalaysia 2002*, an international biotechnology symposium, exhibition and business partnering was organised in October 2002. *BioMalaysia 2002* contributed towards increasing awareness on investment opportunities in the biotechnology industry, sharing information and experiences as well as promoting networking among interested parties.

Manufacturing-Related and Support Services

7.21 The availability of adequate and efficient support services was identified as among the important requirements to enhance the value added of products in the manufacturing value chain. These included product and software development, design and prototyping, packaging, regional establishments as well as logistic and export services. To analyse and identify measures to upgrade capabilities of existing engineering services, the Study on Services Needed to Support the Development of High Technology Industry was conducted during the review period. The objective of this study was to identify new manufacturing and manufacturing support services required for the development of high technology industries, the technology needed, its source, key players, best practices standards, skills required, market size and market environment. Initial findings of the study showed that it is critical that tool and die, machining, mechanical subassemblies and specialty treatment be accorded the highest priority. In addition, design as well as product quality and reliability have to be improved as these provided the most impact to technology development in support services. To achieve success, local companies need to enhance and upgrade their capabilities, including skills, knowledge and technology, to world-class manufacturing standards and obtain the relevant accreditations.

7.22 The establishment of distriparks in the free trade zones provided efficient, effective and quality services to customers that included trans-shipment, regional

distribution, warehousing storage, break-bulking, packing and repacking, grading and labelling. Several incentives were also introduced to attract foreign investors to set up their regional centres in Malaysia. During the review period, 28 operational headquarters, 66 international procurement centres, one regional distribution centre, 252 representative offices and 98 regional offices were approved for establishment. The availability of an integrated logistic chain and marketing services is crucial to facilitate the distribution of manufactured goods. In this regard, a Study on an Integrated Logistic and Supply Chain Management was conducted during the review period with the objective of formulating a comprehensive plan for the development of an integrated logistic sector and promoting a total supply chain management in export, import and domestic distribution activities. Initial findings of the Study indicated the need to improve initiatives along each supply chain element, that is, haulage, trucking, forwarding, customs, electronic data interchange and palletisation. In addition, structured communication and education initiatives are necessary to strengthen awareness and skills of logistics service providers.

7.23 In an effort to provide support for the development of the foundry technology, which was required for the enhancement of the machinery and equipment industry, the Rasa Machinery and Equipment Technology Centre was established in Selangor. Apart from providing technical training to strengthen the engineering base in casting and foundry, precision machining and heat treatment, the centre also promoted cluster development by grouping small, medium and large foundry operators. In addition, a one-stop manufacturing centre to produce machine components and spare parts was established in Technology Park Malaysia in 2002. The centre was integrated with training facilities and a factory to support the manufacturing of computerised numerical control machines for machine tooling.

Production of Capital and Intermediate Goods

7.24 During the review period, imports of capital and intermediate goods decreased by 5.3 per cent, in line with the reduction in the exports of electrical and electronic products that were largely dependent on imported inputs. Nevertheless, capital and intermediate goods still represented a very high proportion of the country's total gross imports at 86.4 per cent. The Study on Enhancing the Local Production of Capital and Intermediate Goods revealed that the high import dependence in the manufacturing sector was largely due to the import of semiconductors and integrated circuits (IC) by multinational corporations (MNCs) for their operations in Malaysia. To encourage MNCs to source locally, the Study

recommended that efforts be focused on developing entrepreneurship, innovation, competencies and skills among the SMEs as well as providing institutional support, infrastructure and network arrangements between MNCs and potential domestic suppliers. Among the products identified for local production included diesel engines, electric motors, metal cutting machineries, in-car electronics and stainless steel and flat-rolled steel. The general support system needed include, among others, establishing the relevant training institutes with emphasis on mechanisation and automation; rationalising and consolidating the various financial support programmes, investment and tax incentives; developing specific programmes for productivity improvement; improving and making the use of standards mandatory; as well as enforcing a policy of gradual increase in local content requirements in Government projects.

Utilisation of Information and Communications Technology

7.25 Investment in ICT by the manufacturing sector was RM2.46 billion, representing 18 per cent of total ICT expenditure during the review period. The investment was mainly by the MNCs, particularly for the use of computer-aided design (CAD), material resource planning and enterprise resource planning in their organisations. There was also an increasing trend in the use of e-commerce, especially for the purchases of direct materials, equipment and machineries as well as maintenance and repair. To enhance the use of ICT by enterprises, the Government initiated the Technology-Industry-Government for e-Economic Revolution (TIGeR) project, a tripartite partnership between the Government, industry and technology providers, during the review period. The project aimed at providing an avenue for local SMEs in the electrical and electronic sector to be integrated into the global supply chain. This was done by building local technological capability to support the integration, creating direct access to the global market and opportunities for collaboration with international partners to facilitate technology transfers and increasing awareness to global trends in products and services.

7.26 The TIGeR e-Logistic Projects involving the Royal Customs and Excise Department, forwarding agents and MNCs, succeeded in reducing the throughput time for processing on non-dutiable export declaration forms significantly. To encourage suppliers of electrical and electronic parts and components to implement the RosettaNet Standard, the Government provided a 50 per cent matching grant of up to a maximum of RM100,000 per company in 2002 with an allocation of RM5 million. This grant covered, among others, expenses in software and hardware

development as well as licensing fees. The RosettaNet was interfaced with the Electronic Data Interchange Customs Declaration System at ports and airports to further facilitate the trade and the clearing of goods at ports and airports.

Strengthening Industrial Clusters

7.27 In line with the Second Industrial Master Plan to strengthen inter- and intra-industry linkages in the manufacturing sector, efforts were undertaken to enhance technology management, skills formation and technology transition, especially for the industrial clusters. In this regard, measures included extending financial assistance, conducting industrial training as well as providing incentives and industrial infrastructure facilities.

7.28 Although the *electrical and electronic products* subsector registered a negative growth of 2.8 per cent during the review period, mainly due to the global downturn of the subsector, it maintained its position as the largest contributor in terms of total value added in the manufacturing sector at 28.3 per cent in 2003. The subsector recorded a shift towards more high value added product range. In this regard, the semiconductor industry produced the latest generation of IC including flip-chip ball grid array, tape ball grid array, quad flat packages and matrix plastic ball grid array. During the review period, the semiconductor industry also moved further towards backward integration in IC design, where 19 IC design houses were in operation, with seven located in the MSC. A total of 13 MNCs operated as integrated manufacturing centres, incorporating R&D, product development, sales and distribution. Exports of electrical and electronic products increased from RM200.3 billion in 2001 to RM202.8 billion in 2003.

7.29 However, cluster development of this subsector was not fully realised. The local content of the industrial and consumer electronics industries remained low at between 20 to 27 per cent. About 68 per cent of Malaysia's total imports comprise semiconductor devices, including fabricated wafers, and 9.2 per cent were electronic components. To promote local production of such inputs, companies were encouraged to participate in the electrical and electronic products industry as Second Tier companies to supply parts and components to MNCs worldwide. Among the support measures introduced included the adoption of Mutual Recognition Arrangements with importing countries such as testing procedures, registration and licensing as well as facilitating compliance with international standards with

regards to labeling and packaging requirements. In addition, Malaysian Institute of Microelectronics System (MIMOS) Berhad conducted R&D on microelectronics and semiconductor, focusing mainly on improving semiconductor processes such as fabrication, testing, failure analysis, as well as increasing local intellectual property through digital and analog design of integrated circuits and application specific integrated circuits. To enhance competitiveness, the Government also identified new areas requiring competency development such as nanotechnology, photonic and wireless communications technology, flat panel display technology, bio-instrument and bio-informatics.

7.30 During the review period, the *chemical and chemical products* industry grew by 6.1 per cent per annum, representing about 11.5 per cent of total manufacturing value added. There were six gas-processing plants operating in Kertih, Terengganu producing gas-based petrochemical feedstock such as ethane, propane and butane for the *petrochemical* industry in Kertih and Gebeng, Pahang. The petrochemical zones at Kertih and Gebeng were supported by the necessary infrastructure such as centralised utilities facility, centralised tankage facility, pipeline and pipe racks as well as a rail link to Kuantan Port. Several world-scale petrochemical plants were constructed in Kertih and Gebeng producing petrochemical products such as ethylene oxide, low-density polyethylene, propylene and butanediol. The third petrochemical zone was constructed at Pasir Gudang/Tanjung Langsat, Johor producing oil-based petrochemicals. The availability of petrochemical feedstock, technology and skilled human resources enabled the petrochemical industry to produce higher end products such as engineering plastics and composite materials.

7.31 Clusters within the *pharmaceutical products* industry included medicinal products, medicaments as well as traditional medicines and herbal products. Exports of pharmaceutical products increased at the rate of 16.6 per cent from RM298.2 million in 2001 to RM347.6 million in 2002. To promote R&D and the production of pharmaceutical products, facilities were provided at the Technology Park Malaysia, UKM-Malaysia Technology Development Corporation Smart Technology Centre, Johor Technology Park, Kulim Hi-Tech Park and Seri Iskandar Pharmaceutical Park. To further enhance the value added of the herbal products industry, proprietary innovations and technologies were also developed to produce standardised extracts of local herbs by domestic entrepreneurs. To assist local manufacturers to penetrate the international market, efforts were taken to establish bilateral trade agreements. The Government also promoted local contract manufacturing of patented drugs for internationally renowned pharmaceutical companies.

7.32 During the review period, the *wood products* industry experienced a negative growth of 4.1 per cent, corresponding with the slowdown in world demand as well as the downsizing of operations by some of the wood product manufacturers. Exports of wood products, such as, veneer, plywood, particle board, furniture and fixtures, however, increased from RM6.0 billion in 2001 to RM6.4 billion in 2003, mainly to Japan and the United States. To sustain the export of Malaysian-made furniture, the Government embarked on reforestation activities and promoted the use of latex timber clones. In addition, the wood product industry was encouraged to obtain their supply of raw materials from other resource-rich countries. This involved importing semi-finished materials from these countries and exporting the completely assembled and finished products as part of the value added activities. To increase competitiveness and resilience, efforts were also taken to assist local manufacturers to improve quality, product design, marketing and distribution. The Malaysian Timber Certification Council worked closely with international timber certification bodies to widen market acceptance of its certification scheme introduced in January 2002.

7.33 The Malaysian Furniture Promotion Council was established in 2002 to promote furniture products as well as improve furniture designs. The Council encouraged members to embark on factory automation, technology investment and skills upgrading as it is important for the industry to be specialised in furniture component manufacturing to attain economies of scale. This led to greater investment in upgrading technology in critical areas including design capability and monitoring design trends. The use of computer-aided design in manufacturing enhanced the fusion of design skills with modern manufacturing. In addition to increasing productivity and efficiency, this assisted the industry overcome critical labour shortages. The Wood Industry Skills Development Centre provided training in design, production technology, finishing, quality control and management. The use of e-commerce was also promoted to widen the market as well as ensure an effective order mechanism and delivery schedules.

7.34 The *rubber processing and products* industry grew by 4.1 per cent per annum during the review period, representing about 2.9 per cent of total manufacturing value added. The export of rubber products amounted to RM14.2 billion. The United States remained the single largest market accounting for 35.6 per cent, followed by the United Kingdom, Japan and Germany. To meet the needs of the competitive domestic latex-based industry, about half of the latex required was imported. The Government also focussed efforts on R&D in new

and specialty products such as high quality new generation gloves including new protein- and powder-free gloves to encourage product diversification. The product base was widened to include high value added and high-technology rubber products such as those used in engineering, construction, marine and transport. A large volume of rubber waste such as sludge and waste tyres was generated, incurring a high cost to the industry. To counteract this, efforts were initiated to find commercial ways of converting sludge into useful products as well as to provide a long-term solution to the disposal problem.

7.35 A Study on Palm Oil Industry Downstream Commercialisation conducted during the review period indicated that *palm oil* contributed 19 per cent to the total world production of oils and fats. During the review period, exports of palm oil, including palm kernel oil and olein, totalled RM28.9 billion. Of the total natural oils and fats produced, 80.0 per cent was used for food, 14.0 per cent in *oleochemicals* and 6.0 per cent in technical areas. The Study estimated that the growth in global demand for oleochemicals to be at 3.0 per cent between 2002 and 2005. Malaysia produced approximately 20 per cent of the global demand for oleochemicals. Exports of oleochemicals amounted to RM5.2 billion during the review period. With demand for oleochemical products in Asia growing at 5.7 per cent per annum, the Government encouraged the industry to shift from the production of lower-value fatty acids to fatty alcohols and esters as well as expand their exports to other Asian markets. Efforts were taken to promote oleochemicals and its products for their quality and benefits to ensure wider applications as well as to capitalise on the growing health conscious consumer market. The Government provided focused technical assistance to encourage companies to invest in R&D and explore the vast potential of oleochemicals and its derivatives.

7.36 The *food manufacturing* industry grew at the rate of 2.8 per cent per annum during the review period, representing 10.1 per cent of total manufacturing value added. The growth was contributed by increased production from sugar refineries, rice and other food products. During the review period, the value of sales from the food-manufacturing sector amounted to RM23.8 billion, due to increased demand both from the domestic market as well as importing countries, such as, Hong Kong, Indonesia, the Netherlands and Singapore. The export of processed food amounted to RM8.72 billion, contributed mainly by animal feed, cocoa and cocoa preparations, processed meat, confectionaries and fruits and vegetables. To facilitate the development of the industry, the Fund for Food was extended to food-based SMEs to enable them to modernize their production facilities. During the review period, a sum of RM153.9 million was disbursed

out of the total approval amounting to RM284.6 million. The industry was also encouraged to consolidate and merge to achieve economies of scale to meet domestic demand as well as venture into the export market.

7.37 R&D efforts were intensified to facilitate the development and transformation of the food-based industry into a high technology and knowledge-intensive industry. Companies were also encouraged to invest in product development and market research to diversify their products, improve product quality and increase competitiveness. In this regard, the 2003 Budget provided an income tax exemption of 70 per cent or an investment tax allowance of 60 per cent for five years to local companies that undertake reinvestment. To meet stringent international safety and hygiene standards as well as provide adequate marketing strategy to penetrate new markets, especially China and the Middle East, the Government encouraged local producers to conform to international food safety standards and requirement as well as acquire ISO certifications of their products for both the local and export markets. In this regard, incentives were given in terms of a matching grant as well as training for operators and workers.

7.38 Recognising the huge potential for *halal* food worldwide and to meet the objective of developing Malaysia into a regional *halal* food hub, various measures were implemented during the review period. These included coordinating measures and programmes at both the federal and state levels pertaining to efforts to promote Malaysia as a *halal* food hub. In addition, technical issues including streamlining and standardising certification procedures and charges, the use of a common logo and conformance to international food safety standards and requirements for *halal* food were resolved. Consultations were also held with relevant industry groups on implementation issues and problems to enable the development of a holistic and integrated approach on this matter.

7.39 The transport equipment subsector contributed 13.7 per cent to total manufacturing value added and grew by 9.0 per cent per annum during the review period, surpassing the Plan target of 8.9 per cent. The main contributor was the *automotive* subsector, with *Perusahaan Otomobil Nasional Berhad* (PROTON) and *Perusahaan Otomobil Kedua* maintaining their dominance, accounting for 78.3 per cent of the total sales of passenger and commercial vehicles during the review period. PROTON invested in R&D for product development, initiated cost reduction programmes and vendor rationalisation to increase efficiency and competitiveness. To retain its market share, PROTON expanded its product range by introducing new models. Efforts were also taken by the Government to encourage foreign automotive manufacturers to establish

production bases in Malaysia and use locally made components in their products. The construction of the new PROTON Plant in Tanjung Malim, Perak, which was halted in 1997 due to the economic crisis, recommenced in 2002 as an integrated complex for the automotive industry encompassing R&D, production and training to further increase its capability and competitiveness. In addition, to inject competition into the domestic automotive subsector and promote Malaysia as a regional hub for production as well as distribution of motor vehicles, several measures were introduced during the review period. These included abolishing price supervision mechanism on vehicles and mandatory deleted items.

7.40 The motorcycle subsector recorded an increase in production and sales by 3.0 per cent and 1.6 per cent, respectively during the review period. *Motosikal dan Enjin Nasional Sdn. Bhd.* remained the largest producer at 93,529 units in 2002, an increase of 2.0 per cent over 2001. Exports of motorcycles, however, decreased by 51.1 per cent in 2002 compared with 2001 mainly due to increased competition from other producers. Among the major markets were Greece and Indonesia.

7.41 To further promote the *aerospace* industry, the Government established the Malaysian Aerospace Council to coordinate its overall development. In addition to meeting military needs, focus was also given to the development of the general aviation and commercial subsectors. This included promoting activities such as parts and components manufacturing, avionics and systems; maintenance, repair and overhaul; as well as training and education. The Sultan Abdul Aziz Shah Airport, Subang, Selangor served as the regional centre for the servicing of commercial aircrafts. The general aviation industry included production of light aircrafts and helicopters used for business, agriculture, pilot training, life saving, traffic control, search and rescue, aerial survey and recreational activities. Efforts were also intensified to create a flying culture and promote awareness of aviation activities.

7.42 The Composite Technology Research Malaysia (CTRM) was established to spearhead commercial activities in the aerospace industry. During the review period, CTRM, through its wholly owned subsidiary company, was awarded the contract to manufacture six components for the Airbus A320 aircraft, that is, aileron panels, over-wing panels, under-wing panels, false work panels, flap track panels and spoilers. It also entered into a joint venture with a leading aerospace company to develop the Eagle ARV, an unmanned aircraft, three of which were sold to the Royal Malaysian Air Force. CTRM also designed and manufactured the fixed-leading edge lower panels for the Airbus A380 super jumbo commercial aircraft, at its complex in Batu Berendam, Melaka that is equipped with world-class state-of-the-art facilities and machineries.

Development of the Small and Medium Enterprises

7.43 To achieve the objective of developing more resilient and competitive SMEs, a broad range of assistance programmes were implemented during the review period. In order to enable SMEs to penetrate the export markets, the Small and Medium Industries Development Corporation (SMIDEC) provided assistance to SMEs to certify their products and processes to fulfil the requirements of importing countries. In this respect, SMIDEC provided a matching grant of up to RM250,000 per company under the Productivity and Quality Improvement and Certification Scheme (ITAF 3) for the SMEs to improve their productivity and quality. A sum of RM29.7 million was provided to 966 SMEs during the review period. To fulfill the demand for skilled workers in the new business environment, the Skill Upgrading Programme was implemented to provide training to employees of SMEs through 16 skill development centres. A grant equivalent to 80 per cent of the cost of training was extended to companies to assist in reducing the cost of training. A total of RM5.7 million was spent to train 8,004 employees of SMEs during the review period.

7.44 As only 20 per cent of SMEs were able to penetrate the export market, the Industrial Linkage Programme (ILP) was implemented to develop SMEs to be reliable suppliers of parts, components and services to lead companies. The ILP comprised fiscal incentives, business matching and supporting programmes such as technology development, skills upgrading, market development and provision of industrial sites. During the review period, 163 SMEs registered with SMIDEC, of which 53 were linked to large companies and MNCs. The majority of these SMEs were from the electrical and electronics as well as the machinery and engineering subsectors. In addition, SMIDEC also collaborated with a foreign-based hypermarket chain in Malaysia in identifying and developing local SMEs in the food processing industry to become global suppliers. As at the end of June 2003, 11 SMEs were appointed to supply products under their own brand names as well as that of the hypermarket's, with sales amounting to RM800,000.

7.45 The scope of the ILP was expanded to include the Global Supplier Programme (GSP), through which SME capabilities were developed to enable them to be competitive suppliers of parts and components to MNCs and their worldwide operations. Through the GSP, SMEs were provided training in critical skills and linked to large companies and MNCs. The training programme that was implemented in collaboration with local training institute was participated by 1,426 employees from 361 SMEs. To facilitate the GSP, SMEs were encouraged to utilise the

RosettaNet Standard. Out of the RM5 million allocated for the RosettaNet Standard, eight grants amounting to RM800,000 were approved during the review period. In November 2002, an alternative implementation option for the SMEs was introduced to enable easier implementation of the RosettaNet Standard. Under this option scheme, the SMEs could subscribe to services offered by Applications Service Providers that were registered with RosettaNet (M) Berhad. The scheme provided 70 per cent funding of the approved project cost, subject to a maximum of RM30,000 per company.

7.46 To encourage the SMEs to improve further their technological capabilities and ICT competencies as well as upgrade engineering design capabilities, the Government provided incentives for product and process improvement through the Industrial Technical Assistance Fund (ITAF 2), the Technology Acquisition Fund and ICT grants, which included e-Manufacturing. In this regard, a matching grant of up to a maximum of RM500,000 per company was provided for the purchase of hardware and the accompanying software. During the review period, 169 companies benefited from the scheme amounting to RM8.53 million. To facilitate the acquisition of strategic and relevant technologies as well as commercialise indigenous technology developed by local universities and research institutions, assistance was also provided through the Technology Acquisition Fund and the Commercialisation Research and Development Fund.

7.47 To assist SMEs diversify their markets, especially through exports, the Government provided matching grants of up to RM40,000 per company for business planning and development and up to a maximum of RM60,000 for market development. Recognising the importance of branding, a new fund amounting to RM100 million was established for the development and promotion of Malaysian brand names for Malaysian companies during the review period. The fund covers the cost of development, registration of trademarks and patent as well as promotional expenses. SMIDEC, in cooperation with the Malaysian Industrial Development Finance, implemented the Soft Loan Scheme for SMEs in the manufacturing sector, providing loans for project financing, machinery, factory mortgage, working capital, leasing and industrial hire purchase facilities as well as equity participation. During the review period, the Scheme received positive response whereby 68 projects were approved accounting for 73.3 per cent of the total Plan allocation of RM100 million. To facilitate SMEs' access to financing, the *Bank Negara Malaysia* also established an SME Unit during the review period. The funds were disbursed through the commercial banks and development financial institutions.

7.48 During the review period, SMIDEC also embarked on three new programmes in line with the Small and Medium Industry Development Plan. These programmes

were the Headstart 500 Programme, which aimed at providing SMEs with financial and technical know-how to accelerate their transformation from domestic-oriented operators to global manufacturers; the SME Information and Advisory Centre which provided virtual business matching and collective purchasing of services and content for SMEs; and the SME Expert Advisory Programme where retired professionals in various technical and management fields assisted SMEs that required their professional services.

7.49 In line with the objective of creating a Bumiputera Commercial and Industrial Community (BCIC), the Government continued to promote participation and upgrade skills of Bumiputera entrepreneurs. Several programmes were implemented focusing on entrepreneurial, managerial and technical skills development. Since its inception, the Vendor Development Programme continued to expand and succeeded in creating 331 vendors involving 85 anchor companies. During the review period, a total of 75 vendor companies was developed and three anchor companies appointed. Under the Franchise Development Programme, a total of eight franchisors and 90 franchisees was developed during the review period. Consultancy services under the Small and Medium Industries Promotion Programme were extended for technology transfer or upgrade while financing of fixed assets was provided through *Bank Pembangunan dan Infrastruktur Malaysia Berhad*. Other financial assistance included the *Tabung Ekonomi Kumpulan Usaha Niaga*, the *Skim Jaminan Usahawan Kecil* and the Technopreneur Fund. The Government also intensified efforts to assist Bumiputera entrepreneurs to acquire proper premises for business and manufacturing operations under the Business Premises Programme, SMI Industrial Parks Programme and Nursery Factory Scheme. During the review period, a total of 1,826 units of business premises and factories was provided under these programmes.

7.50 Efforts were also intensified to assist Bumiputera entrepreneurs in *rural industries* to market their products both in the domestic as well as overseas markets. To ensure the competitiveness and sustainability of local crafts supply in the global market, collaborative efforts were forged with external experts in the area of product development and marketing to penetrate the international market, particularly, Japan and the United States of America. Crafts production was modernised through the application of ICT that included the use of rapid prototyping system for mould making to produce ceramic products and CAD system for the designing of jewellery products, *batik* materials and *songket*. During the review period, 989 craft entrepreneurs benefited from these programmes. In terms of overseas market promotion, Malaysia participated in 13 trade exhibitions involving 84 craft entrepreneurs with sales value amounting RM43.3 million. In

addition, the Government introduced the *one district one industry* programme whereby 16 districts were involved in the production of rubber leaves-based products, woodcarvings and indigenous tribal crafts and ceramic products. Three districts, one each in Perak, Sarawak and Sabah, were selected to participate in pilot projects involving the plaiting of *mengkuang*, *bemban* and lygodium, respectively.

III. PROSPECTS, 2004-2005

7.51 The remaining Plan period will be more challenging to the industrial development process in the face of increased competition from new and emerging economies. To further sustain economic growth, new approaches are needed to ensure that the country's economic fundamentals remain strong. Measures will be taken to help industries keep abreast of developments in the World Trade Organisation relating to international trade and at the same time prepare them for new forms of non-tariff barriers.

7.52 The manufacturing sector is forecasted to grow by 7.8 per cent per annum and contribute 31.4 per cent to the GDP and 29.3 per cent of total employment, for the remaining Plan period. Export of manufactured goods is forecasted to grow by 8.0 per cent per annum, representing 83.6 per cent of total gross exports. New approaches will be adopted to maintain Malaysia's resilience and competitiveness as well as to respond to the challenges of the changing global economy. Towards this end, efforts to improve the performance of the manufacturing sector will focus on:-

- ❑ *developing new sources of growth to diversify economic activities, which have potential for income generation and investment creation;*
- ❑ *increasing participation of local manufacturers in the global supply chain;*
- ❑ *strengthening the development of S&T to enhance innovation and increase competitiveness;*
- ❑ *encouraging investment in high technology and knowledge-based industries as well as promoted activities and products;*
- ❑ *improving the Government delivery system;*

- ❑ *enhancing capability of the workforce by strengthening skills, talents and knowledge to meet the requirements of the manufacturing and manufacturing-related services sectors; and*
- ❑ *introducing new measures and rationalising existing efforts to further develop resilient SMEs.*

New Sources of Growth

7.53 As the manufacturing sector is very dynamic and competitive, the country has to continually identify new sources of growth where the nation has the competitive advantage. In this regard, several high technology and knowledge-based industries have been identified as having the potential to be nurtured and developed, which include manufacturing-related services, the marine, defence, aerospace and biotechnology industries as well as other selected activities such as the manufacture of production machinery and equipment and fabricated metals.

7.54 *Manufacturing-related services* will be developed to increase competitiveness in regional and international market as these value added activities form an integral part of the supply chain. During the remaining Plan period, efforts will be focused on building competencies in new areas, including R&D, logistics, supply chain management and market support services such as product designing, prototyping and development, packaging, branding, distribution and marketing. In this regard, a special unit established at the Ministry of International Trade and Industry will identify the services as well as accelerate and coordinate the implementation of the development programmes for these services.

7.55 The *marine industry* offers vast opportunities in the building of ships, boats, vessels, ferries and trawlers; repairing of ships and boats; fabricating of leisure crafts, yachts, and buoys; as well as heavy engineering works such as the construction and fabrication of offshore structures and equipment and rolling stocks. Under the stimulus package announced in 2003, a total of 1,000 fishing boats of metal or composite materials with modern equipment will be built to replace wooden boats. In this regard, efforts will be taken to enhance boat construction activities to spur the development of other ancillary industries such as telecommunications, cold chain system and rapid freezing technology. In addition, emphasis will be given to promote and further develop ship repairing and the construction of high value added products such as leisure crafts, yachts, hydrofoils and hovercrafts.

7.56 The *defence industry* has the potential to create value added activities as well as enhance the economic development of the country. The industry involves the manufacturing of products for use in aerospace, maritime, defence, automotive and ICT. These activities offer vast opportunities in the area of technological development, skills enhancement and exports. The spill over effects from these activities will accelerate the development of other supporting industries. In view of the great potential to move into more value added activities such as manufacturing, assembly, design, integration, simulation, and R&D, efforts will be focused to develop technological competence for the whole spectrum of the value chain, which could be extended for use in other industries. To enhance the capability of local manufacturers, the Government will encourage them to enter into joint ventures with foreign companies or produce under licence of these companies, both for the domestic market as well as for exports. The Government will also formulate a defence industry blueprint that will provide guidelines for the development of the industry, including determining the key players, capabilities, competencies and strategies. The blueprint will be aimed at developing and enhancing the defence industry to achieve self-reliance in defence technology for peaceful purposes and prepare for global competition in selected niche areas.

7.57 As part of the efforts to promote knowledge-based and high technology industries, the *aerospace industry* will be further developed. In this respect, the National Satellite Programme will be implemented to promote new sources of growth for the industry. The Programme involves the designing, building and launching of Near Equatorial Orbit satellites for remote sensing for applications in areas such as environment, natural resource management, agriculture and security. The Programme will also contribute towards the development of aerospace-related industries and services. In this regard, a national space policy will be formulated to chart the strategic directions and enhance the development of the Malaysian aerospace industry. In addition, efforts will be taken to develop indigenous capabilities in aerospace technology as well as intensify linkages with relevant industries and services to increase value added.

7.58 As the machinery and equipment as well as the metal fabrication industry provides the foundation for industrial development, it will be further developed to generate new sources of growth. In this regard, the manufacture of production machinery and equipment such as machine tools and cranes, will be promoted. In addition, the production of parts and components of machinery and equipment; fabricated metals such as structural metal products, wires and wire products, brass, copper, aluminium products and other fabricated products; as well as engineering support services will be further developed.

7.59 To capitalise on traditional expertise, appropriate skills development will be provided to further enhance design, production capabilities and quality of jewellery and costume jewellery products. In this regard, the wider application of ICT and leading age technology will be encouraged to increase competitiveness and productivity. To complement Government efforts, entrepreneurs involved in the jewellery industry will be encouraged to enhance their marketing strategies to be able to compete in the international arena.

7.60 The *biotechnology industry* will be developed as a new source of growth to harness the nation's mega biodiversity resources. Towards this end, the Bio-Valley project will be implemented to spearhead the development of biotechnology, based on the biotechnology cluster concept that requires the active participation of both the private and public sectors. The three existing interim laboratories will be relocated to the Bio-Valley site and upgraded to national biotechnology institutes. The establishment of these institutes together with a business development directorate will form the nucleus of Bio-Valley development. These institutes will continue to conduct research in biotechnology to stimulate the growth and application of biotechnology, establish linkages with the industry and serve as a catalyst to attract biotechnology firms to locate in the Bio-Valley. The directorate will support the commercial applications of research and innovations developed by the institutes as well as attract private sector investments in biotechnology. The Bio-Valley will provide new sources of growth by supporting a wide spectrum of biotechnology-related activities such as clinical research, bioinformatics and current good-practice manufacturing plant compliant production.

7.61 The *food-manufacturing industry* will be encouraged to focus on the market segments of convenience food, functional food and food ingredients to generate new sources of growth. The market for convenience food, which comprises chilled and frozen ready-to-eat meals, is expected to increase in view of the busy lifestyles of consumers. The demand for functional food that consists of products such as fish oil, high-fibre fruit juice and vegetable health foods and beverages is expected to grow as consumers become more health conscious. The food ingredients market that includes fruit-based ingredients, sauces and dehydrated vegetable products is also expected to register a higher rate of growth. Efforts will be undertaken to develop the key competencies needed for the convenience food producers that include the cold chain system and rapid freezing technology, environmentally friendly packaging and shelf-life extension technology. As for functional food and food ingredients producers, the core competencies that will be strengthened are quality assessment, raw material specification, processing and preservation technology, efficacy analysis and standardisation as well as extraction and purification technologies.

Global Supply Chain

7.62 Local companies will be encouraged to participate in the MNCs' supply chain management network for online and real-time procurement, production and logistic management. To facilitate this, their capabilities in producing parts and components will have to be upgraded through improvements in designing, packaging and distribution. Access to global buyers through the appointment of independent representatives, sales subsidiaries, joint ventures and establishment of production units will also be promoted. In this regard, the Government will conduct the Study on Promoting Local Manufacturers to Participate in the Global Supply Chain. The Study will review and analyse the current situation of Malaysian manufacturers in the global supply chain activities, evaluate their capacity and capability, determine their suitability to participate in the global supply chain and identify the main subsectors that are suitable for local participation, including for SMEs. Results of this Study will assist the Government in formulating new initiatives to encourage local manufacturers to participate in the global supply chain in the subsectors identified.

S&T Development for Innovation and Competitiveness

7.63 Concerted efforts will be geared towards strengthening S&T for innovation and competitiveness to support industrial development and innovation-led growth. The increased application of S&T knowledge will contribute towards improving productivity and generating higher value added products and services. Towards this end, the S&T Policy II will be implemented to provide the impetus to strengthen technological development capacity and capabilities. In addition, the Policy will provide a holistic approach to mobilise the involvement of the Government, industry, universities and research institutions in a synergistic partnership. Greater emphasis will be given to stimulate private sector investment in R&D and to increase commercialisation of R&D findings.

7.64 To sustain and improve competitiveness, a more effective national innovation system will be implemented. In this regard, a committee comprising representatives with the relevant expertise from the public sector, research institutions, universities and industry will be set up to monitor and advise the Government on measures to improve product and process innovations. To complement the national innovation system, a technology foresight study will be conducted to determine the priorities in research and technology development programmes, particularly for new and emerging technologies. This Study will provide an insight on the key technologies to promote and assist in allocating R&D funds to these strategic areas. In

addition, the findings and recommendations for the food, machinery and wood-based industries based on the National Technology Mapping Programme II will provide the relevant information on the key technologies and areas of innovation that need to be developed to enhance their competitiveness.

7.65 To ensure success in commercialisation of R&D findings, ideas and knowledge will have to be transformed into products and processes that are market-driven. As such, applied, strategic and prioritised R&D projects that have high potential for commercialisation will be given priority for research funding. The Business Development Unit at MOSTE will focus greater efforts on commercialisation to facilitate the spin-off and development of knowledge-intensive and high value added industries. Measures will also be taken to increase the level of diffusion of research findings generated by public research institutions and universities as well as to enhance public-private sector collaboration. The intellectual property rights and incentive schemes will be reviewed and improved to further encourage researchers to patent and commercialise their research findings. As part of the efforts to improve the rate of commercialisation, a comprehensive study on incubators and related mechanisms and processes will be conducted to bridge the gap between R&D and commercialisation.

7.66 *Offset arrangements* are part of procurement contract to obtain transfer of technology to upgrade and improve the local technology base as well as provide training and spin-offs for the local industry. The Government will review the whole approach to the offset programme with the aim of strengthening its framework and formulating guidelines as well as determining appropriate processes, structures and practices. Measures to be undertaken will include extending offset arrangements to the procurement of goods and services in defence, transportation, health, education, agriculture and mining. The benefits of technology transfer of offset arrangements for a particular procurement will not be limited to the industry concerned but will also be extended to other sectors. This is to ensure that offset arrangement will assist in enhancing economic growth through accelerating the industrialisation process, creating employment opportunities, uplifting the social status, improving the level of technology, widening the market for our products, increasing competitiveness, enhancing the capacity building of human resources as well as uplifting social infrastructure.

7.67 To ensure effective implementation of the offset programme, a Technology Depository Agency (TDA) will be established to function as a central technology planning and monitoring body as well as coordinate the overall technology needs for the country. The TDA will strive to seek appropriate information and manage the country's technology requirements as well as link these requirements with future procurements to meet the country's development objectives.

Promoting Investment

7.68 Foreign investment remains important for the development of the manufacturing sector, especially in high technology and knowledge-based industries. Towards this end, measures to encourage the inflow of foreign investment will include overseas trade and investment missions to several capital exporting countries such as Europe, Japan, Republic of Korea, Singapore and the United States. Special integrated project missions will also be undertaken for specific industries such as advanced electronics, optics and photonics, medical devices, biotechnology, pharmaceuticals and manufacturing-related services. In addition, MNC suppliers' conferences will be held to attract MNC suppliers to expand their operations in Malaysia and source parts and components from local manufacturers. International investment promotion events in Malaysia as well as dialogue sessions with foreign chambers of commerce and associations will serve as a platform for investment briefings on the investment environment in Malaysia as well as business opportunities available. To increase the export market for local manufacturers through contract manufacturing, the Malaysian Industrial Development Authority (MIDA) overseas centres will provide information on contract manufacturing capabilities of Malaysian manufacturers.

7.69 Efforts will also be intensified to encourage domestic-driven economic activities. In this regard, domestic investment seminars, specific industry seminars and workshops, awareness programmes as well as dialogue sessions will be organised to provide the latest update on policies, incentives, facilities and support services available to the domestic business community. Pro-active and effective follow-up programmes will be pursued to assist in realising the investment interests indicated by companies that participated in the seminars. In addition, MIDA will handhold approved domestic investors in the manufacturing and related services sectors through the entire approval cycle for their project implementation and operation. To assist and facilitate Malaysian companies' participation in identified and targeted industry sectors, specific directories on supporting industries such as mould and die, machinery and electronic components will be published.

Improving the Delivery System

7.70 To create a business-friendly environment for investors, the Government will focus efforts to reduce administrative red tapes, review work processes and abolish unnecessary procedures. Infrastructure support facilities will be improved and the necessary incentives will be introduced from time to time to ensure that

Malaysia remain attractive and competitive to foreign investors. In line with efforts to improve the delivery system, MIDA will act as a one-stop agency for investment in the manufacturing sector and assist investors in obtaining all necessary approvals for projects until they are operational. The local authorities will function as the focal point at the state level in processing and approving building plans and issuing certificate of fitness. In addition, a fast-track system for land conversion will be implemented to expedite project implementation and reduce the time lag from project application to completion. To improve the infrastructure for speedy clearance of goods, the EDI will be implemented at all ports and airports, providing services for on-line submission and validation of forms as well as payment of excise duty, sales tax and service tax. In addition, appropriate incentives, training and infrastructure facilities will be provided by the Government to promote and accelerate the development of these services.

Enhancing Capability of the Manufacturing Workforce

7.71 Apart from adequate capital, suitable technology and entrepreneurship, the supply of an appropriately skilled and technical work force is a critical factor in shifting upwards the whole value chain of the manufacturing sector. In this regard, the various skills development centres and other training institutions will intensify efforts to fulfill the requirement of skilled workforce in the related sectors of the industry. Besides qualification and experience, work attitude and work ethics will be improved. Towards this end, the productivity-linked wage system will be implemented on a larger scale during the remaining Plan period. At the same time, the mindset of the private sector will have to be changed in the efforts to transform Malaysia into a knowledge-based economy. Apart from Government efforts to provide a business-friendly environment, the private sector, particularly the SMEs, will need to be more sensitive and responsive to meet the challenges of global competitiveness and the speed of changing technology. Industry enterprises must develop and transform themselves into efficient and learning organizations to attract, retain and develop the required resources to be more competitive, service-oriented and efficient.

Efforts to Further Enhance the Performance of SMEs

7.72 As the need to rely on domestic demand and domestic-oriented industries for the nation's economic growth increases, the Government will continue to provide support to strengthen the SMEs and enhance existing programmes. During the remaining Plan period, greater efforts will be made to improve the

institutional support system, facilitate accessibility to financing, upgrade technological skills, enhance market access, promote the greater usage of ICT and increase awareness of product branding as well as the protection of intellectual property rights.

7.73 To ensure effective and coordinated implementation of all SME development programmes as well as optimal utilisation of Government resources, SMIDEC will coordinate the various activities and support programmes conducted by agencies involved in the development of SMEs. This will involve addressing gaps and duplications in the current framework to improve efficiency, coordinate entrepreneurial training, consultancy and advisory services, market promotion, financing and SME database. As a pool of highly trained and skilled workers is an important contributory factor to the success of SMEs, training of SME workers will be intensified. To enhance SMEs resilience, management and business skills training will also be provided to entrepreneurs and personnel dealing with SMEs both from the public and private sectors. In this regard, the establishment of an institute for small business management and technology will be explored. To meet the increase in demand for access to financing while at the same time reduce the overall credit risk associated with lending to the SMEs, a credit insurance system will be established.

7.74 To complement Government efforts, the SMEs are encouraged to further improve their competitiveness. In this regard, they will need to acquire and develop better knowledge of market demand, improve product design and quality, innovate in the use of materials, technology and processes, reduce cost and increase productivity. SMEs will also need to differentiate their products through branding to create long-term brand loyalty and undertake aggressive marketing.

7.75 The Government will continue to promote and upgrade Bumiputera SMEs through the BCIC programme. Efforts will be intensified to assist Bumiputera entrepreneurs improve their skills in business management, ICT, R&D, product development and marketing as well as establish strategic alliances with non-Bumiputera entrepreneurs. To upgrade their marketing capability and capacity, an entrepreneur gallery will be set up to display products produced by Bumiputera entrepreneurs. In addition, a trading house will be established to enable these entrepreneurs to gather their products at one central place and market them directly to wholesalers and retailers. It will also provide a proper venue for Bumiputera entrepreneurs to undertake marketing activities in an integrated and coordinated manner, including labelling, packaging and branding. In addition,

a study will also be conducted to review the performance of the existing BCIC programme and identify new strategies and approaches with the view to further improving its effectiveness.

7.76 To enable SMEs in rural industries to penetrate world markets, the Government will intensify efforts to enhance their competitiveness through various programmes such as entrepreneurial development, product design and packaging improvement, marketing assistance and subsidies for machinery. In this regard, the Malaysia External Trade Development Corporation (MATRADE) will be corporatised. Measures to further enhance the effectiveness of MATRADE's export promotion efforts will include road shows to the Middle East and Africa as well as the hiring of expertise from the private sector. In addition, the private sector will also be encouraged to establish trading houses to facilitate the promotion and export of Malaysian products.

7.77 The concept of *one district one industry* will be strengthened to cover a wider area of participation. Hence, efforts will be geared towards enhancing the use of technology in rural industry production processes, acquiring quality accreditation and upgrading market promotion by establishing links with corporate and international clients.

IV. ALLOCATION

7.78 The revised allocation to support industrial development in the Eighth Plan is RM2.9 billion, an increase of 11.9 per cent from the original Eighth Plan allocation, as shown in *Table 7-11*. The estimated expenditure for the review period is RM1.8 billion. The remaining allocation will be expended in priority areas including the provision of funds and infrastructure for SMEs, funds for R&D and technology acquisition, training of industrial workers and the establishment of the Malaysian Trade and Distribution Centre in Bahrain to promote the exports of Malaysian goods in the Middle East.

V. CONCLUSION

7.79 The manufacturing sector continued to be the important contributor in generating economic growth. For the remaining Plan period, efforts will be focused on implementing policies and strategies to sustain growth and ensure an

TABLE 7-11

DEVELOPMENT ALLOCATION FOR INDUSTRIAL DEVELOPMENT, 2001-2005
(RM million)

<i>Programme</i>	<i>8MP Allocation</i>		<i>Estimated Expenditure, 2001-2003</i>	<i>Balance, 2004-2005</i>
	<i>Original</i>	<i>Revised</i>		
Industrial Estates Development	248.0	230.2	102.6	127.9
Development of Industrial Infrastructure	95.0	100.0	65.0	35.0
SME Development	1,091.8	1,120.1	665.7	454.4
Domestic Investment Fund	670.0	670.0	406.0	264.0
Rural Industries	140.0	164.5	125.4	39.1
Training & Consultancy Services	251.0	519.3	393.9	125.4
Investment in Heavy Industries	24.2	24.2	24.2	0.0
Implementation of Action Plan for Industrial Technology Development	78.5	78.5	56.5	22.0
Total	2,598.5	2,906.8	1,839.3	1,067.5

efficient, resilient and competitive sector. Efforts will be made to increase both foreign and domestic investments to generate new sources of growth as well as contribute towards developing indigenous capabilities. To maintain competitiveness, emphasis will continue to be given on R&D and technology innovation to position and propel the nation into high technology and value added activities. Correspondingly, human resource development will be enhanced to improve productivity. At the same time, appropriate measures will be introduced to rationalise and integrate efforts to develop SMEs to become the catalyst of growth.

Chapter 8

Infrastructure and Utilities

8

INFRASTRUCTURE AND UTILITIES

I. INTRODUCTION

8.01 During the review period, infrastructure and utility projects continued to contribute to economic growth through linkages and spillover benefits. Additional new projects, which supported tourism and trade, were also implemented. In addition, measures were taken to improve the efficiency of the delivery system of transportation and utility services. These efforts increased the capacity and improved the efficiency of infrastructure and utilities, which facilitated business activities and enhanced quality of life.

8.02 For the remaining Plan period, focus will be given towards improving service delivery and increasing capacity to further enhance the competitiveness and resilience of the economy. Measures will be taken to integrate transport services to ensure the seamless operation of a multimodal system. Priority will be given towards enhancing quality and reliability in the supply of water and electricity to meet the increasing demands from both domestic consumers and industries. New environmentally sustainable technologies will be studied and adopted to improve quality of life.

II. PROGRESS, 2001-2003

8.03 During the review period, the value added of infrastructure and utilities grew by 4.6 per cent per annum, lower than the Plan target of 8.6 per cent. However, the implementation of infrastructure and utility projects contributed to the growth of the economy and constituted 12.6 per cent of Gross Domestic Product in 2003. The expansion in capacity of roads, rail, ports and airports was achieved with active participation of the private sector. The design and build method was used to shorten processing time while financing of projects was

facilitated by development financial institutions through privatisation and the deferred payment scheme. To enhance the reliability of supply of utilities, distribution networks were upgraded and expanded.

Roads

8.04 During the review period, the implementation of road and bridge projects was accelerated with expenditure of RM10.3 billion, representing 73.6 per cent of the total allocation for this subsector under the Plan period. In addition, the private sector invested about RM1.3 billion under the privatisation programme to construct toll highways. Consequently, the national road network increased by 2,140 km to 75,160 km.

8.05 The completion of several roads and bridges such as the Titi Karangan - Kupang section of the Second East-West Link Road and the Pos Blau - Kampung Kuala Betis section of the Simpang Pulai - Gua Musang - Kuala Berang Road enhanced the development of new areas. Accessibility to the new airports at Tawau and Bintulu was improved with the upgrading of the access roads. In addition, two privatised road projects were completed, namely, the New North Klang Straits Bypass and the Western Kuala Lumpur Traffic Dispersal Scheme (SPRINT Highway) Package A & B. The New North Klang Straits Bypass provided an alternative access road to the North Port, Port Klang, while the completion of the SPRINT Highway Package A & B provided a better linkage between Damansara and the western part of Kuala Lumpur. The list of major road projects implemented during the review period is as shown in *Table 8-1*.

8.06 In line with efforts to improve safety and driving comfort, several road-upgrading projects were completed during the review period. Among the major roads upgraded were the Brinchang - Lojing Road, the Beaufort - Sindumin Road and the Betong - Kayu Malam Road. The upgrading of Brinchang - Lojing Road improved driving conditions within the Cameron Highlands area. The upgrading of Beaufort - Sindumin Road in Sabah and the Betong - Kayu Malam Road in Sarawak provided better road connections between the major towns in the two states. Under the road safety programme, 85 kilometres of motorcycle lanes were constructed to reduce the accident rate among this class of vehicles. Safety campaigns and nation-wide enforcement of traffic rules during long holidays also contributed to the reduction in the number of accidents. The fatality rate declined from 5.7 deaths per 10,000 registered vehicles in 2000 to 4.9 deaths in 2002, as shown in *Table 8-2*.

TABLE 8-1

**MAJOR ROAD PROJECTS IMPLEMENTED,
2001-2005**

<i>Project</i>	<i>Length (km)</i>	<i>Completion (Year)</i>
Completed Projects		
i. Government-Funded Projects		
Upgrading of Brinchang - Lojing Road	22	2001
Upgrading of Beaufort - Sindumin Road	65	2001
Upgrading of Beluran - Spur Road	31	2001
Upgrading of Kuala Kangsar - Grik Road (Phase 3)	21	2002
Access Road to Proton City Industrial Park (Phase 1 & 2)	9	2002
Middle Ring Road II (Phase II)	6	2002
Rehabilitation of Sandakan - Tawau Road	29	2002
Upgrading of Keningau - Nabawan Road (Phase I)	45	2002
Upgrading of Merotai - Kalabakan Road (Phase I)	20	2002
Sayong Bridge, Kuala Kangsar	0.4	2002
Tanjung Manis - Rejang - Belawai Road	18	2003
ii. Privatised Projects		
New North Klang Straits Bypass	18	2001
Western Kuala Lumpur Traffic Dispersal Scheme (SPRINT) (Package A & B)	20	2001
Under Construction		
i. Government-Funded Projects		
Upgrading of Pitas - Kanibongan Road	28	2004
Kunak - Semporna Road	42	2004
Triso - Melebu - Pusa Road	51	2004
East Coast Expressway	169	2004
Upgrading of Merotai - Kalabakan Road (Phase 2)	59	2004
Upgrading of Muar - Melaka - Alor Gajah - Simpang Ampat Road	70	2004
Upgrading of Batu Pahat - Ayer Hitam - Kluang Road	47	2004
Upgrading of Kapar - Sabak Bernam and Klang - Banting Road	118	2004
Sungai Rejang Bridge	7	2004
Upgrading of Kuching - Serian Road	34	2005
Kanibongan - Nangoh Road	150	2005
Pusa - Sesang Coastal Road	46	2005
Tanjung Kidurong - Bakam Coastal Road	178	2005
Upgrading of Gemas Baru - Ayer Hitam Road	120	2005
Trans Eastern Kedah Hinterland Highway	116	2005
Sepulut - Kalabakan Road	145	2005
Sipitang - Tenom Road	54	2005
Keningau - Kimanis Road	59	2005
ii. Privatised Projects		
New Pantai Highway	20	2004
Kajang Ring Road	36	2004
Butterworth Outer Ring Road	14	2004
Shah Alam - Kuang Highway (Guthrie Corridor Expressway)	25	2004
Western Kuala Lumpur Traffic Dispersal Scheme (SPRINT) Package C	6	2004
Kajang - Seremban Highway	46	2005

TABLE 8-2

ROAD ACCIDENTS AND FATALITY RATE, 2000-2002

	<i>Number of accidents</i>					
	<i>2000</i>		<i>2001</i>		<i>2002</i>	
	<i>Accidents</i>	<i>Fatality</i>	<i>Accidents</i>	<i>Fatality</i>	<i>Accidents</i>	<i>Fatality</i>
Type of Vehicle						
Motorcycle	79,816	3,205	85,761	3,369	86,834	3,426
Car	268,881	1,023	300,910	1,044	320,719	1,015
Bus	9,660	49	9,275	68	9,258	46
Lorry	35,076	183	36,448	175	37,803	198
Others	47,953	1,575	50,957	1,193	53,381	1,200
Total	441,386	6,035	483,351	5,849	507,995	5,885
Type of Road						
Expressways		408		376		330
Federal Roads		2,089		1,957		1,716
State Roads		1,365		1,273		1,038
Municipal Roads		718		926		673
Other		1,455		1,317		2,128
Total		6,035		5,849		5,885
Accidents per 10,000 registered vehicles	237.40		234.62		232.68	
Death per 10,000 registered vehicles		5.72		5.17		4.89

8.07 Emphasis was also given to improve the accessibility of rural areas, particularly in Sabah and Sarawak. During the review period, RM5.9 billion was spent on the construction of roads, with a minimum of JKR-R3 standard. In addition, RM1.5 billion was spent to construct and maintain village roads, which added 14,488 km of roads that provided access to about 2.6 million population.

8.08 Road development indicators were revised to take into account lanes added to existing roads through upgrading projects. The revised road development indicators are as shown in *Table 8-3*. The Road Service Level increased from 2.98 km per thousand population in 2000 to 3.17 in 2003 reflecting improved road connectivity.

TABLE 8-3

ROAD DEVELOPMENT INDICATORS, 2000-2005

<i>Indicator</i>	<i>2000</i>	<i>2003</i>	<i>2005</i>
Road Density ¹	0.20	0.22	0.23
Road Development Index ²	0.75	0.85	0.86
Road Service Level ³	2.98	3.17	3.18

*Notes:*¹ Measures road lane length over the total area.² Measures the level of road development taking into account both area and population size of the country.³ Measures total road lane length per 1,000 population.

8.09 The rapid development of road works in the country provided the opportunity for local companies to gain vast experience, which enabled them to venture into international markets. The Government, through the Construction Industry Development Board Malaysia, facilitated the participation of local contractors in 26 road projects overseas. In 2002, the Professional Services Development Corporation Sdn. Bhd. (PSDC), a Government owned company was established. The PSDC provided a common platform for local professional service providers to improve their capacity and capability to meet the challenges of globalisation.

Urban Transport

8.10 Traffic in major urban centres, particularly the Kuala Lumpur conurbation, continued to grow rapidly during the review period. Efforts were intensified to create a more integrated, efficient and multimodal urban transport system. Efficient traffic management systems were instituted to improve traffic flows. Various measures were also taken to promote the use of public transport.

8.11 The urban rail system connecting Kuala Lumpur Sentral (KL Sentral) to KL International Airport (KLIA) began commercial operations in 2002. The KLIA Express provided a fast, reliable and comfortable mode of transport to KLIA. The KLIA Transit enabled access to KLIA from KL Sentral to Bandar Tasik Selatan, Putrajaya and Salak Tinggi. The 8.6 kilometre intra-city light rail network, the KL Monorail, commenced operations in August 2003. With the operation of KLIA Express, KLIA Transit and KL Monorail, the role of KL

Sentral as a major public transport hub integrating intra- and inter-city rail systems was achieved. During the review period, daily ridership on the light rail mass transit services in Kuala Lumpur, namely, Light Rail Transit System I (LRT STAR) and Light Rail Transit System II (LRT PUTRA) as well as KLIA Express and KLIA Transit increased, as shown in *Table 8-4*.

TABLE 8-4				
PASSENGER RIDERSHIP PER DAY ON LRT STAR, LRT PUTRA, KLIA EXPRESS AND KLIA TRANSIT, 2000-2003				
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>
LRT STAR	77,803	88,508	91,300	94,480
LRT PUTRA	121,950	143,777	147,802	150,494
KLIA Express and KLIA Transit	–	–	5,135	6,014
KL Monorail	–	–	–	27,000

8.12 Works on a monorail system was undertaken to provide an efficient mass transit system in Putrajaya. These works included soil investigations, alignment surveys and casting of guide beams. The Study On The Implementation Of An Integrated Transportation System In Putrajaya And Cyberjaya was conducted to formulate an integrated, multimodal system aimed at achieving a modal split of 70:30 between public transport and private vehicle usage in the core areas of Putrajaya and Cyberjaya.

8.13 Efforts were undertaken to improve traffic management and reduce traffic congestion, which included the application of an Integrated Transport Information System (ITIS) in Kuala Lumpur and the Klang Valley. Closed circuit television cameras were installed at strategic locations to monitor traffic flows, which enabled remedial actions to be taken quickly to address traffic obstructions such as accidents, stalled vehicles and road works. This information was also made available to the public through the ITIS website, which was launched in 2003.

8.14 Emphasis continued to be given to the promotion of public transport as an efficient, convenient and reliable mode of transport. Measures were also taken to enhance the use of multimodal public transport to facilitate intra- and inter-city transport services. Works on integrated transport terminals at Bandar Tasik Selatan and Gombak in the Klang Valley commenced during the review period.

Rail Transport

8.15 During the review period, the focus of railway development was to improve quality, efficiency and safety to enhance the competitiveness of passenger and freight services. Among the measures taken were double tracking, rehabilitation and strengthening of the main line, refurbishment of coaches and the upgrading of bridges, halts and stations. To upgrade the freight services, efforts were geared towards improving fleet operations, control systems as well as maintenance and overhaul programmes.

8.16 For passenger services, *Keretapi Tanah Melayu Berhad* (KTMB) operated 24 inter-city services along the west coast, 12 services on the east coast and two services transversing from west to east of the Peninsular. Air-conditioned buffet and first class coaches were added to increase the comfort and service levels. Commuter traffic between Rawang - Kuala Lumpur - Seremban and Sentul - Port Klang increased from 19.3 million passengers in 2000 to 25 million in 2003. Inter-city passenger traffic decreased from 1.23 billion passenger-kilometres in 2000 to 1.20 billion in 2003 due to the temporary reduction in services caused by double tracking works from Rawang to Ipoh. Similarly, total freight traffic, mainly container cargo and cement recorded a decrease from 5.5 million tonnes in 2000 to 5.0 million in 2003.

8.17 Infrastructural works including double tracking, strengthening and electrification of tracks as well as modernisation of signalling and communications systems were implemented to further improve the railway system. The construction of the 180 kilometre Rawang - Ipoh electrified double tracking project attained 72 per cent completion during the review period. Other major infrastructure projects included the rehabilitation of 69 bridges between Gemas, Negeri Sembilan to Kuala Lipis, Pahang and seven bridges between Merapoh, Pahang to Wakaf Baru, Kelantan.

Ports

8.18 During the review period, focus was given to expanding capacity, upgrading and increasing facilities of ports as well as improving other supporting maritime-related services. Emphasis was also directed towards enhancing efficiency and productivity of port operations and management as well as strengthening related ancillary services to increase the usage of local ports, especially Port Klang and Port of Tanjung Pelepas (PTP). In the shipping subsector, efforts were continued to increase the volume of cargo transported by locally registered ships.

8.19 A number of port-related projects were completed, including additional berths of 720 metre length at PTP, new basin at Kuantan Port, and additional container berths and yards at West Port, Port Klang. In Sarawak, the construction of a third Liquefied Natural Gas Jetty (LNG3) at Bintulu Port was completed in the middle of 2002 and began its operations in July 2003. In Sabah, several port-related projects were implemented including the construction of a container terminal at Sepangar Bay, the upgrading of port handling facilities and the construction of a barter trade centre and a ferry terminal at Tawau. In addition, the ferry terminal building and jetty repair works at Menumbok were completed in 2003.

8.20 Total port capacity increased from 324.9 million tonnes in 2000 to 443.4 million tonnes in 2003, as shown in *Table 8-5*. The volume of cargo handled increased by 13.2 per cent per annum, from 223.9 million tonnes to 338.8 million tonnes during the same period. This was higher than the targeted growth of 11.6 per cent per annum for the Plan period. Containerised cargo increased from 4.9 million twenty-foot equivalent units (TEUs) to 10.6 million TEUs, registering the fastest growth rate at 19.8 per cent per annum during the review period. Despite the global economic slowdown, the number of ship calls at ports increased from 81,313 in 2000 to 92,900 in 2003.

8.21 Efforts were also intensified to promote Port Klang and PTP as a hub and cargo transshipment centre, respectively. These included the establishment of business partnerships such as West Port, Port Klang with Hutchinson International Terminal and PTP with Maersk Sealand as well as the provision of rebates and other incentives. The Container Security Initiative, which required pre-screening of US-bound cargo, was implemented at Port Klang and PTP to facilitate clearance of goods to the United States. Containerised cargo handled at Port Klang increased from 3.2 million TEUs in 2000 to 5.1 million TEUs in 2003, registering a growth of 14.5 per cent per annum. Ship turnaround time at port in Westport, Port Klang reduced from 16.4 hours in 2000 to 13.6 hours in 2003. In the same period, the volume of cargo at PTP increased eight fold from 413,000 TEUs to 3.5 million TEUs. Performance at PTP also improved with average container handling rates per hour increasing from 84.4 to 90.2 containers.

8.22 Other measures to enhance the efficiency of port management and supporting services included the introduction of compulsory training on port operations and customs procedures for forwarding agents, increased automation and computerisation as well as improved interfacing capabilities of electronic data interchange.

TABLE 8-5

**PORT CAPACITY, NUMBER OF BERTHS, CRANES, SHIP CALLS AND
VOLUME OF CARGO HANDLED AT PORTS¹, 2000-2005**

	2000	2003	2005
Port Capacity (million tonnes)	324.9	443.4	481.3
Number of Berths	221	230	237
Number of Cranes ²	131	210	251
Number of Ship Calls	81,313	92,900	100,950
Volume of Cargo Handled (million tonnes)	223.9	338.8	414.1
General	23.3	27.6	30.5
Liquid Bulk	87.5	126.3	158.5
Dry Bulk	28.6	33.9	37.1
Container	84.5	151.0	188.0
Containerised cargo (million TEUs)	4.9	10.6	14.2

Notes:

¹ Includes Port Klang, Penang, Pasir Gudang, Tanjung Pelepas, Kuantan, Kemaman, Bintulu, Kota Kinabalu, Lahad Datu, Sandakan, Tawau, Kuching, Miri, Rajang, Lumut, Teluk Ewa, Kuala Perlis, Kuala Kedah, Tg. Bruas, Port Dickson, Kerteh, Sungai Udang and Labuan.

² Includes gantry and multipurpose cranes.

The commencement of a sea-air cargo programme using simplified documentation for cargo utilising both sea and air modes of transport facilitated customs clearance.

8.23 Jetty facilities on islands, particularly Pulau Ketam, Pulau Langkawi, Pulau Pangkor and Pulau Tioman, were upgraded to improve cargo and passenger services. In addition, to encourage the development of yachting, recreational and other tourism activities, marina facilities at Kuala Kedah and Batu Uban, Pulau Pinang began operations in 2003. Other suitable and strategic sites for marinas were also identified for development. The Langkawi International Yacht Registry Act was enacted in October 2003 to establish Langkawi as a one-stop centre for registration of yachts to further promote yachting and related activities.

8.24 Measures continued to be taken to promote the growth of the local shipping industry. The Cabotage Policy was reviewed in January 2001 to further encourage the use of local ships to ferry passengers and cargo between two or more destinations in the country. Rationalisation and greater investment through leasing, joint ventures, chartering business and other strategic alliances further strengthened the Malaysian shipping industry. The number of ships registered in Malaysia increased at an average of 4.5 per cent per annum from 3,126 ships or 6.8 million gross registered tonnage (GRT) in 2000 to 3,540 ships or 7.2 million GRT in

2003. Major local shipping lines including Malaysia International Shipping Corporation (MISC) and Halim Mazmin Berhad increased their capacity during the review period. MISC's fleet increased from 120 vessels in 2000 to 151 in 2003 while that of Halim Mazmin Berhad increased from six vessels to nine. Nepline Berhad, however, reduced its fleet from nine vessels to six in 2003 due to new regulation on double-hull requirement.

8.25 During the review period, about RM500 million was spent on dredging and reclamation works. In 2002, two dredging companies were given long-term contracts for fifteen years to carry out all dredging and reclamation works at ports and river mouths. These companies were required to increase their capacities by acquiring additional equipment.

8.26 Efforts were continued to improve navigational safety and to enhance enforcement and rescue operation capabilities of the Marine Department. Additional enforcement and rescue vessels were purchased to contain oil spills and pollution as well as to conduct rescue operations. Marine Police also purchased additional patrol boats to assist in surveillance to enhance safety. Ship incidents such as collision, running aground and fire increased from 16 in 2000 to 28 in 2002, mainly due to the increasing number of vessels plying in Malaysian waters. The number of oil spills decreased from 18 to 11 in the same period. Other measures included the implementation of the Vessel Traffic System and Traffic Separation Scheme in the Straits of Malacca. These systems monitored vessel movements and provided information on polluting ships and other incidents, thus increasing maritime safety and reducing threats to the marine environment.

Airports

8.27 During the review period, airport capacity expanded with the commercial operation of two new airports and completion of upgrading works on existing airports. Flight safety was enhanced with the installation of navigational aids. Rationalisation as well as productivity and efficiency improvements of air services were undertaken.

8.28 Air travel was affected by the occurrence of global crisis, particularly the advent of Severe Acute Respiratory Syndrome at the beginning of 2003. Passenger traffic contracted by 8.2 per cent in the first half of 2003 but recovered to record 32.9 million passengers in 2003. Air cargo traffic increased to about 914,000 tonnes in 2003 from 773,892 tonnes in 2000.

8.29 Capacity and accessibility were enhanced with the completion of several airport projects in Sabah and Sarawak. In Sabah, the new Tawau Airport, which can handle wide-body, medium haul aircraft, commenced operations in December 2001. The new Bintulu Airport in Sarawak with the capacity to handle wide-body, medium haul aircraft, began operations in March 2003, replacing the old airport which could handle 50-seater turbo prop aircraft. Upgrading works on the Miri Airport, Sarawak to handle wide-body, medium haul aircraft were completed in June 2003. It also included a new 16,110 square metre passenger terminal building with a modern baggage handling system and three aerobridges to enhance passenger traffic flow and comfort.

8.30 Accessibility to the rural areas of Sarawak was improved with the implementation of several projects. The new Limbang Airport enabled the use of 50-seater turbo prop aircraft, more than doubling the availability of seats on the Miri - Limbang route, from the existing 19-seater turbo prop aircraft. The new Long Akah airstrip provided air access to the surrounding villages, which enabled the locals to reach Miri within an hour. Facilities at the existing airstrips of Bakelalan, Bario, Long Lellang, Long Seridan and Mulu were improved.

8.31 Focus was also given to improving air traffic management and flight safety. A new radar was installed in Miri to improve surveillance of the air space of central Sarawak. This radar complemented the existing radars in Kuching, Sarawak and Kota Kinabalu, Sabah.

8.32 Malaysia Airlines (MAS), the national carrier, was restructured in 2001 under which its aircraft fleet was sold to and leased back from *Penerbangan Malaysia Berhad*. MAS also undertook various turnaround programmes including improvements in cost control as well as increasing productivity and efficiency. To rationalise its network, services to several cities were terminated. New services were introduced to Mumbai, Bangalore, Hyderabad and Colombo. Several cities in Scandinavia were served under the MAS-KLM code-share arrangements. Frequencies to Guangzhou, Beijing, Shanghai, Ho Chi Minh City, Phnom Penh, Tokyo, Bangkok, Phuket and Denpasar were increased. As at March 2003, the MAS network spanned 109 destinations of which 77 were international. MAS operated flights to 32 domestic and 61 international destinations while code-share partners served 16 destinations.

8.33 Another scheduled airline, Air Asia, under a new management, introduced no-frills low-fare domestic flights in December 2001. Operating a fleet of seven

B737-300 aircraft, Air Asia provided point to point services to 13 destinations and carried more than one million passengers within the first year of service. The low fares, direct services and convenience of on-line booking and payment contributed to the high load factor of the airline.

Energy

8.34 In line with the growth of economy, the peak demand for *electricity* registered a steady growth during the review period. Peak demand grew at a rate of 5.8 per cent per annum reaching 12,637 megawatts (MW) in 2003, as shown in *Table 8-6*. To meet the growth in peak demand, the *electricity generation capacity* was increased from 14,291 MW in 2000 to 18,562 MW in 2003. The bulk of the capacity expansion was in Peninsular Malaysia, from 12,645 MW in 2000 to 17,015 MW in 2003.

TABLE 8-6				
INSTALLED CAPACITY, PEAK DEMAND AND RESERVE MARGIN, 2000 - 2005				
	<i>Generation By System¹</i>	<i>Accumulated Installed Capacity (MW)</i>	<i>Peak Demand² (MW)</i>	<i>Reserve Margin³ (%)</i>
2000	TNB	12,645	9,712	30.2
	SESB	785	391	100.8
	SESCo	861	554	55.4
	Total	14,291	10,657	34.1
2003	TNB	17,015	11,462	48.4
	SESB	678	472	43.6
	SESCo	869	703	23.6
	Total	18,562	12,637	46.9
2005	TNB	18,465	13,172	40.2
	SESB	733	543	35.0
	SESCo	1,069	816	31.0
	Total	20,267	14,531	39.5
Notes:				
¹ Refers to utilities and the respective IPPs.				
² Refers to the maximum power demand registered by the system in a stated period of time.				
³ Equals to the accumulated installed capacity minus peak demand divided by peak demand multiplied by 100.				

8.35 Two new gas-based Independent Power Producers (IPPs) plants at Kuala Sanglang, Perlis and Prai, Penang with a combined installed capacity of 1,000 MW were commissioned. The conversions of IPPs plants at Lumut, Perak (640 MW) and Telok Gong, Melaka (720 MW) from open cycle to combined cycle were also completed. The utilisation of coal in power generation was further increased with the commissioning of the 1,000 MW *Tenaga Nasional Berhad* (TNB) plant in Kapar and two units of 700 MW plant in Manjung. These plants utilised clean-coal technology to meet environmental standards. Several originally planned plant-up had been deferred due to the lower than expected electricity demand in the Peninsular. Meanwhile, the implementation of the Bakun Hydroelectric Project in Sarawak was continued. The construction of the coffer dam was completed in August 2001 and works on the main dam started in October 2002.

8.36 In line with the Fuel Diversification Policy to reduce dependency on a single fuel, emphasis was given to increase the use of coal as a source of fuel. During the review period, usage of coal increased from 8.8 per cent in 2000 to 16.5 per cent in 2003, as shown in *Table 8-7*. Although natural gas remained a major contributor in the *fuel mix*, its share was reduced from 77.0 per cent in 2000 to 73.2 per cent in 2003.

TABLE 8-7							
FUEL MIX IN ELECTRICITY GENERATION, 2000 - 2005							
(%)							
		<i>Oil</i>	<i>Coal</i>	<i>Gas</i>	<i>Hydro</i>	<i>Others</i>	<i>Total (GWh)</i>
Malaysia	2000	4.2	8.8	77.0	10.0	0.0	69,280
	2003	2.6	16.5	73.2	7.0	0.7	81,488
	2005	2.4	26.8	64.3	5.9	0.6	96,087
TNB	2000	2.3	8.7	79.6	9.4	0.0	63,634
	2003	0.9	17.2	74.8	6.3	0.8	74,539
	2005	0.9	28.2	64.9	5.4	0.6	87,800
SESB	2000	47.3	—	31.4	21.3	—	2,299
	2003	37.6	—	44.6	17.8	—	2,701
	2005	33.0	—	52.4	14.6	—	3,289
SESCo	2000	11.2	15.1	59.4	14.3	—	3,347
	2003	9.4	15.4	63.6	11.6	—	4,248
	2005	8.0	20.6	61.6	9.8	—	4,998

8.37 The electricity *transmission system* was further upgraded with the completion of several major transmission projects. In Peninsular Malaysia, the transmission line from Manjung power station to Ayer Tawar, Perak was completed in August 2001. In Sabah, the 275 kilovolt (kV) transmission lines connecting Kota Kinabalu and Kudat as well as the East Coast Grid project was completed at the end of 2003 while the construction of the East - West Interconnection Grid was started. To facilitate the transmission of electricity between Malaysia and Thailand, the existing interconnection was upgraded to a 300 MW High Voltage Direct Current line.

8.38 The *distribution network* was expanded to meet the increased demand from the consumers and to enhance quality of the system. The bulk of the expansion was in Peninsular Malaysia, which increased from 182,000 circuit-kilometres (cct-km) in 2000 to 200,000 cct-km in 2003. In addition, TNB's distribution network was further strengthened with the completion of 71 main intake substations and 62 main distribution stations. By the end of the review period, the distribution networks totaled 5,500 cct-km in Sabah and 8,800 cct-km in Sarawak.

8.39 The *productivity and performance* of the electricity supply services was improved, as shown in *Table 8-8*. During the review period, the three utilities, namely TNB, Sabah Electricity Sdn. Bhd. (SESB) and Sarawak Electricity Supply Corporation (SESCo) recorded improved performance in terms of units sold per employee and a continuous reduction in the number of interruption incidences. The System Average Interruption Duration Index also improved with the efforts of the utilities in enhancing work practices, utilisation of information and communications technology as well as ensuring better coordination of system operation and maintenance.

TABLE 8-8

**PERFORMANCE INDICATORS OF THE ELECTRICITY
SUPPLY SYSTEMS¹, 2001 AND 2002**

<i>Indicator</i>	<i>2001</i>			<i>2002</i>		
	<i>TNB</i>	<i>SESB</i>	<i>SESCo</i>	<i>TNB</i>	<i>SESB</i>	<i>SESCo</i>
System Losses ² (%)	12.2	17.8	13.7	12.9	18.4	14.5
Unit Sold per Employee ³ (GWh)	2.49	0.99	1.51	2.55	1.04	1.60
Interruption Incidences (number)	47,296	10,426	6,004	31,333	9,457	4,167
SAIDI (minute/customer/year)	281.0	2,279.8	731.3	149.0	1,779.1	610.6

Notes:

¹ Comprises utilities only.

² Refers to losses in generation, transmission and distribution stages as well as own-use.

³ Refers to the total unit of electricity sold divided by the total number of employees.

8.40 The supply of electricity to rural areas was improved. A total of 805 *rural electrification* projects benefiting 45,747 housing units, mainly in Sabah and Sarawak was implemented. As a result, rural electricity coverage for Sabah increased from 67.1 per cent in 2000 to 69.8 per cent in 2003, while that of Sarawak from 66.9 per cent to 77.3 per cent, as shown in *Table 8-9*.

TABLE 8-9			
RURAL ELECTRIFICATION COVERAGE ¹ BY REGION, 2000-2005			
(%)			
<i>Region</i>	<i>2000²</i>	<i>2003</i>	<i>2005</i>
Peninsular Malaysia	97.5	98.0	98.6
Sabah	67.1	69.8	72.8
Sarawak	66.9	77.3	80.8
Malaysia	89.5	91.5	92.8
<i>Notes:</i>			
¹ Refers to rural housing units served as a percentage of total rural housing units.			
² Refers to Census 2000 data excluding housing units served with private individual generators.			

8.41 During the review period, efforts were taken to promote the utilisation of *renewable energy* (RE) as a fifth fuel. The Small Renewable Energy Programme (SREP) was launched in 2001 to encourage and intensify the utilisation of RE. By end of May 2003, a total of 48 projects was approved with a grid connected capacity of 267.3 MW. Of these, 28 were biomass projects, 16 mini-hydro and four landfill gas. Apart from the SREP projects, the non-grid connected facilities of palm oil mills produced for their own consumption about 1,065 gigawatt-hour (GWh) or 1.3 per cent of the total electricity generated in 2003. To encourage the utilisation of RE, the 2001 Budget provided fiscal incentives for companies which utilised biomass as a source of energy and these incentives were extended for another three years until December 2005.

8.42 In Peninsular Malaysia, the power sector continued to be the main consumer of natural gas, accounting for about 70 per cent of total *gas utilisation* in 2003. The consumption of gas by the power sector grew at 5.0 per cent per annum from 1,179 million standard cubic feet per day (mmscfd) in 2000 to 1,332 mmscfd in 2003 with the commissioning of new gas-based power plants. The consumption

of gas by the non-power sector also increased from 338 mmscfd in 2000 to 572 mmscfd in 2003. As part of the efforts to promote the usage of natural gas by the small and medium industrial, commercial and residential consumers, the Natural Gas Reticulation System network was expanded by 28 per cent per annum from 462 kilometres in 2000 to 912 kilometres in 2003. To support the growth of the petrochemical industry, Centralised Utility Facilities were developed to supply utilities such as electricity, steam, demineralised water, oxygen and nitrogen to the integrated petrochemical complexes in Kertih, Terengganu and Gebeng, Pahang.

8.43 During the review period, 23 *natural gas for vehicles* (NGV) outlets were built in Johor Bahru, the Klang Valley and Prai, bringing the total to 44 by the end of 2003. As part of the efforts to increase the utilisation of NGV, *Petroliam Nasional Berhad* also provided price concession on conversion kits for taxis. As a result, about 7,500 vehicles, mostly taxis, were converted to run on dual fuel.

8.44 In line with the commitment to moderate the trend of increasing energy consumption, efforts were undertaken to encourage *efficient utilisation of energy*, particularly in the industrial and commercial sectors. Under the Malaysian Industrial Energy Efficiency Improvement Programme (MIEEIP), a total of 43 energy audits was conducted in eight manufacturing subsectors, namely, wood, pulp and paper, iron and steel, cement, rubber, glass, ceramics and food. The findings indicated potential energy savings of 5.6 per cent in electricity and 26.7 per cent in fuel with the implementation of energy efficiency (EE) measures by the audited companies. The energy audits also facilitated the establishment of an on-line Energy-use Benchmarking System at the National Productivity Corporation. The system enabled companies to effectively implement EE measures and improve their productivity.

8.45 In the commercial sector, efforts were focused to promote EE in buildings. A new Code of Practice in EE and RE for Non-residential Buildings was formulated as part of the Malaysian Standard MS 1525:2001. The new office building of the Ministry of Energy, Communications and Multimedia in Putrajaya, was designed with energy saving features in the architecture as well as the mechanical and electrical systems to demonstrate the technical and economic feasibilities of the Code. The new office building was also targeted to achieve an annual energy consumption of 100 kilowatt-hour (kWh) per sq. metre.

8.46 An energy audit programme was also launched to develop the energy service industry. Energy service companies were appointed to conduct energy audits involving 12 government buildings to establish a benchmark database on energy consumption as well as EE measures for reference by architects and engineers in designing new and retrofitting buildings. These energy audits recorded a range of energy consumption from 77.9 to 246.8 kWh per sq. metre per year and indicated a potential energy savings of 20 to 30 per cent annually with the implementation of recommended EE measures. In 2003, one of the audited government buildings was selected for implementation to demonstrate the practicality of the recommended measures.

8.47 The implementation of the EE initiatives increased the awareness of energy savings, particularly in the industrial sector. However, the implementation of the EE measures by industries was limited due to lack of financing and expertise. To encourage adoption of EE measures, the 2001 Budget provided fiscal incentives, which were subsequently extended to December 2005. In addition, the 2003 Budget reduced the write-off period from three years to one year for the accelerated capital allowance on EE-related equipment.

Water Supply

8.48 The water supply subsector focused on the construction of new infrastructure as well as the upgrading and rehabilitation of existing systems with the main objectives of meeting the water needs of the domestic and industrial sectors and improving the efficiency of water supply distribution. During the review period, measures were taken to reduce water loss and wastage of water. Efforts were also taken to expand supply of potable water to rural areas.

8.49 The supply of water increased with the construction of water treatment plants (WTPs) and modernisation of water supply systems. The Teluk Bahang/Batu Feringhi Water Supply Project in Pulau Pinang as well as Kuala Jelai Phase II WTP and Sungai Terip Phase III WTP in Negeri Sembilan were completed during the review period. The completion of Rasa Stage 1 WTP in 2002 and Sungai Selangor Dam as well as Bukit Badong Stage 1 WTP in 2003, which formed part of the Sungai Selangor Phase III Project (SSP3), increased potential water storage capacity by 235 million m³ and water treatment capacity by 525 million litres per day (Mld) in Selangor. The completion of source work projects increased the total national production capacity from 11,917 Mld in 2000 to

13,603 Mld in 2003. This ensured that water supply could meet demand which grew from 9,655 Mld to 11,317 Mld in the same period, as shown in *Table 8-10*. In addition, the national water supply coverage increased to 93 per cent in 2003, as shown in *Table 8-11*.

8.50 Water demand management and conservation strategies continued to be adopted to improve the efficiency and reliability of water supply systems. Water supply operators, related government agencies and non-governmental organisations also promoted public awareness on water conservation. State water supply authorities reduced non-revenue water (NRW) through replacing old asbestos cement pipes and faulty water meters, improved the capacity for leak detection and repairs, and prevented illegal connections. The NRW level was reduced from 40.0 per cent in 2000 to 37.0 per cent in 2003, as shown in *Table 8-12*.

TABLE 8-10						
PRODUCTION CAPACITY AND QUANTITY OF WATER SUPPLIED, 2000-2005 (mld)						
State	2000		2003		2005	
	Production Capacity	Quantity of Water Supplied	Production Capacity	Quantity of Water Supplied	Production Capacity	Quantity of Water Supplied
Johor	1,285	1,158	1,929	1,334	2,380	1,482
Kedah	988	804	1,004	935	1,239	1,038
Kelantan	214	212	238	236	264	262
Melaka	386	324	386	360	476	400
Negeri Sembilan	528	490	528	520	652	605
Pahang	762	500	905	696	1,117	773
Perak	969	812	1,158	961	1,429	1,067
Perlis	91	84	91	94	113	104
Pulau Pinang	1,050	741	1,166	847	1,439	941
Sabah	718	706	718	783	887	870
Sarawak	918	602	935	700	1,154	778
Selangor ¹	3,437	2,858	3,962	3,425	4,487	3,527
Terengganu	511	334	523	388	645	431
Labuan	60	30	60	38	75	42
Malaysia	11,917	9,655	13,603	11,317	16,357	12,320

Note: ¹ Includes Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya.

TABLE 8-11

URBAN AND RURAL WATER SUPPLY COVERAGE, 2000-2005
(% of population)

State	2000			2003			2005		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Johor	100.0	98.0	99.0	100.0	98.5	99.3	100.0	99.0	99.5
Kedah	100.0	97.0	98.0	100.0	98.0	99.0	100.0	99.0	99.5
Kelantan	63.0	48.0	53.0	70.0	55.0	62.5	72.0	58.0	65.0
Melaka	100.0	99.0	99.0	100.0	99.0	99.5	100.0	99.5	99.8
Negeri Sembilan	100.0	99.0	99.0	100.0	99.0	99.5	100.0	92.0	99.8
Pahang	98.0	89.0	93.0	98.0	89.0	93.5	99.0	92.0	95.5
Perak	100.0	99.0	99.0	100.0	99.0	99.5	100.0	99.5	99.8
Perlis	100.0	97.0	98.0	100.0	98.0	99.0	100.0	99.0	99.5
Pulau Pinang	100.0	99.0	99.0	100.0	99.0	99.5	100.0	99.5	99.8
Sabah	89.0	60.0	74.0	89.0	60.0	74.5	90.0	64.0	77.0
Sarawak	100.0	92.0	96.0	100.0	92.0	96.0	100.0	92.0	96.0
Selangor ¹	100.0	98.0	99.0	100.0	99.0	99.5	100.0	99.5	99.8
Terengganu	84.0	78.0	81.0	86.0	80.0	83.0	90.0	83.0	86.5
Labuan	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Malaysia	97.0	85.0	92.0	97.0	86.0	93.0	97.5	87.0	94.0

Note: ¹ Includes Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya.

8.51 A pilot project was undertaken in Labuan to further reduce NRW through the application of Geographical Information System (GIS). The GIS mapped out the water supply system infrastructure such as the routes of the pipe networks and locations of valves, reservoirs and WTPs. The Supervisory Control And Data Acquisition and telemetry systems were also applied in leak detection and automatic valve closure consequent to pipe burst. NRW in Labuan was reduced from 32.0 per cent in 2000 to 30.0 per cent in 2003, as shown in *Table 8-12*.

8.52 Preliminary works for the Inter-State Raw Water Transfer Project From Pahang To Selangor (ISRWT) project were undertaken. The Detailed Environmental Impact Assessment for the ISRWT project was approved by the Department of Environment in 2001. A socio-economic survey on the settlers at Felda Lembah Kelau and *Rancangan Tanah Pemuda Kelau* was also undertaken in 2002. In addition, two studies were completed in 2003, namely, the Additional Survey Of Flora And Fauna In The Lakum Forest Reserve (Additional Survey) including a survey of riverine fishery at Sungai Kelau and Sungai Semantan, Pahang and

TABLE 8-12

NON-REVENUE WATER, 2000-2005

<i>State</i>	<i>2000</i>		<i>2003</i>		<i>2005</i>	
	<i>%</i>	<i>Mld</i>	<i>%</i>	<i>Mld</i>	<i>%</i>	<i>Mld</i>
Johor	32	371	32	427	23	341
Kedah	46	370	43	402	42	436
Kelantan	44	93	43	101	38	100
Melaka	31	100	28	101	24	96
Negeri Sembilan	45	221	44	229	43	260
Pahang	38	190	38	264	37	286
Perak	38	309	34	327	32	341
Perlis	44	37	40	38	35	36
Pulau Pinang	23	170	20	169	18	169
Sabah	72	508	62	485	58	505
Sarawak	30	181	30	210	28	218
Selangor ¹	42	1,200	39	1,336	36	1,270
Terengganu	39	130	31	120	30	129
Labuan	32	10	30	11	28	12
Malaysia	40	3,890	37	4,221	34	4,199

Note: ¹ Includes Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya.

Environmental Impact Assessment (EIA) Study for the proposed conversion of 600 acres of Kelau Forest Reserve at Sungai Bilut for the resettlement of the Sungai Temir Orang Asli, Pahang. The Additional Survey provided inputs to the preparation of the Environmental Management Plan for the construction of ISRWT project while the EIA Study covered the environmental and social issues related to the resettlement of Orang Asli Sungai Temir to Sungai Bilut.

8.53 Efforts were made to reduce the wasteful use of treated water. In this regard, property developers were required to install 6-litre toilet flushing systems in buildings. Studies on the practicalities, economics and health aspects of rainwater harvesting and utilisation were also conducted.

8.54 To meet the increasing demand for water in rural areas, a total of 293 projects was implemented under the Alternative System Of The Rural Water Supply Programme (BALB) nation-wide, mostly in Sabah and Sarawak. A total of RM12 million was spent for the implementation of BALB that included the construction of 141 gravity flow, 140 tube well and 12 rainwater harvesting

projects. BALB benefited about 43,000 people in Sabah and 10,000 people in Sarawak.

8.55 Groundwater sources continued to be given emphasis as an alternative to supplement surface water. The major groundwater supply system completed was the Chicha WTP in Kelantan, with a capacity of 60 Mld, which sourced its water from 38 wells. The capacity of the existing Kg. Puteh groundwater supply system was increased to 45 Mld from 30 Mld with the construction of a production well in 2003. The Study On The Sustainable Groundwater Resources And Environmental Management For The Langat Basin was completed in 2002. The Study estimated the volume of annual groundwater recharge in Langat Basin at 139 million m³ and the sustainable groundwater yield at 45 Mld. The development of groundwater quality monitoring networks for Sabah and Sarawak were also completed. Under the National Groundwater Resources Study, a total of 22 exploratory wells was constructed in Johor, Kedah, Negeri Sembilan, Sabah, Sarawak and Selangor.

8.56 The corporatisation of state water supply authorities and privatisation of water supply continued during the review period. The corporatisation of Selangor Waterworks was completed in 2002 with the establishment of *Perbadanan Urus Air Selangor* (PUAS). PUAS was given the responsibility for water supply management and distribution, billing and revenue collection as well as the implementation of future capital works including the reduction of NRW in Selangor and the Federal Territories of Kuala Lumpur and Putrajaya.

Sewerage

8.57 The sewerage subsector focused on improving services through the construction of new infrastructure as well as the upgrading and rehabilitation of existing systems. The studies on engineering services and detailed designs of the 13 National Sewerage Projects were divided into Phase 1 and Phase 2 and completed in 2001 and 2002, respectively. The tendering process for the construction of Phase 1 was completed in 2003.

8.58 Capital and refurbishment works were carried out to improve the quality of effluent discharged into surface water bodies, thereby improving the environment. Land reclamation works for Jelutong sewerage treatment plant (STP) and the construction of the sludge drying bed at Bayan Baru, Pulau Pinang were completed in 2002. The construction of Bayan Baru STP commenced in 2003. To improve

the conditions of beaches, the Port Dickson Pumping Station, a part of the overall sewerage improvement works in Port Dickson, was completed in 2002. The construction of STPs and sewerage networks at Padang Matsirat and Pantai Tengah to improve the sanitation conditions in Langkawi were undertaken in 2002.

8.59 The catchment study for Pulau Tioman, which covered both sewerage and sludge management strategies, was completed in 2002. Based on topography, natural drainage systems as well as existing and future land use patterns, the study identified seven catchment areas for the construction of sewerage infrastructure. As an interim measure to improve the sanitation condition on Pulau Tioman, communal septic tanks serving four to five households were installed in Kg. Tekek and Kg. Salang catchments.

III. PROSPECTS, 2004-2005

8.60 Infrastructure and utilities development will continue to be implemented with the objective of enhancing the competitiveness of the economy. In this regard, measures to increase efficiency of the multimodal transport chain will be given emphasis. The use of public transport will be further encouraged to reduce traffic congestion, especially in urban centres. Efforts will also be undertaken to minimise damage to the environment by encouraging the use of cleaner fuels, renewable energy as well as good construction practices in the implementation of infrastructure projects.

Roads

8.61 During the remaining Plan period, implementation of road and bridge projects will be undertaken with emphasis on improving accessibility to less developed, recreational and potential economic growth areas. Road construction through privatisation will be promoted in line with efforts to expand required infrastructure by utilising private sector expertise and funding. In addition, efforts will also be continued to improve road safety.

8.62 Allocation on road development will be increased from RM14.0 billion to RM18.6 billion. The additional fund will be utilised to expedite completion of major road projects. These projects include the Simpang Pulai - Gua Musang - Kuala Berang Road, Bentong - Kuala Lipis Road, Trans Eastern Kedah Hinterland

Highway, Kuching - Serian Road, Nangoh - Kanibongan Road, Sepulut - Kalabakan Road and Sipitang - Tenom Road. The Trans Eastern Kedah Hinterland Highway will open up the eastern corridor of Kedah for development, while the completion of Simpang Pulai - Gua Musang - Kuala Berang Road and the upgrading of Bentong - Kuala Lipis Road will enable better access to the hinterland of Pahang, Kelantan and Terengganu. The new road connecting Nangoh and Kanibongan in Sabah will provide a new linkage between Kudat and Sandakan as well as provide access to the large plantations along the road corridor. The completion of Sepulut - Kalabakan Road and Sipitang - Tenom Road will provide improved linkage to the hinterland of Sabah. The list of major road projects that are scheduled to be completed within the Plan period is as shown in *Table 8-1*.

8.63 Implementation of various privatised road projects, which were affected by the financial crisis in 1997, will be reviewed. The list of privatised road projects that are expected to be completed is as shown in *Table 8-1*. The New Pantai Highway when completed will reduce traffic congestion between Kuala Lumpur and Subang Jaya while the completion of Shah Alam - Kuang Highway will open up a new corridor for development.

8.64 Efforts will be continued to improve accessibility to less developed areas in order to support the development of the rural areas. Roads will be built to further improve mobility of the rural population as well as facilitating the transport of their produce to the markets.

8.65 Various studies will be undertaken to provide the direction for future road development. A Study To Review The Highway Network Development Plan will be conducted in 2004 to update the original plan, which was completed in 1983. The Study will identify potential road projects to be implemented up to the year 2020. In addition, the ITS Master Plan Study will be completed to provide the framework for future implementation of intelligent transport systems (ITS) nationwide, which aims to promote efficient transportation of goods and passengers. A common architecture will be formulated to enable inter-operability among ITS systems that will be implemented in various urban centres.

8.66 The Government will continue to promote road safety programmes in order to reduce accident rates to less than 4 deaths per 10,000 registered vehicles by the year 2010. Studies will be undertaken to identify further measures to reduce accidents, especially those involving motorcyclists. Efforts will be made to improve the skills of driving instructors, particularly on safety aspects to enable them to impart this knowledge to learner drivers.

8.67 Measures will continue to be undertaken to encourage local contractors and professional service providers to participate in projects abroad. CIDB will continue to provide assistance to enable local construction firms venture overseas. In view of the liberalisation of the services sector, the PSDC will undertake a study to map out the strategy for the export of professional services. The PSDC will also provide linkages for these service providers to enable them to compete in international markets.

Urban Transport

8.68 During the remaining Plan period, priority will be given to ensure accessibility and seamless transfer between the various modes of public transport, particularly in the Klang Valley. Traffic management will focus on uninterrupted right of way for mainline journey and efficient traffic dispersal to ease traffic congestion. In other urban centres such as Putrajaya, Pulau Pinang and Johor Bahru, rail-based transportation networks will be introduced.

8.69 Multimodal public transportation will be enhanced with the operation of integrated transport terminals. KL Sentral will continue to be the hub of public transportation in central Kuala Lumpur. Construction of the integrated terminals at Bandar Tasik Selatan and Gombak at the fringes of Kuala Lumpur will commence. The Sentul Integrated Station will be built with private sector participation.

8.70 To enhance public transportation in Putrajaya, the Putrajaya Monorail Line 1 is scheduled to be completed by the end of the Plan period. The 13.2 kilometre east-west alignment will link Precinct 7 in the west to Precinct 14 in the east. When completed, there will be 18 stations of which seven will be underground, one at grade and 10 elevated. In addition to car parks, these stations will be served by feeder buses and taxis.

8.71 The restructuring of the public transportation system in urban centres will be continued to improve the quality of public transport. The first phase of the current restructuring exercise will involve the takeover of the two major bus companies operating in the Klang Valley. The Government will lease the assets to a single operating company that will reroute buses with emphasis on feeder services to commuter and LRT stations, thereby providing a seamless multimodal and efficient public transport service in the Klang Valley. A Public Transport Authority will be established by the end of the Plan period, which will, among others regulate the restructured public transport system in the Klang Valley. The functions of this authority will be expanded to plan, coordinate and implement

public transport programmes in other major cities as well as ferry and other riverine transportation.

8.72 Studies will be undertaken to address the problem of traffic congestion in the Klang Valley. These studies will include re-routing, accessibility and frequency of public transport as well as convenience to the users. The Study On The Integrated Plan For The Development Of Public Transportation System And Land Use Development In The Klang Valley will be completed in 2004. This study will provide the strategy for the future development of the public transportation system in the Klang Valley until the year 2020.

8.73 The ITIS project will be fully implemented in Kuala Lumpur in 2005. The Klang Valley Advanced Traffic Management System with its control centre at Technology Park Malaysia will become the Transport Management Centre of the ITIS. With the operation of ITIS, road users will be able to obtain real time information on traffic situations and plan their journey to avoid traffic congestions.

Rail Transport

8.74 The rail subsector will continue to focus on increasing the competitiveness of rail services. Passenger services will be increased and improved to enhance rail transport as an efficient people-mover system. Modernisation of equipment will include the purchase of new coaches and locomotives. Skills upgrading will be provided to enhance the capability and productivity of KTMB personnel.

8.75 The Rawang - Ipoh Double Tracking Project, which will increase capacity and enhance services between Kuala Lumpur and Ipoh, will be completed in 2005. Passenger train travel time will be reduced from three and a half hours to two. In addition, works in double tracking the railway line from Ipoh to Padang Besar and Seremban to Johor Bahru will be undertaken. The KTM Commuter service will be extended from Rawang to Tanjung Malim. With the completion of double tracking of the seven kilometre stretch from Sentul to Batu Caves by the end of the Plan period, the commuter service will be extended to Batu Caves. In addition, KTMB will purchase 10 coaches and 40 locomotives to increase its services.

8.76 KTMB will take measures to enhance its operations and maintenance standards to remain competitive in carrying freight. Focus will be given to high yield cargo, vessel concept operation, heavier haul for conventional bulk, long distance cargo and e-freight. This will enable KTMB to become a major regional intermodal transporter with land, sea and air connectivity.

8.77 A new Central Workshop and Training Centre will be established at Batu Gajah, Perak to replace the existing Depot and Training Centre at Sentul, Kuala Lumpur. The Central Workshop will be equipped with modern equipment to provide quality maintenance for locomotives and coaches. The training centre will provide training to KTMB staff to upgrade and enhance their skills and knowledge to improve productivity.

Ports

8.78 During the remaining Plan period, capacity, efficiency and productivity of port-related services will continue to be improved. The promotion of Port Klang as a mega hub and distripark as well as PTP as a cargo transshipment centre will be intensified. In addition, efforts will continue to be undertaken to ensure the integrated development of all service providers in the logistics and transportation chain. This will enhance the usage of other local ports, marinas and related facilities as well as to further promote the development of the local shipping industry.

8.79 In an effort to increase capacity, improve competitiveness and enhance utilisation of national ports, emphasis will be given to the completion of on-going projects. These projects include additional berths at West Port, Port Klang and PTP, Second Inner Harbour Development at Bintulu Port, redevelopment of Swettenham Jetty at Penang Port, and additional infrastructure works at Kuantan Port. The major port expansion programmes under implementation will increase the capacity from 443.4 million tonnes in 2003 to 481.3 million tonnes in 2005. Demand for port and related facilities during the same period is expected to grow at an annual rate of 13.2 per cent per annum, from 338.8 million tonnes to 414.1 million tonnes, as shown in *Table 8-5*. In terms of containerised cargo, it is expected to increase from 10.6 million TEUs to 14.2 million TEUs.

8.80 The complete implementation of electronic documentation and paperless port operations will enhance the performance of Port Klang, PTP and other local ports. Closer cooperation will be fostered between port operators, port authorities and Government agencies. The formation of a single port authority will be expedited to regulate and monitor the performance of all port operators. Port operators are encouraged to undertake more innovative and creative strategies to improve their operations. Procedures and practices relating to traffic handling and clearance will be further simplified and automated. In line with the recommendations of the Inter-Agency Study On Integrated Logistics And Supply

Chain Management, a comprehensive master plan will be formulated to promote total supply chain management in exports and imports as well as in domestic freight transport. This will further enhance Malaysia's competitiveness and stimulate economic growth.

8.81 Inland water transport for both passengers and freight will continue to be promoted as an alternative mode to land transport, particularly in Sarawak and Sabah. Efforts will be undertaken to improve and upgrade passenger and cargo facilities, including the construction and upgrading of passenger terminals. The formulation of regulations and performance standards for ferry and other riverine transport services will be included in the functions of the proposed Public Transport Authority to ensure systematic and orderly development of the whole public transportation subsector.

8.82 For the remaining Plan period, local participation in sea-related transport services, which include passenger and cargo as well as dredging services is expected to increase. The shipping industry is expected to consolidate and focus on LNG and petroleum businesses. To further strengthen the shipping industry, better fleet programming and asset reliability will be pursued. In addition, shipyard activities such as maintenance, repair and overhaul of ships will be promoted. Strategic measures will be taken including long-term charter and global alliances to gain economies of scale, lower operating costs and increase opportunities. In addition, the Government will convert the Shipping Fund into a revolving fund and facilitate greater usage and distribution of the Fund to potential Malaysian shipping companies.

8.83 MISC will acquire additional vessels, including 27 petroleum tankers and will have a total fleet of 165 vessels by 2005. The activities of local shipping companies will be diversified to cover both domestic and international shipping, particularly in the high-growth route of Asia-Pacific. With the increased investments by local shipping companies, the number of vessels registered in Malaysia is expected to increase from 3,622 ships in 2003 to 3,800 in 2005.

8.84 For the remaining Plan period, dredging and reclamation works at ports and river mouths will be carried out by local dredging companies, thus saving the outflow of foreign exchange. As part of the capacity expansion programmes, the two long-term dredging contractors will acquire, own and operate additional equipment such as dredgers, barges and tug-boats. With the increased capacity, these companies will also be able to compete in international tenders for dredging and reclamation works.

8.85 Emphasis will also be given to enhance the safety of maritime navigation and reduce marine pollution. In this regard, a Malaysian Maritime Enforcement Agency will be established to assist in surveillance and intelligence works in Malaysian waters. The Marine Department will continue to enhance the enforcement role and upgrade its training programmes. In addition to the privatised Malaysian Maritime Academy, a Maritime Training Centre will be constructed at Pulau Indah, Port Klang. Other measures include the implementation of the Automatic Identification System to monitor vessel movements in the Straits of Melaka as well as exchange information between ships and maritime authorities. This is in line with the conventions recommended by the International Maritime Organisation.

Airports

8.86 The airport subsector will focus on measures to increase the usage of existing facilities, expand capacities in specific areas as well as improve the efficiency of services. KLIA will continue its promotional efforts in its bid to become a regional aviation hub. Efficiency and productivity of air services will also be improved.

8.87 Efforts to attract more international airlines to KLIA as well as encourage existing airlines to increase frequencies will be continued. Other measures will include strategic alliances with tourism-related industries and marketing campaigns overseas. Services in the airport such as ground handling, baggage handling and retail shopping will be continuously monitored and improved.

8.88 Facilities at other airports will be upgraded to cater to passenger comfort and convenience. Kuching International Airport, which handles about 2.5 million passengers annually will be upgraded to cater for wide-body, long haul aircraft operations. Its terminal building will be extended and renovated to provide more holding lounges, shopping arcades and other facilities. Upgrading works on Alor Setar Airport will be completed by the end of the Plan period. Facilities at Kota Kinabalu and Labuan airports will also be upgraded. The runway at Pulau Pangkor Airport will be extended to enable turbo prop aircraft and executive jets to operate there. The airport at Batu Berendam, Melaka will be upgraded to mainly facilitate medical tourism while Senai Airport, Johor will be developed into an air cargo centre.

8.89 A new airport will be built in Pulau Tioman to support its development as a duty free island resort. The airport situated at Kampung Paya will be able to handle narrow-body jet aircraft and will replace the existing airport in Kampong Tekek which can only handle up to 50-seater turbo prop aircraft. To ensure obstacle-free flight operations, the runway will be built on the sea while landside facilities will be on the island. Pulau Redang, another island resort, will also have an airstrip by 2004, which will improve access to the island.

8.90 During the remaining Plan period, MAS will continue to focus on strengthening its operations. Measures to be taken include productivity improvements by shortening aircraft turnaround time, improving ticketing systems, refurbishing cabins for better seat configurations, better scheduling of flights as well as increasing frequencies and destinations to high-yield sectors. Air Asia will expand its network by adding new routes, both domestic and regional as well as increasing frequencies. In addition to KLIA, the airline will operate from Johor Bahru and Kota Kinabalu.

8.91 The Government will continue to adopt a liberal policy on Air Services Agreements, including open sky agreements, to assist the airlines to expand their networks. The Government will negotiate with relevant authorities to enable the airlines to operate additional frequencies and destinations on a reciprocal basis. In this regard, additional Air Services Agreements will enhance connectivity and capacity of airlines, thereby improving convenience to passengers and facilitate tourism.

Energy

8.92 In line with the positive outlook of the national economy, peak demand for *electricity* is expected to grow at a higher rate of 7.2 per cent per annum from 12,637 MW in 2003 to 14,531 MW in 2005, as shown in *Table 8-6*. By the end of the Plan period, the accumulated installed capacity is expected to increase to 20,267 MW. The reserve margin is expected to decline to 39.5 per cent, which is more than adequate to meet the demand of the country. In the longer term to enable a more effective utilisation of resources, the reserve margin will be reduced gradually to 20 percent. In this regard, the focus will be on phased implementation of current committed power generation projects as well as imposing a freeze on approvals for future IPPs. In addition, the concept of demand risk sharing will be introduced in new power purchasing agreements to facilitate the sharing of the costs of maintaining the reserve margin.

8.93 The 2,100 MW Manjung coal plant will be fully commissioned during this period with the completion of its final plant unit. With the operation of the TNB plant in Manjung, the share of coal in the *fuel mix* will increase from 16.5 per cent in 2003 to 26.8 per cent in 2005, as shown in *Table 8-7*. The contribution of gas in the fuel mix will be reduced to 64.3 per cent, while those of oil and hydro are expected to remain below 10.0 per cent. The gas supply situation will be further improved by the end of the Plan period with the commencement of production from the new offshore fields.

8.94 Utilisation of *RE* as the fifth fuel will be continued to supplement the supply from conventional fuel sources. In this regard, to enhance the implementation of the SREP, studies will be conducted on the availability and competitive uses of biomass, particularly oil palm residues as well as the cost structure of producing electricity from the various sources of RE. In addition, the biomass-based industrial boilers for the production of steam as well as co-generation system for production of electricity and heat energy, mainly for in-house consumption, will be encouraged. In this regard, oil palm millers will be encouraged to adopt measures to enhance the efficiency of their non-grid connected facilities.

8.95 To meet the overall demand of consumers and improve the quality of the electricity supply system, several *transmission and distribution* projects will be constructed. Transmission network in Peninsular Malaysia is expected to total 17,000 cct-km, in Sabah 2,400 cct-km and in Sarawak 900 cct-km. Another 8,000 cct-km of distribution circuit will be constructed while 62 main intake substations and 123 main distribution stations will be installed in Peninsular Malaysia to further strengthen and improve the coverage of the networks. By the end of the Plan period, the distribution network in the Peninsula will reach 208,000 cct-km, in Sabah about 5,800 cct-km while in Sarawak it is expected to be 9,800 cct-km.

8.96 The implementation of the *rural electrification* programme will be continued with the implementation of 850 projects. For Peninsular Malaysia, the contribution of the Electricity Supply Industry Trust Account towards this programme will be increased. By the end of the Plan period, rural electricity coverage in Sabah and Sarawak will reach 72.8 per cent and 80.8 per cent, respectively.

8.97 To promote *gas utilisation* by the small and medium industrial, commercial and residential customers, the Natural Gas Reticulation System network will be expanded by about 50 per cent to 1,350 kilometres in 2005. With the expanded network, the natural gas consumption is expected to increase by 62 per cent to

119 mmscfd. To further promote NGV utilisation, another 20 NGV outlets will be built and the number of vehicles running on dual fuel is expected to increase by an additional 2,000 units when PROTON starts producing factory-fitted NGV vehicles.

8.98 During the remaining Plan period, efforts will be continued to promote *productive energy utilisation* through improvements in plant, equipment and processes as well as end-use. Under the MIEEIP, energy audits will be conducted to promote energy-use benchmarking, particularly among the small- and medium-scale enterprises. The coverage of the energy audits will be expanded to include the plastics, chemicals and textiles industries. To increase awareness and encourage the use of EE equipment, energy rating and labelling will be developed. In this regard, an EE testing facility will be established in Standards and Industrial Research Institute of Malaysia (SIRIM) Berhad. Recognising that funding is a constraint in the implementation of EE programmes, particularly in the industrial sector, a study will be undertaken to identify the modalities of finance.

8.99 At the regional level, Malaysia will continue to support the ASEAN initiative in energy supply security through the participation in the ASEAN Power Grid and Trans ASEAN Gas Pipeline projects. In this regard, the ASEAN Interconnection Master Plan will provide the framework for the development and implementation of 14 electricity supply interconnection projects in the ASEAN region up to the year 2020. To facilitate the implementation of the Trans ASEAN Gas Pipeline project, the establishment of the ASEAN Gas Centre in Malaysia will serve as the strategic technical and information resource and capacity building centre.

Water Supply

8.100 The sustainability of water supply will be ensured through increasing the efficiency of existing water supply systems, construction of source works and conservation of water resources. In this regard, the Federal Government will assume a more active role in planning, managing and coordinating programmes on water resources in the country. Effective monitoring and regulatory mechanisms will be used to ensure the quality of water supply meets established standards. Programmes on rehabilitation and upgrading of existing WTPs and NRW reduction will continue to be implemented. The billing and collection systems will be strengthened to increase revenue.

8.101 The construction of Pahang to Selangor ISRWT project will commence in 2004. It will be implemented in three packages, namely the construction of a water transfer tunnel, dam and pumping station. SSP3 will be fully operational with the completion of Rasa Stage II WTP in 2004 and Bukit Badong Stage II WTP in 2005. This will increase the water supply capacity of SSP3 by 525 Mld to its full capacity of 1,050 Mld. The multi-purpose Beris Dam in Kedah which has a storage capacity of 115 million m³ and supply capacity of 650 Mld will be completed in 2004. It will enhance the supply of water in the northern states of Kedah, Perlis and Pulau Pinang. The Chereh Dam with a storage capacity of 250 million m³, which forms part of the Greater Kuantan Water Supply Scheme Phase 2 will be completed by 2005. The Jus Dam will be completed in 2004 and increase the water availability in Melaka by 275 Mld. In addition, the Tanjung Malim Water Supply Scheme with a capacity of 128 Mld will be completed in 2005 and cater for the water needs of Behrang, Slim River and Tanjung Malim.

8.102 The development of water resources will be undertaken on a sustainable basis with emphasis given to Integrated Water Resources Management (IWRM). The IWRM integrates all water resources and incorporates considerations for land use, environment, social and economic development in water resources management. In addition, campaigns on raising IWRM awareness will be conducted at all levels to gain active support and enhance the transfer of knowledge on global experiences and best practices. Water conservation needs, capacity building as well as research and development (R&D) will also be incorporated into the IWRM programmes. The National Water Resources Study Phase 2 for Sarawak, based on IWRM concept, will commence during the remaining Plan period.

8.103 Alternative sources of water will continue to be developed to increase the national water supply. During the remaining Plan period, the National Groundwater Resources Study covering Johor, Kedah, Negeri Sembilan, Sabah, Sarawak and Selangor will be continued. For sustainable development of groundwater resources in the Langat Basin, monitoring of groundwater level and quality as well as land subsidence will be undertaken.

8.104 Emphasis will be given to reliable water supply in hinterlands and islands to improve public health and promote the tourism industry. The construction of the submarine pipelines to Pulau Perhentian in Terengganu and Pulau Buit in Sarawak will provide potable water to these islands. A wellhead protection programme will be set up in Pulau Tioman to protect the groundwater quality to ensure sustainable groundwater supply. Alternative rural water supply programme

will be expanded with emphasis on affordable, small-scale and community-led solutions for water management. This will include rainwater harvesting, groundwater development and low-water sanitation technologies.

8.105 A Management Information System will be set up to integrate the databases of all water supply authorities. This will provide easy access to information to improve the planning, monitoring, operation and maintenance of water supply systems.

8.106 The Melaka Water Board will be corporatised while Negeri Sembilan Water Supply Department will be privatised during the remaining Plan period. The corporatisation and privatisation of these state water supply authorities will include all aspects of water supply such as the construction of source works and distribution systems, operation and maintenance, as well as billing and collection of charges.

Sewerage

8.107 The implementation of the sewerage capital development programme will continue in the remaining Plan period. The construction works for Phase 1 of the National Sewerage Project will commence whilst the tendering process for Phase 2 will be initiated. Phase 1 which covers the central zone consists of five projects, namely: Bunus STP, Pantai STP and network, Bandar Tun Razak STP, Puchong STP and Southern Klang Valley Central Sludge Treatment Facility (CSTF). These projects will provide an additional sewerage treatment capacity of 979,000 population equivalent (PE) when completed in 2005.

8.108 Construction of Bayan Baru STP with a capacity of 200,000 PE will be completed in 2004 while the design of Jelutong STP and CSTF is scheduled to be completed in 2004. The Jelutong STP with a design capacity of 1.2 million PE will be constructed in two phases and Phase 1 will cater for 800,000 PE. The Jelutong CSTF will provide sludge treatment facility for Penang island. The completion of sewerage facilities at Bayan Baru and Jelutong will improve the quality of rivers and beaches in Penang island.

8.109 Sewerage improvement works in Port Dickson as well as Padang Matsirat and Pantai Tengah in Langkawi will be completed during the remaining Plan period. These works will provide sewerage capacity of 30,000 PE in Port Dickson

and 32,000 PE in Langkawi. The detailed designs will be prepared for the sewerage network systems and sewerage treatment works as well as sludge handling, treatment and disposal facilities for Pulau Tioman.

8.110 Studies will be carried out to identify areas that need to be provided with centralised sewerage systems. R&D in sewerage will be promoted including sludge re-use and disposal. The Sanitation Commission will be established to formulate economic and safety regulations to safeguard public interest and to promote the development of sewerage and solid waste management.

IV. ALLOCATION

8.111 The Eighth Plan allocation for infrastructure and utilities development amounting to RM29.4 billion will be increased to RM39.7 billion, as shown in *Table 8-13*. This allocation accounts for 24.8 per cent of the total development budget for the Eighth Plan. The transport sector will receive the bulk of this allocation, amounting to RM30.9 billion.

TABLE 8-13				
DEVELOPMENT ALLOCATION FOR INFRASTRUCTURE AND UTILITIES, 2001-2005 (RM million)				
Sector	8MP Allocation		Estimated Expenditure, 2001-2003	Balance, 2004-2005
	Original	Revised		
Transport	21,222.1	30,941.8	18,228.7	12,713.1
Roads ¹	14,002.6	18,614.4	10,316.9	8,297.5
Urban Transport	705.6	930.8	459.3	471.5
Rail	4,081.0	6,301.4	5,124.3	1,177.1
Ports	1,500.0	3,040.6	1,122.3	1,918.3
Airports	932.9	2,054.6	1,205.9	848.7
Utilities	8,151.5	8,764.8	4,544.6	4,220.2
Water Supply	3,966.3	4,810.0	2,231.5	2,578.5
Sewerage	1,583.6	1,666.0	678.8	987.2
Energy	2,601.6	2,288.8	1,634.3	654.5
Total	29,373.6	39,706.6	22,773.3	16,933.3
<i>Note:</i> ¹ Excludes localised roads in regional development areas, some local authorities and agricultural roads.				

V. CONCLUSION

8.112 Capacity expansion of infrastructure and utilities during the review period provided a catalyst to stimulate domestic demand through its linkages and spillover benefits. The increased capacity enhanced the mobility of goods and people, thereby facilitating business and improving the quality of life. To ensure that investments in the expanded infrastructure and utilities are utilised optimally, focus will be given towards improving the delivery of services and satisfying customer needs. Thus, the infrastructure and utilities network constructed will continue to enhance the efficiency, productivity and competitiveness of the economy.

Chapter 9

Information and Communications Technology

9

INFORMATION AND COMMUNICATIONS TECHNOLOGY

I. INTRODUCTION

9.01 During the review period, concerted efforts were undertaken to position Malaysia as a competitive knowledge-based economy with information and communications technology (ICT) as the enabler. Initiatives to further provide the momentum for the development of the Multimedia Super Corridor (MSC) as the global ICT and multimedia hub involved intensifying efforts to rollout flagship applications, upgrading and expanding the communications infrastructure to increase accessibility, enhancing human resource development in ICT and promoting e-commerce to enhance competitiveness. In addition, emphasis was also placed on bridging the digital divide, fostering local capabilities in creative content development, nurturing a critical mass of ICT-based small and medium enterprises (SMEs) as well as promoting research and development (R&D).

9.02 For the remaining Plan period, efforts will be intensified to expedite the MSC flagship applications rollout. In addition, focus will continue to be given to basic infrastructure development, especially the Universal Service Provision (USP) programme, with priority on schools and the rural community. Measures will also be undertaken to enhance skills and competencies development, broadband connections for advanced multimedia applications, local content development and greater e-commerce adoption as well as enhancing information security.

II. PROGRESS, 2001-2003

9.03 During the review period, the Government embarked on efforts to position Malaysia as a regional as well as global ICT and multimedia hub. These included policy adjustments related to the liberalisation and promotion of a competitive and dynamic environment for the healthy growth of the ICT and multimedia

industries. These initiatives fueled the growth of many advanced value added services, including voice, data and text-based applications as well as the market for electronic-based contact and data centres in the country. Through the development of the MSC, the Government provided incentives to attract multinational corporations (MNCs) and increase the country's competitiveness. The Government also provided other logistic support services such as joint-venture arrangements, partnership and knowledge-workers to maximise the potential benefits of contact and data centres. The consolidation of the cellular phone industry from five to three operators also strengthened the industry through greater economies of scale and sharing of network facilities.

Positioning Malaysia as a Global ICT and Multimedia Hub

9.04 Service availability, affordability and productivity are among the key success factors in developing Malaysia into a world-class global ICT and multimedia hub. The Multimedia Development Corporation (MDC) entered into an agreement with a local debt venture company to jointly market Malaysia as a global ICT hub and provided an attractive and competitive financing package to expedite the growth of the ICT sector. In this regard, the liberalisation of service providers in the MSC and the establishment of competitive tariff for leased-line communications services further improved efficiency and increased the quality of service. The availability of broadband services and provision of small office units at affordable rentals to start-up SMEs complemented existing incentives under the MSC Bills of Guarantee. SuperJARING provided the Internet backbone infrastructure with 2.5 Gigabits per second transmission speed, making available the fastest and longest Internet Protocol-over-fibre backbone service.

9.05 Tariff liberalisation increased the number of mobile phone users from 5.1 million in 2000 to 9.2 million in 2002, as shown in *Table 9-1*, and this provided the critical mass needed by the data centres. Other measures undertaken by the Government included the establishment of an industry-self code of practice to improve the services provided by the data centres. During the review period, there were 200 data centres in Malaysia operated by several companies, including 6 Secure Internet Data Centres and 11 MNCs, providing services in areas such as communications, tourism, shipping, banking, stock broking, insurance and transportation. In terms of market value and size, the data centre industry recorded remarkable growth rates of 18 per cent per annum to reach more than RM600 million.

TABLE 9-1

SELECTED ICT INDICATORS, 2000-2003

<i>Indicator (Unit)</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>
Main Telephone Lines in Operation ('000)	4,628	4,710	4,670	4,600
Main Telephone Lines Penetration Rate (%)	19.7	19.6	18.8	18.5
% Households with Telephone (per 100 households)	66.4	65.1	62.5	59.8
Residential Main Lines (%)	73.3	72.2	71.7	70.5
Public Payphones ('000)	149.3	124.7	120.5	116.6
Cellular Phone Subscribers ('000)	5,122	7,477	9,245	11,400
Cellular Phone Penetration Rate (%)	21.8	31.1	37.3	39.6
ISDN (number)	34,512	52,202	71,181	71,857
ISDN B Channel Equivalents (number)	69,024	104,404	142,362	143,714
ASTRO Subscribers (number)	561,350	799,588	1,001,398	1,125,069
Personal Computers (million units installed)	2.2	3.0	3.6	4.0
Internet Subscribers - dial-up (million)	1.659	2.115	2.614	3.200
Estimated Internet Users (million)	4.977	6.345	7.842	8.187

9.06 The Customer Access Network system managed by *Telekom Malaysia Berhad* (TMB) was completed during the review period and began its operation from the TMB Cyberjaya Central Exchange. A comprehensive fibre optic infrastructure in resilient ring configuration connects residential and business customers to the local exchange, offering services such as managed data services and broadband to meet the needs of global MNCs and Malaysian ICT companies located within the MSC. The completion of the TMB Internet Service Exchange (EastGate) enabled Internet Service Providers (ISPs) and large businesses to have immediate connectivity to global Internet Point of Presence (PoPs). This infrastructure enhanced the positioning of the MSC as a global hub in terms of communications network. Other telecommunication companies also invested in building their own fibre optic infrastructure within the MSC, thus complementing the existing TMB network. These alternative networks and services helped attract investment by companies with critical business operations, contact centres as well as disaster recovery centres.

Upgrading and Expanding ICT Infrastructure

9.07 *Basic ICT Infrastructure.* During the review period, the penetration rate for telephone services was 39.6 per cent and 18.5 per cent for mobile and fixed lines, respectively. In terms of penetration rate per household, fixed line services accounted for 59.8 per cent. To ensure an equitable distribution and access to ICT, the USP programme required all licensed service providers to contribute towards the USP fund. In addition, the Government also allocated additional resources to connect rural schools and communities using the Very Small Aperture Terminal (VSAT) and wireless local loop technology. As at the end of 2003, 220 rural schools in Sabah and Sarawak were connected with such facilities. This technology was also utilised for communities in very remote and difficult terrains, with 688 terminals presently established nationwide. As at the end of December 2002, approximately 203,000 wireless local loop line capacities using the Code Division Multiple Access (CDMA) were deployed throughout the country that enabled more than 72,000 customers in the rural and high-cost areas to enjoy basic communications facility and Internet access.

9.08 The telecommunication companies also contributed significantly in providing basic ICT infrastructure by establishing national trunk networks consisting of cable routes and submarine festoons linking the major cities and outlying areas of Peninsular Malaysia. For Labuan, Sabah and Sarawak, the network comprised a Metropolitan Area Network and switching network in Labuan. For international connectivity, the substantial investment in submarine fibre optic network and cable system enhanced links to international gateways such as the Asia Pacific Cable Network and South East Asia-Middle East-Western Europe Network with connections to Australia, Brunei, Hong Kong, Indonesia, Japan, the Philippines, South Korea, the United Kingdom and the United States. A regional voice hub was also established for countries such as Bangladesh, Indonesia, Myanmar, the Philippines, Singapore and Thailand. Other private sector initiatives included building a comprehensive infrastructure in Cyberjaya to support international telecommunications hub for MNCs and the installation of bilateral voice and data service arrangements with telcos in Canada, Hong Kong, Singapore and the United States.

9.09 During the review period, new and innovative services were also made available over the cellular telephone network to meet increasing competition and consumer demand. The services that enhanced the advantages of convenience and mobility included short messaging services (SMS), mobile multimedia services (MMS), e-mail, download of ring tones and logos as well as reload payments

for pre-paid cellular service. A total of 5.6 billion SMS messages was sent over the cellular network at the end of June 2003. A pilot Third-Generation (3G) cellular service was launched in the MSC area.

9.10 *Broadband.* During the review period, efforts were undertaken to expand the broadband rollout that included the implementation of local access network facility using wireless technologies such as Fixed Wireless Access, Wireless Fidelity (*Wi-Fi*), Multimedia Multipoint Distribution Service and 3G systems. To facilitate quick rollout to achieve a critical mass of *Wi-Fi* users, service providers using this technology to provide wireless hotspots were allowed to use the spectrum without any fee being charged or additional licence required. To accelerate the use of Asymmetric Digital Subscriber Line (ADSL), service providers also increased the number of ports and outsourced installation of equipment to cater to the growing public demand. New fixed wireless spectrum was released to licensees for implementation in 2001 and the 3G spectrums were assigned to two telecommunication companies in 2003.

9.11 The Malaysian Communications and Multimedia Commission (MCMC) introduced the Community Communications Development Programme (CCDP) to improve community access to network and services. The programme provided a holistic and multi-faceted approach towards capacity building and maximised local participation and collaboration between Government agencies and NGOs. The first CCDP programme was launched in 2002 with the participation of a telecommunications company that provided basic telephone services in two locations in Sarawak. This was followed by the provision of Internet access and basic computer education to the community through the assistance of volunteers. The programme was expanded to selected areas in Pahang and Perak.

9.12 *Tariff.* The application of a reasonable and affordable tariff structure benefited both the customer and industry as well as narrowed the digital divide, besides sustaining inflow of investment. In this regard, the tariff for mobile services was liberalised in 2000 that paved the way for increased competition in the mobile phone industry. As a result, the number of mobile phone users in the country increased by about 52.5 per cent during the review period, as shown in *Table 9.1*. To improve competitiveness, the tariff structure for fixed-line services was also adjusted in March 2002. With the new tariff structure, charges for international calls were reduced by 7.0 per cent to 67.0 per cent and national calls by 23.0 per cent to 54.0 per cent. The Industry Development Rebate Scheme was launched in December 2002 to encourage licensees to be actively involved in the development of the telecommunications industry. Under the scheme, licence

fees payable were discounted based on actual expenditure incurred on approved industry development items.

9.13 *Regulatory Environment.* During the review period, the MCMC continued to provide the regulatory framework for economic, technical and social regulations as well as consumer protection. The new regulatory environment promoted the development of the digital convergence industry and introduced new types of services such as the content application services. The content applications service providers include broadcasters, online service providers that provide Internet content and closed circuit broadcasting services as well as local and wide area networks. In addition, it also supported a liberalised licencing regime for the industry to promote a self-regulatory environment and lifted restrictions on the number of Applications Service Provider (ASP) licences issued with Internet access and Voice over Internet Protocol (VoIP) service. As at the end of May 2003, 67 ASP licences were issued.

9.14 The Framework for Industry Development was launched in 2001 to provide a perspective plan for the development of the communications and multimedia industry. The framework outlined the strategies for development for a five year period aimed at creating a globally competitive, efficient and increasingly self-regulating communications industry. Critical success factors identified included promoting access to communications and multimedia services, improving the quality and choice of services, building skills and capacity, managing resources efficiently and regulating effectively a fast-moving industry. In this regard, a quarterly Customer Satisfaction Index (CSI) and a half-yearly Extensive Endpoints Service Availability Testing (EESAT) surveys were conducted to monitor the service quality and performance standards of telecommunications companies.

9.15 *Community-based Internet Centres.* To address the issue of digital divide, the Government intensified efforts to provide ICT facilities and Internet access to the underserved groups. During the review period, 16 *Internet Desa* and 15 *InfoDesa* centres were established nationwide, as shown in *Table 9-2*. Apart from providing Internet access, these centres also trained the local communities, developed content applications as well as functioned as one-stop centres for information on Government services. The Government encouraged participation from the community to ensure that these centres become community-owned entities. At the same time, relevant contents and e-commerce applications were attached to the websites to provide income-generating opportunities via the Internet. For this purpose, collaborative efforts with the private sector and solution providers were initiated.

TABLE 9-2

NUMBER OF *INTERNET DESA* AND *INFODESA* CENTRES¹

<i>Internet Desa Centres</i>	<i>InfoDesa Centres</i>
<ul style="list-style-type: none"> • Sungai Air Tawar, Sabak Bernam, Selangor • Kanowit, Sarawak • Kubang Pasu, Jitra, Kedah • Kepala Batas, Pulau Pinang • Batu Kikir, Negeri Sembilan • Sg. Rambai, Melaka • Lurah Bilut, Pahang • Mata Air, Perlis • Pangkalan Hulu, Perak • Sipitang, Sabah • Gua Musang, Kelantan • Benut, Pontian, Johor • Merbok, Kuala Muda, Kedah • Ajil, Terengganu • Kota Marudu, Sabah • Bau, Sarawak 	<ul style="list-style-type: none"> • Kampong Kok Klang, Padang Besar, Perlis • Kampong Bujang, Kuala Muda, Kedah • Kampong Sungai Gulang-Gulang, Sarawak • Kampong Buntal, Santubong, Kuching, Sarawak • Kampong Bayangan, Keningau, Sabah • Kampong Parit Tengah, Batu Pahat, Johor • Kampong Mengkuang Tun Sardon, Bukit Mertajam, Seberang Prai Tengah, Pulau Pinang • Kampong Padang Menora, Tasik Gelugor, Seberang Prai Utara, Pulau Pinang • Kampong Selanyau, Bekenu, Miri, Sarawak • Kampong Dagek, Alor Gajah, Melaka • Kampong Tehel, Jasin, Melaka • Kampong Pamah Kulat, Ulu Dong, Raub, Pahang • Kampong Seberang Kota, Kuala Kedah, Kedah • Kampong Sungai Haji Muhammad, Hilir Perak, Perak • Kampong Jimah Baru, Port Dickson, Negeri Sembilan

Note: ¹ As at the end of August 2003.

9.16 With the view to further reducing access and equity gaps, the Government also implemented pilot projects aimed at specific segments of the underserved groups during the review period. The pilot projects implemented to bridge the digital divide by enhancing connectivity, people development and participation were for seven target groups, namely, the rural, underserved communities and natives of Sabah and Sarawak, the urban poor, women, youth, the disabled, senior citizens and the SMEs. These projects were aimed at enabling the usage of ICT to enhance economic value and living skills, transforming participants

into knowledge citizens and bringing the underserved groups into the mainstream of society. To ensure a wider coverage of students, the utilisation of ICT for teaching and learning was expanded, especially in rural schools. Computer laboratories were established at 2,226 schools comprising personal computers equipped with teaching courseware for Mathematics, Science, *Bahasa Malaysia* and English. In addition, to improve management and administration, computers were also provided to 9,000 schools.

Utilisation of ICT

9.17 The manufacturing sector recorded the highest investment in ICT amounting to almost RM2.5 billion during 2001-2002 or 19.8 per cent of total ICT expenditure, as shown in *Table 9-3*. This was followed by the banking and finance sector with 15.4 per cent and the Government and distributive trade both with 12.1 per cent. The Government sector's investment amounting to RM1.5 billion recorded the

TABLE 9-3
ICT EXPENDITURE BY SECTOR, 2000-2002
(RM million)

<i>Sector</i>	<i>2000</i>	<i>%</i>	<i>2001</i>	<i>%</i>	<i>2002</i>	<i>%</i>	<i>Average Annual Growth Rate (%), 2001-2002</i>
Manufacturing	1,182	22.0	1,170	19.8	1,290	19.8	4.6
Banking & Finance	827	15.4	910	15.4	1,000	15.4	10.0
Government	532	9.9	715	12.1	790	12.1	22.4
Distributive Trade	650	12.1	715	12.1	787	12.1	10.0
Home	473	8.8	520	8.8	572	8.8	10.0
Telecommunications	473	8.8	520	8.8	572	8.8	10.0
Oil & Gas	296	5.5	325	5.5	358	5.5	10.0
Utilities	236	4.4	260	4.4	286	4.4	10.1
Education & Research	236	4.4	260	4.4	286	4.4	10.1
Professional Services	236	4.4	260	4.4	286	4.4	10.1
Transportation	177	3.3	195	3.3	215	3.3	10.2
Healthcare	59	1.1	65	1.1	70	1.1	8.9
Total	5,377	100.0	5,915	100.0	6,512	100.0	10.0

highest rate of growth of 22.4 per cent per annum in ICT expenditure during the same period.

9.18 The Government undertook various initiatives during the review period to educate and create awareness among its personnel to use ICT as an enabler to increase productivity. These included training on the use of computers, access to the Internet, systems development, applications and website creation as well as maintenance of the ICT-related facilities and equipment. Among the efforts undertaken at the private sector level, education and awareness programmes were initiated by the National Productivity Corporation for the manufacturing sector to improve productivity and performance through the use of ICT. The Federation of Malaysian Manufacturers also conducted ICT-related training courses for its members. In 2002, a total of 136 participants from 41 manufacturing and six services companies received training in various areas such as fundamentals of network technologies, auto computer aided design (CAD) and digital RF communications technology. Despite these efforts, the country's Internet penetration rate remained low at 23 per cent in 2002 compared with the world average of 35 per cent.

9.19 The Association of the Computer and Multimedia Industry, Malaysia (PIKOM) complemented Government's efforts in the areas of education and awareness of ICT by organising various events and activities to increase ICT awareness and exposure to networking opportunities. These included the Asia-Pacific Conference on Operational Technologies (APRICOT), a training programme for women with the collaboration of the Women's Aid Organization and a PC Fair. In addition, PIKOM also established Special Interest Groups (SIGs) to provide a platform for members to interact, exchange information, formulate plans and implement activities to advance the interests of the ICT industry. During the review period, nine SIGs were established namely, open source, e-business, PC industry, infosecurity, technopreneur, standards and accreditation, education and training, communications as well as biotechnology.

Enhancing Human Resource Development in ICT

9.20 Based on the survey conducted by the MDC in May 2003, out of 17,854 jobs created, 86 per cent comprised knowledge workers such as software developers, programmers and analysts. In addition, 87 per cent of those employed by MSC-status companies were Malaysians. During the review period, the MSC Internship Programme was introduced by the MDC to develop a pool of local talent and

assist in expediting Malaysia's move to become a knowledge-based society as well as cultivate creativity and innovativeness. The programme also aimed at augmenting the current supply of university graduates to ensure a ready source of well-trained workers and experts for MSC-status companies. In addition, the MSC established a Higher Education Client Services Unit to complement efforts to streamline the MSC-status scheme for institutions of higher learning.

9.21 The establishment of the INTAN Management and Technology Centre (IMATEC) at the National Institute of Public Administration (INTAN) enhanced the training of ICT-skilled and knowledge workers as well as ICT professionals in the public sector. By integrating training and innovation through technology, IMATEC enabled the effective deployment of technology in learning. The training programme included e-based learning tools, learning by simulation, learning support systems and the Integrated Training Information and Management System. In addition, the Penang Skills Development Corporation also provided training up to the post-graduate level in areas such as CAD and applied design, automation, operating system and programming, calibration, RF/microwave & wireless and communications.

9.22 The Malaysia Grid for Learning (MyGfL) was implemented to provide an integrated online learning platform, catering to the learning needs of Malaysians of every age. MyGfL made available all existing e-learning projects, provided free content as well as served as a market place for all commercial content through an Internet-based mosaic of inter-connecting networks and education services. It also served as the conduit for online programming courses to meet the nation's requirement for knowledge workers as well as a one-stop centre for free content and online learning tools and services.

Promoting E-Commerce

9.23 During the review period, e-commerce activities applications were used mainly by the banking sector. The study on Electronic Commerce Strategic Directions for Malaysia conducted in 2001 identified several areas that the Government needs to focus to expedite the greater use of e-commerce. These included reducing set-up costs, enhancing technical know-how, creating a critical mass, improving inbound usage by setting up Internet data centres and Internet contents development, providing adequate protection for intellectual property rights (IPR) and allaying public concerns on security and integrity of transactions on the Internet.

9.24 The Government initiated several measures to expedite e-commerce, including facilitation of the payment system. The payment gateway, which initially offered only the processing of credit card payments, was enhanced to accept Secure Sockets Layer (SSL) protocol in 2001. Eight banks and 132 merchants subscribed to the payment gateway services. The total volume of transactions channelled through the payment gateway increased significantly from 29,718 transactions amounting to RM14.6 million in 2000 to 166,447 transactions valued at RM40.2 million in 2002. In line with the recommendations of the Financial Sector Master Plan to increase efficiency and competition in payment systems, *Bank Negara Malaysia* (BNM) allowed the market to determine the number of payment gateways and payment standards to be adopted.

9.25 In an effort to encourage innovation and enhance the delivery system in the provision of services, 13 banks offered Internet banking services. As at the end of 2002, there were 1.0 million Internet banking subscribers, accounting for 39.2 per cent of the total Internet subscribers in Malaysia. Five of these banks also offered Internet banking services tailored to the corporate needs, drawing 5,665 corporate subscribers by the end of 2002. In addition, BNM also introduced the Financial Process Exchange (FPX) to provide a reliable and efficient online payment system to facilitate e-commerce transactions. The FPX allowed payments to be made across the buyers' and sellers' banks on a more widespread basis than the current bank-centric models. Benefits of the system included integration of the purchasing and payment functions, streamlining transaction cycles, ensuring payment and expediting cash flow processing.

9.26 In support of e-commerce, TMB installed a total of 53,000 connectivity to ADSL circuits for Streamyx and other services to enable high-speed access to the Internet and support 9.8 million mobile subscribers from the mobile service providers for mobile commerce (m-commerce), during the review period. To date, there were 52k ports installed nationwide. This high-speed connectivity further expanded content access and development. Other connectivity already offered were digitaline II, *COINS* and Super High Speed Broadband access of up to 155 megabits per second (Mbps).

9.27 Efforts to promote e-commerce included the National E-Commerce Week (NECW) that showcased national initiatives and projects to drive and accelerate the growth of e-commerce in Malaysia and the region. This activity also served to increase awareness among local businesses on the various incentives provided by the Government as well as assisted start-up companies to adopt e-commerce as a tool of doing business and enhance competitiveness. About 16,800 visitors

attended the NECW in 2002, with an estimated total sale of RM26.2 million contracted by the exhibitors during the event.

9.28 To protect the information and enhance data integrity in e-commerce and online transactions, the Public Key Infrastructure (PKI) solution was implemented. The PKI provided a standardised platform where through a single card, the user can have access to multiple PKI-enabled Internet applications with reduced cost but increased security.

Fostering Local Capabilities in Content Development

9.29 Efforts were undertaken to spur the growth of the local content industry, especially to promote production and distribution of locally produced contents, both for creative as well as knowledge or education purposes. Content development financing and grants were provided, among others by the *Perbadanan Kemajuan Filem Nasional Malaysia* and *Bank Pembangunan dan Infrastruktur Malaysia Berhad*. These funds were extended to the commercial sector to produce films and contents for digitally animated short films, documentaries and digital videos. To further stimulate the development of local content, the Creative Application Development Centre (CADC) with multi-dimensional design capabilities was established at MDC. In 2002, two students funded to produce digitally animated short films won awards from the Malaysian Video Award Festival KL and Thailand Animation Award. Several projects for the centre were undertaken in 2003 including the commissioning of the documentary programme on ancient Melaka, the Mulu Caves visualisation, surgical reconstruction, disaster management and courseware for the smart school project.

9.30 The CADC was established by the MDC to cater to the needs of the industry for content development facilities. Being a centre of excellence for new technologies in visualisation and creation of new multimedia contents as well as skills development the CADC promoted collaboration in content development projects among local institutions of higher learning, the industry and government agencies. The Communications and Multimedia Content Forum of Malaysia was established in 2001 as an industry forum to govern content and related issues through electronic network using a Content Code. The Government introduced legislations to facilitate and nurture local content development. In this respect, the Film Board Bill was drafted to reduce restrictions on local content development for the various media including television and film to increase local participation and focus on Malaysian subjects and themes. In addition, the Optical Discs Act,

2000 that was enacted in 2002, to complement the Copyright (Amendment) Act, 1997, provided clear guidelines for IPR protection. A study was also initiated to look into the problems faced by the network content industry with the view to developing strategies and plan of action to further enhance the performance of the industry.

Development of the Multimedia Super Corridor

9.31 During the review period, the Government continued to accord high priority to promote the MSC as the regional and global ICT and multimedia hub. This included efforts to increase the availability of the required expertise, creating a pool of local technology entrepreneurs, high quality products and services, adoption of world class standards and attracting world-class companies to the MSC for the purpose of spurring growth in strategic areas of ICT. By the end of September 2003, a total of 930 companies was awarded the MSC status, including 277 foreign-owned companies, as shown in *Table 9-4*. Out of these, 59 companies were world-class, including two companies that were locally owned. During the review period, efforts were also undertaken to foster the local ICT industry to export indigenously developed technology through the technopreneur development flagship. Total sales of MSC status companies amounted to RM3.6 billion in 2002 with export sales amounting to RM620 million.

TABLE 9-4				
MSC-STATUS COMPANIES BY OWNERSHIP, 2000-2003				
<i>Category</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003¹</i>
Malaysian-owned	276	410	543	627
Foreign-owned	144	198	248	277
Joint Venture	9	13	21	26
Approved	429	621	812	930
World-class	38	50	54	59
Local	1	1	2	2
Foreign	37	49	52	57
<i>Note:</i> ¹ As at the end of September 2003.				

9.32 The breakdown of MSC-status companies, in terms of sectors, is as shown in *Table 9-5*. The number of MSC-status companies surpassed the original target. To further increase the number of companies, efforts were also made to provide customized incentives.

TABLE 9-5	
APPROVED MSC-STATUS COMPANIES BY SECTOR	
<i>Sector</i>	<i>Number¹</i>
Software Development - Business Applications	189
Software Development - Engineering & Specialised Applications	145
Internet-based Business - E-commerce Service / Solution Providers	104
Content Development - Generic	95
Internet-based Business - Application Service Providers	61
Hardware / Electronic Design	52
Education & Training	53
Systems Integration	48
Telecommunications / Networking	33
Wireless / Mobile Technology	29
Production / Post Production / Animation	22
Shared Services	25
Computer & System Security	22
Consultancy	16
Computer / Engineering Design	15
Internet-based Business - Web Hosting, Web / Online Publishing	8
Incubator	9
Biotechnology / Life Sciences	4
Total	930
<i>Note:</i> ¹ As at the end of September 2003.	

9.33 As at the end of September 2003, a total of 191 companies, including 39 non-MSC-status companies, was operating in the Cyberjaya Flagship Zone, the hub of the MSC initiative, involving 14,064 people. Many public facilities and amenities were provided including a post office, police station, banks, commercial centre, transport terminal, accommodation and lodging units and a Cyber Park. The City Command Centre in Cyberjaya, a central nerve system, provided a fully

coordinated service, integrating both municipality and community services. The first phase of the project was completed comprising 26 systems such as community portal, financial information system, kiosk, billing information system, human resource management system, variable messaging system, traveler information system, traffic management system and global positioning system. With the launch of the Express Rail Link service in April 2002, Cyberjaya joined the rank of communities having access to express rail link from the central business district to the international airport.

MSC Flagship Applications

9.34 During the review period, the MSC Flagship Centre was established in September 2002 as a one-stop facility, with the objective of ensuring that flagships remain competitive, interoperable and exportable. Four of the flagship applications, namely electronic government, multi-purpose card, smart school and telehealth, have shown export potential. The smart card and smart school applications were exported to Myanmar, China, the United States and countries in the Middle East.

9.35 Eight projects in the *electronic government* (EG) flagship application were at various stages of implementation during the review period. The projects were Electronic Services (E-Services), Electronic Procurement (EP), Generic Office Environment (GOE), Human Resource Management Information System (HRMIS), Project Monitoring System (PMS), Electronic Labour Exchange (ELX), EG-AG Integration and E-Syariah. In addition, several other projects to support the EG flagship requirements were initiated, which included EG*Net, Putrajaya Campus Network (PCN) and Shared Services Outfit (SSO).

9.36 Initiatives of the E-Services project included driver and vehicle registration, licensing and summons, utility payments and the Ministry of Health online information. These services were provided through service delivery channels such as electronic kiosks, cellular phone and the Internet to facilitate the conduct of multiple transactions. The system was implemented by the Road Transport Department, *Tenaga Nasional Berhad*, TMB and the Police Department, during the review period. The EP project, involving 30,000 suppliers and 4,000 Government procurement contact points, was able to reduce cost of operation, shorten procurement cycle times and minimize product returns. The nationwide rollout is in various stages of implementation at all ministries. At the same time, the electronic budget control system is also being implemented parallel to the EP project.

9.37 Under the GOE, 11 components were developed, namely, executive information manager, electronic document management system, search and retrieval, web information filter, messaging system, electronic meeting, bulletin board, decision tracking, meeting management, discussion forum, and document registration and tracking. The GOE enabled the five agencies involved in the pilot project to communicate, interact and share information through a secured network. The HRMIS project was implemented in 10 pilot agencies. A paperless human resource management system for the public sector, the project improved the efficiency of manual processes and incorporate areas such as remuneration, career management, performance management, and competency assessment. Phases I, II and III of the PMS project were completed in July 2002 and post implementation evaluation is currently in progress. The ELX was completed in 2002 and operated at 91 sites across the nation. The system comprises three elements: a job clearing system which handles job matching and the registration of employers and job seekers; a labour market database; and a productivity system to automate and streamline administrative tasks.

9.38 The EG-AG Integration was designed to integrate EG pilot projects with the legacy system of the Accountant General (AG) Department, that is, the eSPKB. This enabled the electronic payment processes and procedures to be linked to the AG's legacy system to provide a total end-to-end solution. The system was implemented in 521 responsibility centres in Kuala Lumpur and Selangor and 25 payment offices throughout the nation. The E-Syariah project introduced administrative reforms in the Syariah courts to improve the quality of services and efficiency of the *Jabatan Kehakiman Syariah Malaysia*.

9.39 A key element of the *telehealth* pilot programme was the improvement of medical services in rural and remote areas through the use of new communications technology. The applications within the pilot project included remote diagnosis and consultation as well as continuing medical training through the use of virtual resources. As at the end of April 2003, the telehealth project included the implementation of teleconsultation systems in more than 41 clinics. In addition, the Centre for Health Innovation and Medical Enterprises, a telehealth-related project was launched in September 2002 in Cyberjaya focusing on the development of bioinformatics.

9.40 The launching of *MyKad* marked the national rollout of the *multi purpose card* flagship application. *MyKad* comprised four Government applications, that is, identification, driving licence, immigration information and health information. Three private sector functionalities, that is, Malaysian Electronic Payment System

Cash, Touch 'n Go and Automated Teller Machine, were also included. As at the end of July 2003, a total of 5.7 million MyKad was produced and 12 Government Service Centres (GSC) were established.

9.41 The *smart school* pilot project, implemented at 90 schools, was completed in December 2002. It involved electronic teaching and learning, courseware development for four subjects, area network and a computerised school management system. Teachers and principals were trained in the use of smart school applications that involved a smart school management system with nine modules for school automation and 1,494 courseware titles for four subjects.

9.42 During the review period, other flagship applications were also implemented, such as the *R&D cluster* aimed at encouraging the development of next-generation multimedia technologies within the MSC through the promotion of indigenous corporate R&D activities. The R&D projects that reached commercialisation stage included those in areas such as computer telephony integration, electronic bill presentment and bill payment, Supervisory Control And Data Acquisition software application, visualisation and simulation tools for physics, ultra high-speed fibre optic communication transceiver and interactive play TV. The successful implementation of these projects included the filing of patents in Malaysia and the United States, listing on the Malaysian Exchange of Securities Dealing and Automated Quotation Berhad (MESDAQ), registering of trademarks and the winning of international awards.

9.43 The technopreneur development flagship was initiated to spawn a critical mass of SMEs in the ICT and multimedia industries as well as to facilitate the growth of world-class ICT/multimedia SMEs. During the review period, nine incubators were established to facilitate the development of SMEs under this programme. The e-business flagship, a combination of two former separate flagships known as the worldwide manufacturing web and the borderless marketing centre, was launched to promote e-commerce. The e-business initiatives implemented were as shown in *Table 9-6*.

Other Government ICT Programmes and Initiatives

9.44 In line with the objective of providing efficient and quality service electronically to the public, various applications were enhanced and developed during the review period. The virtual Geographical Information System was developed to improve remote sensing services. The Computerised Land Registration

TABLE 9-6

E-BUSINESS INITIATIVES

<i>Project</i>	<i>Objective and Progress Status</i>
Efficient Consumer Response (ECR) Sector: Retail	Objective: <ul style="list-style-type: none"> • ECR covers hypermarkets, supermarkets, convenient stores and sundry shops. • ECR business volume contributes 50 per cent of the total retail industry in 2001, valued at RM46.7 billion. • The ECR E-Business Thrust project aimed at improving: <ul style="list-style-type: none"> - conformance of domestic supply chain to global standards - accuracy of item information - sharing of item information.
Lead Logistic Integrator (LLI)	Objective: <ul style="list-style-type: none"> • to optimise the supply chain network through a “One-Stop” provider known as the 4PL model. • to integrate industry players to increase competitiveness through innovative service and solutions.
Primary Commodity Exchange	Objective: <ul style="list-style-type: none"> • capitalise on Malaysia’s position as a key producer of the three commodities: oil palm, natural rubber and timber. • extend the capabilities of on-line solutions to the three sectors. <ul style="list-style-type: none"> - NRexchange (natural rubber) was launched in 2001. - The Timber Exchange is at discussion stage. - The Epomex (Oil Palm Exchange) is currently operational.
Other Projects	The E-Commerce Strategic Directions Phase 2 study is currently on-going. The result of the study will identify specific e-Business thrust projects in other sectors that will escalate the demand of e-Business solutions across industries.

System and the Cadastral Data Management System enabled the process of land measurement and ownership to be accelerated while the Malaysian Geospatial Data Infrastructure facilitated the exchange and sharing of spatial and non-spatial information. The process of property evaluation was also improved through the upgrading of the Valuation Information System. The Ministry of International Trade and Industry and Agencies Trade and Industries Information Exchange Portal (MATRIIX) not only enhanced the sharing of trade-related information and resources but also expedited the approval of licences and permits. To facilitate entrepreneurs in obtaining useful information and guidelines on how to start a business, the Online Registration of Entrepreneur and Premise Online systems were developed.

9.45 The *Sistem Pengautomasian Fail Pendaftaran Perniagaan* (SAFARI) was developed to computerise the process of answering enquiries as well as to

facilitate the validation and updating of business licences. The introduction of the INTAC-STIS system allowed taxpayers to access online information, perform self-assessment as well as submit tax returns in a more convenient way. The launch of the All The Year Round Registration and Verification System (eSPPST) enabled voters to register online throughout the year. Phase I of the Malaysian Government Portal or myGOV, which will replace the Malaysian Civil Service Link, was launched during the review period to provide a single gateway for citizens and businesses to gain online access to all government services as well as making online payments.

9.46 To encourage participation in the global supply chain, the Government initiated the Technology-Industry-Government for e-Economic Revolution (TIGeR) project during the review period by providing a matching grant to SME and non-SME suppliers of electrical and electronic parts and components for implementation of the RosettaNet standard. This included expenses in software and hardware development as well as licensing fees. Several initiatives were also undertaken to further improve service delivery to the private sector. The Electronic Data Interchange (EDI) system which processed applications for import/export permits and licences, entered its sixth year in 2003, and enabled port communities at Port Klang, Port of Tanjung Pelepas, Pasir Gudang Port, KLIA, Senai Airport and Penang Airport to transact in a near-paperless environment. The present EDI-Customs Declaration System migrated into a web-based system known as e-Declare that was rolled out in conjunction with the pilot TIGeR e-Logistics project. Pilot programmes for the exchange of Customs EDI messages among Customs authorities in Asia were also put in place. Malaysia participated in the pilot exchange programmes with Indonesia, the Republic of Korea and Taiwan.

Nurturing ICT-based SMEs

9.47 Efforts to develop a critical mass of Malaysian ICT and multimedia SMEs showed positive results by attracting about 2,000 firms at the end of August 2003. The MSC Central Incubator, a new model of technology incubator, was expanded via the National Incubator Network programme. Nine incubators nationwide were awarded MSC-status. Through a joint mentoring and nurturing programme with several foreign companies, projects were initiated to facilitate local ICT and multimedia SMEs to enrich their business concepts and plans by assisting start-up companies in the areas of communications, multimedia and intelligent system. Under the programme, more than 800 business plans were reviewed and developed up to August 2003. The Market Access Initiative under

the World-Class Programme facilitated partnership between local and foreign companies to expand their businesses in the global market. Several projects such as the Icon of Industry Mentoring Programme, the International Business Series, the Skills Enhancement Programme and the Technopreneur Skills Development and Leadership Institute were initiated. Some of these initiatives were done in collaboration with the local institutions of higher learning and corporations to identify and nurture talent.

9.48 During the review period, nine incubation centres were established to nurture and assist start-up companies involved in ICT. These facilities were located in the MSC Central Incubator, the Kulim High Technology Park (KHTP), BT Multimedia, Makmal.Com, USAINS Holdings Sdn. Bhd. (USAINS), UTM/Biro Inovasi & Perundingan, BioEnterprise Asia, YTL E-Solutions Berhad and N2N Venture Solutions Sdn. Bhd. A total of 58 companies participated in these nine centres and were linked to each other under the National Incubator Network programme. The MSC Central Incubator supported the highest number of companies (17), followed by USAINS (10) and KHTP (5).

Funds for ICT Development

9.49 To develop the ICT sector, the Government made available several sources of funds. The MSC Venture Corporation Sdn. Bhd. (MSC VC) a subsidiary of the MDC was allocated RM120 million for the MSC Venture One programme that provided venture funds. As at the end of August 2003, MSC VC approved 17 applications amounting to RM75.4 million. In addition, the Malaysian Industrial Finance Berhad also approved a total of 23 applications worth RM430 million for ICT-related projects. Out of this amount, RM368.2 million or 85.6 per cent was approved for the telecommunications services, satellite network and telephony services. Financing for Bumiputera entrepreneurs was also made available by the *Bank Pembangunan dan Infrastruktur Malaysia Berhad*, in the form of direct equity participation or equity financing, computer software development, e-commerce and Internet services.

9.50 The Commercialisation of Research and Development Fund managed by MTDC approved four loan applications for ICT-related companies. The establishment of the Malaysia Debt Ventures Berhad (MDV) in August 2002, with a RM1.6 billion loan facility, provided another source of financing for companies involved in ICT. As at the end of May 2003, a total of RM459 million worth of loans was approved. MDV provided not only an alternative source of financing but

also complemented other financing schemes offered by banks and venture capitals. In addition, MDV was required to transfer knowledge to local financial institutions and ICT companies to enable them to be self-sustaining.

9.51 The Government also launched the E-Manufacturing Grant in 2002 worth RM2 million aimed at assisting SMEs integrate their manufacturing operations and better manage their resources through the use of ICT applications such as enterprise resource planning, supply chain management and customer relations management. As at the end of March 2003, 97 applications were approved. The E-Design Grant was another ICT-related scheme introduced in 2002 to assist SMEs in upgrading their design capabilities. A total of RM10 million was allocated for this scheme and 118 applications were approved. The E-Commerce Grant that was introduced in July 2000 to assist SMEs transact and promote their products beyond domestic boundaries was fully expended by June 2002. A total of 1,819 applications amounting to about RM15.5 million was approved.

Promoting R&D

9.52 During the review period, 22 R&D-based projects related to ICT were approved amounting to RM18.5 million under the Intensified Research in Priority Areas (IRPA) programme. The focus of the approved projects was the development of ICT infrastructure for monitoring network; engine grid, infrastructure grid and design; wireless communications; and ICT applications for health, education and business. Standards and Industrial Research Institute of Malaysia Berhad conducted 13 projects utilising IRPA grant amounting to RM7.9 million. In addition, the MSC R&D Grant Scheme (MGS) approved a total of 28 projects amounting to RM57.2 million, during the review period. A total of 50 projects amounting to RM80.1 million was also approved under the Demonstrator Applications Grant Scheme (DAGS).

III. PROSPECTS, 2004-2005

9.53 The current development strategies hinged heavily on the extensive and pervasive applications of ICT, both to improve productivity as well as to promote new business activities. Recognising the future growth of the country is dependent on the advances made in the digital technology, efforts will continue to strengthen the progress made on present initiatives to develop Malaysia into a knowledge-based nation. Emphasis will be given to building confidence for electronic

transactions, developing human resource, bridging the digital divide and harnessing new business activities and opportunities. For the remaining Plan period, the focus of ICT development will be to:

- ❑ *develop further the necessary policy framework and infrastructure to enhance Malaysia's position as a major global ICT and multimedia hub;*
- ❑ *implement Phase Two of the MSC;*
- ❑ *increase efforts to bridge the digital divide and add value to e-community projects;*
- ❑ *enhance human resource development to meet the growing demand for ICT-related skills, knowledge and expertise;*
- ❑ *create a conducive environment and user-friendly applications to promote e-commerce;*
- ❑ *foster and nurture local capabilities in content development and facilitate the greater adoption and usage of local content and applications;*
- ❑ *undertake rollout of MSC flagship applications; and*
- ❑ *enhance information security.*

Developing ICT Policy Framework and Infrastructure

9.54 To provide greater focus on policy formulation and strategy for ICT development, the ICT institutional framework was restructured. Malaysian Institute of Microelectronics System Berhad was reorganised to function as a commercial entity. The Ministry of Energy, Communications and Multimedia will serve as the secretariat to the National IT Council (NITC) and be responsible for ICT industry development. In this regard, a National ICT Policy Centre for policy research will be established to provide the necessary support to the NITC.

9.55 A comprehensive and an integrated ICT policy is required to accelerate the development of the appropriate infrastructure, industries, capabilities and technologies towards meeting the objective of Malaysia becoming a knowledge-based society. In this regard, a study will be undertaken to prepare a National ICT Strategic Roadmap with the aim of providing direction and guidance to all ICT initiatives in the country. The overall ICT roadmap will assist in identifying national focus areas, setting the direction and coordination for the Government and industry in terms of technology, investment, manufacturing activities, capacity building and R&D as well as preparing the necessary action plans.

9.56 The formulation of an ICT Strategic Plan for the public sector will be pursued to leverage on ICT and multimedia initiatives to achieve higher productivity in the public sector, facilitate sharing of resources among government agencies through a secured telecommunications network and common standards as well as provide efficient and quality services electronically to the public. The prioritised ICT initiatives will include the Business Community Portal, Citizen-Centric Portal, Land and Property Application System, G2E Portal, eSocial Services, eLearning, Local Government System and Integrated Financial Management System. In addition, the myGOV Portal will be further enhanced to expand its services to more users through multiple channels such as mobile platforms and call centres. Integration with other projects will also be explored to increase the number of online interactive and transactional services to the public. To ensure a consistent level of quality when users access Government services through this portal, the web masters and developers in all Government agencies will be provided with the necessary training.

9.57 To address the escalating cost of software, interoperability issues as well as security and sovereignty concerns, the Government will continue efforts to implement the public sector Open Source Software (OSS) programme. With the objectives of reducing the total cost of ownership of software usage, increased freedom of choice of software, interoperability among systems, accelerated growth in local ICT industry and knowledge society as well as bridge the digital divide, the OSS will be implemented based on the principles of fit for purpose, least disruptive to organisational operations, open platform and co-existence with legacy proprietary system, where necessary. It will also leverage on existing facilities, hardware, software and expertise in the private sector, universities, ICT organisations and government agencies. Towards this end, a national level Open Source Master Plan will be formulated and an Open Source Competency Centre will be established to provide services such as consultancy and technical support, R&D, training and certification as well as awareness promotion.

9.58 To position Malaysia as a major global ICT and multimedia hub, it is necessary to ensure that the MSC is a major supplier of high-value products and services to the global market, focusing mainly on shared services. Towards this end, measures to promote the MSC will include putting in place customized incentives and programmes to attract businesses, creating an enabling and conducive environment including rapid entry and exit procedures as well as ensuring the availability of a sufficient supply of knowledge workers. In addition, apart from promoting shared services with global inventors, it is important that local talent

is developed to attract the MNCs to locate their operations in Malaysia and build a critical mass of competitive indigenous knowledge-based ICT industry. Focus will be given to develop expertise in creative multimedia, smart cards, e-learning and flagship technologies, bioinformatics, grid computing, wireless and mobility, advanced micro-electronics and nanotechnology as well as microelectrical and mechanical systems.

9.59 The USP programme is designed to initiate and jump-start the usage of communications services by making network facilities available to areas currently without access. To facilitate its implementation, the governing USP regulations will be reviewed to provide additional incentives to the operators to develop basic infrastructure in the rural and underserved areas. In addition, public-private sector partnerships are encouraged to provide communications infrastructure in non-profitable areas. To overcome the problem of affordability and increase penetration rate in these areas, availability of access to basic telephony and Internet through public payphones and community access centres or access points will be promoted. To reduce the operational cost of the ISPs as well as widen reach, telecommunication companies will be encouraged to purchase international bandwidth for shared use. The shared use of such facilities is expected to improve the quality of service and allow them to offer services at affordable rates. In addition, JARING will be merged with TMNet to ensure the provision of wider and more efficient Internet services.

9.60 During the remaining Plan period, efforts will be undertaken to rollout e-Government, smart school and telehealth flagships utilising wireless technology and high-speed broadband communication links. This will facilitate broadband infrastructure development, especially in the rural areas. The Government will encourage broadband usage and growth through increased procurement of broadband services by agencies as well as promoting usage of the flagships and accessibility to its online services. The on-going National Broadband Plan study is expected to recommend incentives and areas of applications to increase broadband penetration and utilisation in the country.

9.61 Phase Two of the Government-funded USP programme will be implemented in tandem with other projects to reduce the digital divide. Broadband Internet connectivity will be provided to all schools as part of the SchoolNet programme. A total of 89 areas will receive network infrastructure rollout under the USP Fund. The services to be provided are community phones, individual phones and Internet access.

9.62 Greater emphasis will also be given to enhancing R&D during the remaining Plan period. In this regard, a dedicated Malaysia Research and Education Network (MyREN) connecting universities and research institutions in Malaysia will be established to enhance closer collaboration in R&D among local researchers. MyREN will also be connected to research communities in South East Asia and serve as the region's hub to link with the Trans-European Information Network through the Asia hub in South Korea. This will enable research communities in the country and region to network with their counterparts in Europe. In addition, local universities will be encouraged to match research outputs with industry and commercial needs.

Implementation of Phase Two of the MSC

9.63 Phase Two of the MSC will begin to be implemented during the remaining Plan period, focusing on efforts to develop the MSC into a regional and global leader in specific high growth areas such as biotechnology and nanotechnology. To maximise impact, the MSC will establish a global marketing strategy to promote and increase awareness of the MSC and Malaysia as a high technology hub as well as set global standards in flagship applications and develop a harmonised global framework of cyber laws. As a one-stop agency for selected services, the MDC will handhold and guide investors in obtaining approvals from the relevant authorities to expedite project implementation.

9.64 To attract large local and foreign technology companies to establish R&D centres in the MSC, the MSC Strategic Thrust Area in Research programme will be initiated. The strategic thrust areas include wireless and mobility, advanced microelectronics and nanotechnology as well as microelectrical and mechanical systems. A platform for the radio frequency identification chip will be established to enhance its underlying technology for potential application in areas such as retail goods identification, security enhancement and verification.

9.65 To further develop Cyberjaya as the global ICT hub and accelerate the creation of the needed critical mass, efforts to attract companies, particularly SMEs, to relocate to Cyberjaya will include the provision of office space at competitive rental rates as well as a reliable, convenient and cost-effective public transport service. In addition, measures will be taken to create an ICT SME cluster that will develop innovative and competitive companies. The Cyberjaya's entrepreneurial ecosystem will include the establishment of best practice incubators, innovation centres for product prototyping, a Business and Technology Incubation Centre and an SME park.

Bridging the Digital Divide

9.66 The National Framework for Bridging the Digital Divide will be formulated to provide guidelines on project implementation and avoid redundancies and ensure that the objectives of bridging the digital divide are achieved. In addition, the Government will collaborate with the telecommunications companies to speed up the implementation of the USP and accelerate the rolling out of basic infrastructure to cover the underserved areas with new and cost efficient technologies. The *InfoDesa* and *Internet Desa* will be expanded to cover more areas. These centres will be equipped with value added contents and e-commerce applications, thus providing opportunities to increase income and improve the quality of life. The formation of *Bahasa Melayu* portals and the use of automatic language translation service will be encouraged to cater for the needs of the non-English speaking community in the rural areas. Agencies will be required to put in place appropriate monitoring mechanism to ensure that these rural Internet centres meet the needs of the community. An impact study will be carried out to assess the effectiveness of the programme before embarking on a national rollout. In addition, Malaysia will intensify efforts to establish the ASEAN Digital Divide Database under the auspices of the ASEAN Telecommunications Ministers' Meeting to serve as a depository for information and data on digital divide efforts in the region.

9.67 To reduce the problem of misuse of the Internet, the Government will undertake programmes to enhance awareness among children, youths and parents on the positive and proper use of the Internet. Towards this end, a programme for the positive use of the Internet will be established at the Malaysia Multimedia University to draw up guidelines and organise seminars and workshops for the benefit of the identified target groups. These activities will also be complemented by similar initiatives by the non-governmental organisations.

9.68 To further strengthen the computer-aided teaching and learning programme, computer laboratories will be completed at an additional 2,870 schools, during the remaining Plan period. In addition, a total of 6,464 primary schools and 1,616 secondary schools will be equipped with computer infrastructure. More primary and secondary school teachers will also be supplied with computers to facilitate the teaching and learning of Mathematics and Science, using English as the medium of instruction.

Enhancing Human Resource Development in ICT

9.69 To ensure the development of highly competent workers, all MSC programmes will be required to incorporate ICT human resource development

and training. In addition, specialists in new venture areas will be hired on short-term basis to manage critical elements of the flagships. ICT and related engineering courses at both public and private institutions of higher learning, on-the-job training and apprenticeship scheme in ICT-related activities will be enhanced. To increase the availability of knowledge workers with the right skills required by the industry, such as in the areas of software engineering, technical support as well as sales, marketing and management information system, the teaching curriculum at public and private institutions of higher learning will be more market oriented and linkages will be forged between these institutions and the ICT industry. To develop specialist skills, the MSC internship programme will be expanded and strategic partnerships with existing training institutions established. MSC-status companies will be encouraged to participate in the Human Resource Development Fund to lower the high cost of ICT and multimedia training.

Promoting E-Commerce

9.70 Phase Two of the National E-Commerce Strategic Directions Study will identify new suitable e-business initiatives, especially in the manufacturing, construction, agriculture, tourism and services sectors. To increase confidence in the usage of e-commerce as a way of doing business, steps will be taken to promote the development of e-commerce tools, applications and best practices. In addition, the Malaysian E-Readiness Study will be continued to identify the level of e-commerce readiness in the country and the improvements needed to enhance e-commerce activities. At the same time, the implementation of the related cyber laws and regulations will be expedited. In this regard, the Electronic Transaction Act will be formulated to facilitate the development and application of electronic transactions. Apart from providing adequate protection to consumers, the Act will also ensure conformance to international practices and standards. Incentives will be offered to large corporations similar to those given to web creators to encourage them to set up business in the MSC area. These corporations will be encouraged to support MSC-status SMEs by using their products and services. An offset approach will also be introduced to enable local ICT-based companies to expand their market reach. A comprehensive logistics system will be established as part of an integrated supply chain for e-commerce logistics and fulfillment centre.

Fostering Local Capabilities in Content Development

9.71 To foster local capabilities in creative content development, initiatives will be undertaken to develop Cyberjaya as the hub for content development,

aggregation and broadcasting. In this respect, the establishment of the *Lembaga Filem Malaysia* will enable the MDC to complement its planned activities for creative industry. Focus will also be given to building key competencies through accreditation programmes with the local content industry association. To further promote the industry, ICT-related activities focusing on creativity and technology will be encouraged and additional incentives will be introduced to attract international and world-class content developers, creative technology companies, broadcasting companies and international production houses to set up business in the MSC. Efforts will also be directed towards enhancing awareness and understanding of the Content Code to enable the industry to effectively implement self-regulation. In addition, the legal framework for IPR, particularly for patents, copyrights and trademarks for ICT-related products and services, will also be developed to encourage greater participation of potential content creators. To nurture local capabilities in this field, customised incentives and a funding package will be implemented.

Rollout of MSC Applications

9.72 To enhance the MSC's competitiveness, MSC flagships rollout will be accelerated. To ensure compliance with the objective of sustainable innovation, competitive processes to meet new expectations in areas of strategy, integration, business models, technology, human resource and implementation will be developed and relevant new projects in strategic MSC thrust areas will be launched.

9.73 To ensure the smooth national rollout for *MyKad*, steps will be taken to accelerate card production capacity, increase service channels by opening more outlets such as new offices, mobile counters, e-service kiosks and phone-in facility as well as provide more Card Acceptance Devices equipment for enforcement personnel. In addition, other efforts include integrating the *MyKad* system with the existing National Registration Department's main system, optimising usage and enhancing marketability of *MyKad* for new applications as well as launching an awareness and public acceptance campaign.

9.74 To further enhance the competitiveness of the MSC, shared services will also be promoted by providing common services under a single, shared organisation leveraging on economies of scale, such as outsourcing and Call Centre consolidation. Focus will be given to areas with growth potential, such as multimedia, graphics art, art and animation, CAD/CAM and scientific visualisation. Towards this end, efforts will be undertaken to improve the services, enhance promotion through global branding and provide competitive customised packages.

9.75 The E-Business Flagship Application will be accelerated to expedite the adoption and uptake of electronic business tools and best practices by local corporations and also enhance the competitiveness of Malaysian e-business companies. The application will also increase export potentials of e-business solutions and create the critical mass of online commercial usage. The main activity of this application will be the implementation of the sector-focused E-Business Thrust Projects comprising the Lead Logistic Integrator, the Efficient Consumer Response project and the Primary Commodity Exchange project. The MSC Flagship Centre will be utilised to promote flagship marketing, interoperability and quality improvement. This centre will also act as a marketing avenue where products of ICT SMEs will be showcased. In addition, centres of excellence will also be established to encourage R&D and continuous innovation.

9.76 The *smart school* will be rolled out to another 300 schools beginning 2004. Towards this end, efforts will include upgrading ICT infrastructure in these schools as well as those involved in the pilot project, enhancing the teaching-learning materials by developing courseware for nine additional subjects and spreading existing courseware to all schools. To ensure continuous enhancement, the smart school management system will be upgraded and support services will be expanded with the establishment of 10 regional help desks and data centres during the remaining Plan period. At the same time, human resource development will be enhanced through regular functional-based training.

Information Security

9.77 To ensure information security and the integrity and reliability of the network, a more comprehensive security framework will be introduced to address security in the communications network and network components. In this regard, a study will be conducted to formulate the mechanism and security framework for total ICT security management. The National ICT Security and Emergency Response Centre (NISER) will be strengthened to assist organizations enhance security measures so as to prevent security breaches. The sanctity of the system will not only ensure uninterrupted services but also provide confidence to investors. Efforts will also be undertaken to develop the relevant software as well as educate and encourage individual users on the need to install security measures for their own personal computers. For the public sector, the Government Security Command Centre (PRISMA) will implement training programmes to create awareness on the importance of network security. For a comprehensive information system security, businesses and organizations will also be encouraged to complement

Government efforts by instituting appropriate security measures, including compliance to international security standard practices such as the ISO 17799 security standards.

IV. ALLOCATION

9.78 The revised allocation for ICT-related programmes and projects is RM7.7 billion, as shown in *Table 9-7*. For the remaining Plan period, a higher proportion of the development budget will be allocated for flagship applications and

TABLE 9-7				
DEVELOPMENT ALLOCATION FOR ICT-RELATED PROGRAMMES AND PROJECTS, 2001-2005 (RM million)				
<i>Programme</i>	<i>SMP Allocation</i>		<i>Estimated Expenditure, 2001-2003</i>	<i>Balance, 2004-2005</i>
	<i>Original</i>	<i>Revised</i>		
Flagship applications	1,824.9	1,468.4	1,014.1	454.3
E-Government	434.8	584.9	380.0	204.9
Smart Schools	401.1	375.3	222.5	152.8
Telehealth	400.0	119.7	72.7	47.0
Multi-purpose card ¹	418.1	234.3	234.3	0.0
R&D Cluster	1.9	1.9	1.1	0.8
Cross Flagship	169.0	152.3	103.5	48.8
Computerisation	2,586.8	4,682.7	3,000.0	1,682.7
Schools	762.0	2,182.7	2,000.0	182.7
Government Agencies	1,824.8	2,500.0	1,000.0	1,500.0
ICT funding	310.0	212.0	109.2	102.8
MSC Grant Scheme (MGS)	200.0	100.0	40.1	59.9
DAGS	100.0	98.0	64.1	33.9
TDF (Pre-seed Funding)	-	4.0	0.0	4.0
Grant for E-commerce	-	5.0	5.0	0.0
Local Content	10.0	5.0	0.0	5.0
Bridging the digital divide	153.0	359.2	233.6	125.6
Universal Service Provision	119.8	303.9	203.96	100.0
<i>InfoDesa</i>	30.2	34.1	16.3	17.8
<i>Internet Desa</i>	3.0	5.2	1.2	4.0
Others	-	16.0	12.2	3.8
Others	284.4	998.1	819.7	178.4
Total	5,159.1	7,720.4	5,176.6	2,543.8

Note: ¹ Almost half of the total cost for implementation and rolling out plan will be provided under the operating budget.

computerisation of schools and Government agencies. Emphasis will also be given to the USP programme and projects to bridge the digital divide.

V. CONCLUSION

9.79 During the review period, emphasis was focused on intensifying infrastructure and infostructure development and providing greater access, particularly to the rural areas. For the remaining Plan period, the national agenda of expediting the MSC flagship applications rollout will be complemented by parallel developments in human resource, increasing local content and enhancing e-commerce activities. In addition, the Government will continue to emphasise the development of basic ICT infrastructure and enhance the implementation of the USP programme with priority given to schools and the rural community.

Chapter 10

Finance

10

FINANCE

I. INTRODUCTION

10.01 During the review period, the financial sector remained strong and resilient despite the more challenging and uncertain economic environment. This was largely due to the concerted efforts undertaken by the relevant institutions to enhance the competitiveness and resilience of the sector. In this respect, the consolidation programme of the domestic banking and capital market institutions placed the financial sector on a stronger footing. The capital market assumed an increasingly significant role in raising funds to generate growth and reduced the vulnerability of the economy to external shocks and contagion risks.

10.02 For the remaining Plan period, measures will be undertaken to further strengthen the financial sector and ensure an orderly development towards a more liberalised environment to contribute towards sustained economic growth. Efforts will be geared towards preserving the resilience and stability of the banking sector as well as to improve consumer protection. Measures will also be undertaken to enhance the value proposition of the capital market by strengthening the key components of the capital market. Islamic financing will be developed as a strategic niche market segment to tap its vast potential. Emphasis will be placed on ensuring that development financial institutions (DFIs) and venture capital companies perform their respective roles more effectively in complementing the traditional financial institutions as well as to accelerate the development of high technology and knowledge-intensive industries.

II. PROGRESS, 2001-2003

Finance

10.03 The finance, banking and insurance sector continued to assume a vital role in the mobilisation and allocation of funds to support socio-economic

development. During the review period, the sector grew at an average rate of 7.2 per cent per annum. In terms of contribution to Gross Domestic Product (GDP), its share increased from 12.7 per cent in 2000 to 14.4 per cent in 2003. Correspondingly, employment in the sector increased at an average rate of 7.5 per cent per annum from 508,700 in 2000 to 631,800 or 6.2 per cent of total employment in 2003.

Financial Sector Master Plan

10.04 Significant development was achieved with the launching of the Financial Sector Master Plan (FSMP) in March 2001. The FSMP outlined the medium- and long-term strategies for the development of the financial sector. The review period witnessed the implementation of the first phase of the FSMP, which was targeted at increasing domestic capacity of the financial sector. The strategies implemented were aimed at enhancing effectiveness and competitiveness of domestic financial institutions, promoting financial stability through a strong, risk-adjusted prudential regulation and supervision framework, promoting an efficient and stable payment system, and establishing an efficient and market-driven consumer protection infrastructure.

Banking System

Sources and Uses of Funds

10.05 Total assets of the banking system, comprising the commercial banks, finance companies and merchant banks, expanded further at an average annual rate of 5.6 per cent in the period 2001-2002 and by 10.1 per cent as at the end of August 2003, as shown in *Table 10-1*. The increase in total assets reflected the increase in loans and advances as well as investment in securities, which together accounted for 73.3 per cent of the total assets of the banking system as at the end of August 2003. Deposits mobilised by the banking system, which grew at an average annual rate of 3.5 per cent in 2001-2002 and by 9.1 per cent as at the end of August 2003 continued to account for the bulk of the new resources mobilised during the period. As at the end of August 2003, deposits constituted 67.9 per cent of the total liabilities of the banking system.

TABLE 10-1								
SOURCES AND USES OF FUNDS OF THE BANKING SYSTEM ¹ , 2000-2003 (outstanding as at end-period)								
	<i>RM billion</i>			<i>% Share</i>			<i>Annual Growth Rate (%)</i>	
	<i>2000</i>	<i>2002</i>	<i>2003²</i>	<i>2000</i>	<i>2002</i>	<i>2003²</i>	<i>2001-2002</i>	<i>2003²</i>
Sources								
Deposits	470.4	504.4	532.6	71.4	68.6	67.9	3.5	9.1
Uses								
Investment in securities	78.6	92.5	105.3	11.9	12.6	13.4	8.5	20.8
Loans & advances ³	396.7	451.5	469.5	60.2	61.4	59.9	6.7	5.6
Total Sources & Uses	659.0	735.2	784.3	100.0	100.0	100.0	5.6	10.1
<i>Notes:</i> ¹ Includes Islamic banks. ² As at the end of August 2003. ³ Prior to September 2001, the data excluded loans sold to Cagamas. However, due to revision in accounting treatment, conventional loans sold to Cagamas with resources were included in the data from September 2001 onwards.								

Bank Lending

10.06 During the review period, banking institutions continued to assume an important role in providing the necessary financing to support economic growth. The pattern of bank lending shifted towards higher lending to the small borrowers, consumers as well as small and medium enterprises (SMEs).

10.07 In line with stronger growth in private consumption, financing extended to the households by the banking system increased significantly at an average annual rate of 14.6 per cent in the period 2001-2002 and by 12.3 per cent as at the end of August 2003, as shown in *Table 10-2*. The double-digit growth in the household loans raised the share of household loans to 43.9 per cent of total loans outstanding as at the end of August 2003, from 34.7 per cent as at the end of 2000. Of the total loans disbursed to the household sector during the review period, 32.0 per cent was for purchase of houses, 26.2 per cent for financing of cars and 41.8 per cent for consumption credit.

TABLE 10-2

LOANS OF THE BANKING SYSTEM¹ BY SECTOR, 2000-2003
(RM billion, outstanding as at end-period)

<i>Sector</i>	<i>2000</i>	<i>%</i>	<i>2002</i>	<i>%</i>	<i>Average Annual Growth Rate (%), 2001- 2002</i>	<i>2003²</i>	<i>%</i>	<i>Annual Growth Rate (%), 2003²</i>
Business sector	260.7	57.4	252.1	51.4	-1.6	251.8	49.5	-0.7
Small & medium enterprises	70.5	15.5	74.6	15.2	2.8	78.9	15.5	6.3
Others	190.1	41.9	177.6	36.2	-3.4	172.9	34.0	-3.5
Household Sector	157.4	34.7	206.8	42.2	14.6	223.3	43.9	12.3
Others ³	36.0	7.9	31.3	6.4	-6.7	33.3	6.6	1.3
Total⁴	454.0	100.0	490.3	100.0	3.9	508.4	100.0	4.8

*Notes:*¹ Includes Islamic banks.² As at the end of August 2003.³ Refers to Government, financial institutions, other domestic and foreign entities.⁴ Includes housing loans sold to Cagamas.

10.08 The growing importance of SMEs was also reflected in the increased lending to this group during the review period. Outstanding loans to SMEs increased at an average annual rate of 2.8 per cent in 2001-2002 and at a higher annual rate of 6.3 per cent as at the end of August 2003. Hence, the share of SMEs loans to total business loans outstanding increased from 27.1 per cent as at the end of 2000 to 31.3 per cent as at the end of August 2003. For the period 2002 to the first eight months of 2003, a total of RM47.3 billion of loans was approved to 125,996 SMEs as shown in *Table 10-3*. Total loans disbursed were higher, amounting to RM104.2 billion, reflecting the higher turnover of loans. The higher lending to small borrowers and SMEs was due to efforts to enhance access to financing this group.

10.09 In recognition of the emerging role of SMEs as an important source of future driving force for a broad-based and resilient economy, a comprehensive

TABLE 10-3

**LENDING BY THE BANKING SYSTEM¹ TO SMALL
AND MEDIUM ENTERPRISES, 2002-2003**
(RM billion)

	2002	2003 ²	Total	% Share of Total Loans	% Share of Business Loans
Amount of loans approved	30.7	16.6	47.3	19.8	39.3
Amount of loans disbursed	49.5	54.7	104.2	15.0	21.9
No of loans approved (unit)	74,233	51,763	125,996	3.5	—

*Notes:*¹ Includes Islamic banks.² For the period January-August 2003.

approach was undertaken to improve their access to credit. Among the measures undertaken included the establishment of SME units, Bumiputera development units and special loan rehabilitation units at banking institutions as well as the establishment of an SME unit at *Bank Negara Malaysia* (BNM). In addition, steps were taken to enhance the effectiveness of Special Funds and the role of the Credit Guarantee Corporation.

10.10 While there was increased reliance by consumers and SMEs on financing from the banking system, large corporations increasingly raised funds from the bond market for longer-term capital requirements. Amidst the low interest rate environment, the large corporations locked in long-term funds at low cost through the issue of private debt securities (PDS). Recourse to the banking system by large corporations was mainly to source short-term loans for working capital requirements. Hence, while loans disbursed to the large corporations accounted for 53.0 per cent of the total loans disbursed, the share of this group declined to 34.0 per cent of total loans outstanding as at the end of August 2003, from 41.9 per cent as at the end of 2000.

10.11 In terms of bank lending, loan disbursements were channelled mainly to the manufacturing; wholesale and retail trade, restaurants and hotels; financial, insurance and business services; and construction sectors; as well as for the purchase of residential properties, passenger cars and credit card transactions. The loans disbursements of the banking system by sector are shown in *Table 10-4*.

TABLE 10-4
LOANS DISBURSEMENTS OF THE BANKING SYSTEM¹ BY SECTOR, 1999-2003
(RM billion)

<i>Sector</i>	<i>1999-2000</i>	<i>%</i>	<i>2001-2002</i>	<i>%</i>	<i>Annual Growth (%)</i>	<i>2003²</i>	<i>%</i>	<i>Annual Growth (%)</i>
Agriculture, Forestry & Fishing	17.9	2.6	18.1	2.3	1.1	6.9	2.4	17.4
Mining & Quarrying	3.8	0.6	2.7	0.3	-28.6	0.9	0.3	9.2
Manufacturing	178.7	26.3	209.7	26.7	17.3	72.8	25.7	3.8
Electricity, Gas & Water	13.4	2.0	13.8	1.8	3.3	4.4	1.6	18.5
Wholesale & Retail, Restaurants & Hotels	120.3	17.7	130.2	16.6	8.2	45.2	16.0	7.3
Broad Property Sector	121.1	17.8	139.1	17.7	14.8	50.7	17.9	-1.8
Construction	48.3	7.1	51.2	6.5	6.1	18.1	6.4	-13.2
Purchase of Residential Property	43.1	6.4	58.2	7.4	34.8	22.7	8.0	13.5
Purchase of Non-Residential Property	14.8	2.2	16.0	2.0	7.8	6.1	2.2	3.2
Real Estate	14.9	2.2	13.7	1.7	-7.7	3.7	1.3	-22.1
Transport, Storage & Communications	17.7	2.6	19.6	2.5	10.8	8.4	3.0	13.7
Finance, Insurance & Business Services	68.9	10.1	52.1	6.6	-24.3	18.3	6.5	21.0
Consumption Credit	71.2	10.5	124.4	15.8	74.8	47.4	16.7	4.0
Personal Uses	22.5	3.3	29.2	3.7	29.9	11.1	3.9	-6.3
Credit Cards	20.3	3.0	45.3	5.8	123.4	19.4	6.9	22.3
Purchase of Consumer Durables	0.8	0.1	0.5	0.1	-32.0	0.1	0.0	-19.0
Purchase of Passenger Cars	27.7	4.1	49.4	6.3	78.7	16.7	5.9	-5.3
Purchase of Securities	22.4	3.3	19.5	2.5	-12.7	8.4	3.0	8.0
Purchase of Transport Vehicles	6.2	0.9	5.8	0.7	-7.4	0.8	0.3	-59.9
Community, Social & Personal Services	10.5	1.5	9.7	1.2	-7.3	2.9	1.0	-17.8
Others	26.7	3.9	40.5	5.2	51.8	15.7	5.5	-1.3
Total	678.8	100.0	785.3	100.0	15.7	282.9	100.0	4.1

Notes:

¹ Includes Islamic banks.

² For the period January- August 2003.

10.12 In aggregate, financing provided by the banking system through direct extension of loans and holdings of PDS expanded at an average annual rate of 4.8 per cent during 2001-2002 and 6.1 per cent as at the end of August 2003, as shown in *Table 10-5*. Consequently, the loan-deposit ratio, including holdings of PDS by the banking system, stood at 94.2 per cent as at the end of August 2003 compared with 92.0 per cent as at the end of 2000.

TABLE 10-5

**FINANCING THROUGH BANKING SYSTEM¹ AND
PRIVATE DEBT SECURITIES, 2000-2003**
(RM billion, outstanding as at end-period)

	2000	2002	Average Annual Growth Rate (%), 2001 - 2002	2003 ²	Annual Growth Rate (%), 2003 ²
Financing by the Banking System	472.1	518.4	4.8	540.8	6.1
Loans Outstanding ³ (A)	454.0	490.3	3.9	508.4	4.8
Holdings of PDS	18.1	28.1	24.8	32.4	32.0
PDS Outstanding⁴ (B)	100.5	104.0	1.7	126.2	25.2
Total (A) + (B)	554.5	594.2	3.5	634.6	8.3

*Notes:*¹ Include Islamic banks.² As at the end of August 2003.³ Include loans sold to Cagamas and Danaharta.⁴ Refers to total PDS issued by the private sector with original maturity period of more than one year.
Exclude debt securities issued by banking institutions, Khazanah, BNM, Cagamas, Danaharta and Danamodal.*Structural Changes in the Banking System*

10.13 During the review period, the strengthened banking system, low interest rates and ample liquidity situation continued to support the bank intermediation process. To ensure a balance between institutional objectives and the broader objectives of nation building, measures were undertaken by the banking industry to enhance shareholder value, improve risk management capabilities and at the same time also considered community interests in order to achieve long-term sustainability.

10.14 Significant advances made in the restructuring efforts, institutional development, the development in the financial infrastructure and the enactment of a new legislation contributed towards strengthening the foundation as well as the emergence of an increasingly resilient financial sector. In this regard, the consolidation programmes for the domestic banking institutions represented a major structural enhancement to the banking system and placed the banking

sector on a stronger footing. The merger programme for the domestic banking institutions was completed in 2000, thus transforming the domestic banking system from one that was highly fragmented comprising 54 banking institutions to 10 domestic banking groups. This consolidation exercise not only addressed weaknesses and preserved the stability of the financial system but also enhanced the effectiveness and efficiency of the system. Customers were provided wider access to banking services and were able to enjoy seamless services from the merged institutions. The operational business integration processes and rationalisation exercises constituted an important part of the merger process to reduce duplication of resources and attain higher levels of economies of scale and efficiency in the banking institutions.

10.15 The institutional arrangements established in 1998, namely, *Danaharta*, *Danamodal* and the Corporate Debt Restructuring Committee (CDRC) essentially achieved their objectives. The CDRC was wound down, while *Danaharta* and *Danamodal* commenced scaling back their operations. *Danaharta* ceased to acquire non-performing loans (NPLs) from the financial sector in 2001 and initiated recovery action on all of the NPLs under its purview amounting to RM52.5 billion. *Danaharta* focused on maximising the recovery of NPLs acquired through restructuring, settlement and foreclosure. As at 30 June 2003, the average recovery rate was 58.0 per cent with expected recovery proceeds totalling RM30.4 billion with RM22.1 billion received in the form of cash and non-cash assets. The remaining RM8.3 billion were at various stages of recovery.

10.16 With the stronger domestic banking institution, there was no necessity for *Danamodal* to inject capital during the review period. As a result, outstanding investment declined from RM7.1 billion in 10 institutions since its inception to RM2.1 billion in three institutions in 2002. Upon the completion of the recapitalisation exercise, *Danamodal* concentrated on managing its surplus funds to ensure adequate returns on its assets that comprised mainly fixed income instruments.

10.17 The CDRC served as a platform for voluntary debt restructuring and ceased operations in August 2002 with the completion of tasks entrusted to it. As part of debt restructuring, a number of large corporations undertook rigorous restructuring exercises in terms of management and ownership structure as well as the disposal of non-core businesses and assets. While most of the restructuring were market driven, the Government was involved in the restructuring of a selected number of companies with a high degree of social and national interests. The successful resolution of the large CDRC cases contributed towards reducing

the NPL in the banking system. During its four years of operation, CDRC successfully resolved 48 cases involving debts of RM52.6 billion.

10.18 *Operational Enhancement Measures.* In line with the FSMP, a number of measures were implemented to enhance competition and efficiency in the banking industry. Efforts by the banking system to strengthen their capabilities and innovativeness to meet the challenges and competition arising from globalisation and technological advances included the application of technology and the introduction of electronic banking. Domestic banking institutions were allowed to introduce Internet banking since 1 June 2000, while the foreign banks were allowed to introduce communicative Internet facilities with effect from 1 January 2001 and transactional websites from 1 January 2002. At the end of 2002, Internet banking was available in eight domestic institutions and four foreign banks. The penetration rate of Internet banking as a percentage of total population in Malaysia was 4.3 per cent as at the end of 2002.

10.19 Greater efficiency gains were realised as market forces shaped the development of the payment systems. The repo transactions were liberalised on 2 February 2003 to permit banking institutions to undertake repo and reverse repo transactions of less than one-month maturity with non-licensed institutions. This measure was introduced to promote secondary activities and market liquidity.

10.20 One of the key measures undertaken to improve operational performance was the implementation of the industry-wide benchmarking project in 2001. The initiative included the dissemination of a wide-ranging set of indicators as a tool to measure performance on a periodic basis to guide domestic banking institutions in implementing capacity building initiatives and formulating appropriate strategies.

10.21 *Prudential Measures.* During the review period, a number of new measures and refinements to the existing prudential guidelines were undertaken. Taking into cognisance that credit risk remained the largest source of risk for banking institutions, the Best Practices for the Management of Credit Risk was implemented in September 2001. It stipulated minimum standards on best practices and mandatory requirements to be observed by banking institutions to develop effective credit risk management.

10.22 Additional measures taken to enhance credit assessment included the establishment of a Central Credit Reference Information System (CCRIS) and skill enhancement of credit officers. The CCRIS, a comprehensive credit database of all borrowers in the banking system, was operational since October 2001. To

enhance the credit skill of credit officers, an accreditation programme for credit officers was introduced requiring them to attend a training programme and pass an examination.

10.23 The regulatory framework was further strengthened with the introduction of several policy measures and further refinement to the existing prudential guidelines. Liberalisation measures were also instituted as part of the continuing efforts to improve the competitiveness and efficiency of the financial sector. In addition, consolidated supervision of the banking group was implemented while the continuous implementation of risk management undertaken by banking institutions was monitored.

10.24 New prudential policies were also introduced to enhance corporate governance. The Guidelines on Directorship in Banking Institutions was revised in July 2001 to restrict directorships by the Chief Executive Officers (CEOs) of banking institutions to the holding company, sister company or subsidiary of the sister company, all of which must be financial institutions and limiting the number of directorships at any one time to five. This was done to ensure that CEOs of banking institutions were able to dedicate their full attention to the management of the respective banking institutions. Directorships in related companies were to enable the group to maximise its synergistic value and profitability. Another major revision was that the Board of Directors of the respective banking institutions was accorded full discretion and responsibility in determining the remuneration of CEOs to attract and retain the right talent. In addition, as part of the on-going efforts to enhance corporate governance in institutions licensed under the Banking and Financial Institutions Act (BAFIA), 1989, BNM issued guidelines for the establishment of Board Committees at all licensed institutions, namely the nominating committee, remuneration committee and risk management committee.

10.25 An important prerequisite for the development of an efficient, dynamic and competitive financial sector was the quality of skills and calibre of management in the sector. Highly skilled managers were needed to maximise the opportunities presented by the evolving financial landscape. To achieve this objective, efforts were initiated to establish an International Centre for Leadership in Finance to provide a focused and coordinated approach towards enhancing development of senior management in the financial sector.

10.26 In view of the importance of a coordinated national effort to address money laundering, the National Committee to Counter Money Laundering was formed. The Anti-Money Laundering Act, 2001 (AMLA) was enacted in July

2001 to combat illegal transfer of financial resources as a means to legitimise such assets. The AMLA provided a comprehensive legislative framework for the prevention, detection and prosecution of money laundering, the forfeiture of property derived from or involvement in money laundering as well as the requirement for record keeping and reporting of suspicious transactions. The AMLA, which came into effect in January 2002, reinforced Malaysia's commitment to the global combat against money laundering, financing of terrorism and serious crimes. The Act also paved the way for international cooperation that contributed towards preserving the overall integrity of the financial system.

10.27 *Consumer and Investor Protection Measures.* In moving towards a more liberalised and competitive financial sector, measures were undertaken to enhance the consumer protection framework as well as to develop more active consumerism. To spearhead efforts towards active consumerism, a long-term structured consumer education programme known as *Bankinginfo* was launched in 2003. This 10-year programme was divided into three phases to ensure effectiveness in the dissemination of information to different groups of banking consumers, with the ultimate objective of reaching out to all segments of the banking population. A set of 12 booklets, covering information on basic banking-related issues was published. In addition, as part of the strategy to enhance consumer protection, the conceptual framework and overall strategy as well as the design features for the setting up of a deposit insurance scheme were initiated in 2002.

10.28 Guidelines for Exempt Dealers on Pass-Through Activities was issued on 24 April 2003 to ensure a level playing field between exempt dealers and stockbroking companies to protect investor interest and preserve market integrity. A review of the Guidelines on the Specimen Financial Statements for Licensed Financial Institutions was undertaken in 2002 to take into account the issuance of accounting standards by the Malaysian Accounting Standards Board. It was also intended to meet the requirements for greater public disclosure to foster market discipline.

Special Funds

10.29 During the review period, measures aimed at strengthening the effectiveness of special funds were undertaken to enhance the availability of financing at reasonable costs to a wider group of SMEs. These included expanding the scope

and size of special funds, liberalising the eligibility criteria and conditions of selected special funds, establishment of new funds as well as increasing the allocation of special funds. As at the end of August 2003, a total of RM5.8 billion was allocated for special funds to SMEs, as shown in *Table 10-6*. The utilisation rate of these funds was high. Of the RM4.9 billion approved, a total of RM3.8 billion was disbursed at the end of August 2003.

10.30 As part of the Package of New Strategies in May 2003, the Government established new funds and increased allocations to existing funds to encourage private investment in priority sectors and stimulate economic growth. The new funds launched were the Micro-Credit Schemes (MCS), New Technology Investment Fund (NTIF), Fund for Domestic Brands (FDB) while an additional allocation was provided for the Tourism Infrastructure Fund (TIF).

10.31 The MCS of *Bank Pertanian Malaysia* (BPM) was established with funds amounting to RM500 million to provide micro-credit to the agricultural sector. As at 27 September 2003, 16,667 loans amounting to RM194.9 million were approved by BPM. The MCS of *Bank Simpanan Nasional* (BSN) was established with an allocation of RM300 million to provide micro-credit for the non-agricultural sectors. As at 30 August 2003, BSN approved 21,247 loans amounting to RM203.1 million.

TABLE 10-6										
STATUS OF SPECIAL FUNDS UNDER THE ADMINISTRATION OF BANK NEGARA MALAYSIA, 2000-2003										
	Total Allocation, 2003 ¹	Loan Approvals				Utilisation Rate, 2003 ¹	Loan Disbursements			
		Total as at end-		Change, 2001-2003 ¹	Total as at end-		Change, 2001- 2003 ¹			
		2000	2003 ¹		2000			2003 ¹		
		RM million			%	%	RM million			%
Fund for Food	1,300	854	1,411	557	65.2	108.5	740	1,245	505	68.3
New Entrepreneur Fund 2	900	0	903	903	-	100.3	0	664	664	-
Fund for SMIs	1,250	99	1,801	1,702	1,713.9	144.1	43	1,242	1,199	2,810.9
Bumiputera Rehabilitation Fund	300	0	420	420	-	140.0	0	341	341	-
Rehabilitation Fund for SMIs	500	288	330	42	14.7	66.1	235	301	67	28.3
Entreprenuer Rehabilitation & Development Fund	500	0	3	3	-	0.7	0	1	1	-
Special Relief Guarantee Facility	1,000	0	22	22	-	2.2	0	0	0	-
Total	5,750	1,241	4,891	3,649	294.0	85.1	1,017	3,794	2,777	273.0

Note: ¹ As at the end of August 2003.

10.32 The NTIF was launched with an allocation of RM500 million to assist in acquiring equity in foreign firms or investing in start-up companies in new growth sectors. An allocation of RM200 million was provided for the establishment of the FDB to support companies seeking to promote the development of Malaysian brands internationally through activities such as product design, registration of patents and trademarks as well as packaging and promotions.

10.33 The allocation for TIF was increased from RM200 million in 2001 to RM700 million in May 2003. The TIF aimed at promoting private investment in tourism infrastructure projects. To enhance viability of projects undertaken, soft loans with long repayment periods were provided. As at 30 June 2003, six applications amounting to RM150.3 million were approved to finance the construction of an airstrip, improvement of the beachfront and provision of an amphitheatre.

10.34 The new funds under the administration of BNM that were established during the review period were the New Entrepreneur Fund 2 (NEF 2) and the Entrepreneur Rehabilitation and Development Fund (ERDF). Taking into cognisance the full utilisation of NEF and financing needs of SMEs, the NEF 2 was launched in July 2001 with an allocation of RM250 million to stimulate the growth of Bumiputera SMEs. The Fund was subsequently increased to RM900 million in 2003. As at the end of August 2003, a total of RM902.9 million was approved for 1,702 loans to cater for expansion in productive capacity and working capital.

10.35 The ERDF was established with an allocation of RM500 million in July 2001 to assist distressed but viable Bumiputera SMEs through non-performing loans/financing (NPL/NPF) resolution and additional working capital support. As at the end of August 2003, a total of RM3.3 million was approved for 33 loans.

Development Financial Institutions

10.36 During the review period, DFIs continued to develop and promote certain strategic sectors such as high technology industries, export-oriented industries, infrastructure development and agriculture to achieve socio-economic and national goals. As part of efforts to strengthen the regulatory framework of the DFIs, the Development Financial Institutions Act, 2002 came into force on 15 February 2002. To ensure that the policies and objectives of DFIs were consistent with the Government priorities and initiatives, six DFIs were placed under the purview

of the Act. The legislative framework incorporated prudential rules, disclosure and reporting requirements as well as powers of the regulatory and supervisory authority. With the enactment of the Development Financial Institutions Act, 2002, BNM was empowered to administer a new regulatory and supervisory framework for the DFIs.

10.37 *Bank Industri dan Teknologi Malaysia Berhad* focused on providing long-term financing to capital-intensive and high technology industries engaged in the shipping, shipyard, marine-related and manufacturing industries. As at the end of 2002, loans to the maritime sector accounted for 58.0 per cent of total outstanding loans of RM964.6 million. The remaining loans were extended to the manufacturing sector, of which 10.2 per cent were in the high technology industries.

10.38 *Export-Import Bank of Malaysia Berhad* facilitated export of goods and services through export credit, financing of capital investment and provision of business information and services. As at the end of 2002, total outstanding loans amounted to RM817.3 million while export credit refinancing and export guarantees amounted to RM1.1 billion and RM185.5 million, respectively. To support export diversification and expansion, *Malaysia Export Credit Insurance Berhad* provided credit insurance and guarantee facilities amounting to RM560.6 million, as at the end of 2002.

10.39 *Bank Pembangunan dan Infrastruktur Malaysia Berhad* continued to provide financing to increase the participation of the Bumiputera community in business and industry as well as financing for infrastructure projects. Of the total loans outstanding amounting to RM9.3 billion in 2002, 83.6 per cent were for infrastructure financing. Loans to SMEs accounted for 16.4 per cent, of which 81.2 per cent were extended to Bumiputera companies.

10.40 *Bank Pertanian Malaysia* continued to grant credit facilities for agricultural purposes and mobilise savings, particularly from the agriculture community. Total outstanding loans as at the end of 2002 amounted to RM2.4 billion, representing an increase of 8.8 per cent from 2001. The growth in loans was largely due to the increase in lending under the Fund for Food scheme. The major beneficiaries were the oil palm, food crop and livestock industries. Small farmers formed the major group of borrowers, accounting for 70.3 per cent of total loans outstanding.

Islamic Banking

10.41 During the review period, Islamic banking sector continued to record progressive growth with the market share of Islamic banking assets to the total banking system increasing from 6.9 per cent in 2000 to 8.9 per cent by the end of 2002 and to 9.4 per cent as at the end of June 2003. The encouraging achievement by the industry was a manifestation of the collective efforts of BNM and the industry to realise the potential of the Islamic banking industry in meeting the economic and financial needs of the country.

10.42 Total assets of the Islamic banking sector grew at an average rate of 20.4 per cent per annum from RM47.1 billion in 2000 to RM68.1 billion in 2002 and by 10.9 per cent to RM75.5 billion as at the end of June 2003. Total deposits mobilised by Islamic banking registered an increase of 22.2 per cent per annum from RM35.9 billion in 2000 to RM53.3 billion in 2002 and by 8.0 per cent to RM57.6 billion as at the end of June 2003. The increase in deposits was attributed to the significant growth in demand and savings deposits that was largely due to the competitive rate of return and expansion in the retail customer base in Islamic banking. Financing extended by the Islamic banking sector expanded by 32.6 per cent per annum from RM20.9 billion in 2000 to RM36.7 billion in 2002 and by 15.4 per cent to RM42.4 billion as at the end of June 2003, channelled mainly to the property sector and consumption credit. The significant expansion of Islamic banking was underpinned by sustained economic growth and continued commitment to further develop the sector.

10.43 In line with the FSMP, to further strengthen the regulatory framework and improve the operational efficiency of Islamic banking, the minimum risk-weighted capital adequacy ratio (CAR-i) framework was introduced for banking institutions participating in the Islamic Banking Scheme (IBS). With effect from 2 January 2002, IBS banks were required to observe a minimum core capital ratio of four per cent and risk weighted capital ratio of eight per cent for their Islamic banking portfolios. In addition, a standard framework for the computation of the rate of return for Islamic banking institutions was formulated. The framework enabled a more effective assessment of the efficiency, profitability, prudent management and fairness of Islamic banking institutions. In 2002, the Malaysian Accounting Standard Board issued a standard format for the presentation and disclosure of financial statements of Islamic financial institutions that conduct Islamic banking activities. In addition, the model financial statement for Islamic banks (GP8-i) was issued in August 2003 to facilitate Islamic banks in disclosing their activities in the financial reports.

10.44 As part of efforts to increase the market penetration level and deepen the Islamic financial market, two consultative committees, namely, the Consultative Committee on Service (CCS) and Consultative Committee on Product and Market Development (CCPMD) were formed. The CCS was established with the objective of setting the minimum best practice standard for Islamic banking in customer service, establishing image building as well as promoting public awareness and knowledge on Islamic banking and finance. The CCPMD was formed to drive the innovation and development of Islamic banking products. Among the initiatives under the CCS were the bi-annual Islamic Banking and *Takaful* Week to promote greater public awareness and a comprehensive consumer education programme involving both Islamic banking and *takaful*. In conjunction with the first Islamic Banking and *Takaful* Week in 2001, the Islamic banking logo was introduced to provide the branding for Islamic financial products and services.

10.45 Initiatives in product and market development that were undertaken included the introduction of a risk-sharing mode of financing based on the concepts of *mudharabah* or profit sharing and *musyarakah* or profit and loss sharing and Islamic variable rate mechanisms for managing fluctuating market risks. To enhance uniformity of product names to facilitate identification of Islamic banking products in a dual banking environment, a standard list of generic names of Islamic banking products was introduced. The market practice of sell and buy back arrangement based on Islamic principles was streamlined through the issuance of the guidelines on Sell and Buy Back Agreement in August 2002 along with the updated version of the Guidelines on Islamic Acceptance Bills. In terms of human resource development, the Islamic Banking and Finance Institute (IBFIM) completed its transformation exercise from a bank-owned entity into an industry-owned training and research institute in September 2002. The establishment of IBFIM represented a continuous initiative to enhance knowledge and expertise in Islamic banking and finance.

10.46 With effect from 1 March 2003, a High Court in Kuala Lumpur dedicated to hear all cases pertaining to Islamic banking and finance was established. This provided the legal infrastructure for any party to seek legal redress arising from Islamic financial transactions. In tandem with this development, the establishment of an arbitration centre for Islamic banking and finance was finalised. A Law Review Committee was formed in June 2003 to look into specific legislations that may impede the smooth functioning of Islamic banking. The Central Bank Act, 1958 was amended in September 2003 to incorporate the formation of the Syariah advisory council at BNM.

10.47 A significant achievement in the global development of Islamic banking and finance was the inauguration of the Islamic Financial Services Board (IFSB) in November 2002. The establishment of the IFSB in Kuala Lumpur was the culmination of a two-year effort to put in place the organisational infrastructure to contribute towards ensuring the soundness and stability of the Islamic financial system as well as to pave the way for its global integration in the international financial system. The founding member countries of the IFSB consisted of Bahrain, Indonesia, Iran, Kuwait, Malaysia, Pakistan, Saudi Arabia and Sudan as well as the Islamic Development Bank. At the second IFSB Council meeting in Jeddah, Saudi Arabia in April 2003, the Central Bank of Jordan and Qatar Central Bank were admitted as Full Members of the IFSB. The Council also agreed on the commencement of the preparation of two prudential standards namely, risk management and capital adequacy.

Employees Provident Fund

10.48 The Employees Provident Fund (EPF) remained the largest provident and pension funds in the country with resources constituting about 82.2 per cent of all such funds. Total accumulated contributions, however, decreased from RM180.8 billion held in trust for the benefit of 10.0 million members in 2000 to RM174.5 billion for 10.3 million members by the end of 2002. The decline in net contributions was mainly due to the higher amount of withdrawals, arising from the greater flexibility in withdrawal procedures in 2001. The withdrawal of EPF contributions was made more flexible for pensionable employees as well as those who took optional retirement. In addition, the flexibility in EPF withdrawals was granted to all contributors for the purchase of a second house or personal computer and payment of fees for tertiary education. Another factor was the option given to EPF contributors to reduce their monthly contribution from 11 per cent to 9 per cent for a period of one year with effect from 1 April 2001. The EPF contributions by employees were again reduced from 11 per cent to 9 per cent for a year beginning from 1 June 2003. During the review period, EPF continued to support socio-economic development by mobilising and channelling funds to finance public and private sectors in the form of Malaysian Government Securities, corporate bonds and equities. In this respect, total investments of the EPF increased by 5.9 per cent per annum from RM181.5 billion in 2000 to RM203.7 billion in 2002.

Insurance

10.49 The insurance industry continued to provide an important source of funds to meet the needs of the economy. Total assets of the insurance industry

increased at an average annual rate of 14.7 per cent from RM50.6 billion in 2000 to RM66.6 billion in 2002, which accounted for 4.8 per cent of the total assets of the financial system. Investment in corporate securities constituted 46.1 per cent of the assets of insurance funds, while Government securities and Government-guaranteed loans accounted for 14.1 per cent. Cash and deposits increased by 5.5 per cent per annum from RM10.7 billion in 2000 to reach RM11.9 billion in 2002.

10.50 The combined premium income excluding annuity business of the life and general insurance increased at an average annual rate of 11.9 per cent from RM13.5 billion in 2000 to RM16.9 billion in 2002, with 63.9 per cent of the income being derived from life insurance. Premium income of the industry as a percentage of nominal Gross National Product increased to 5.0 per cent in 2002 compared with 4.3 per cent in 2000. Total benefits and net claims paid out excluding annuity business by the industry increased at a rate of 16.0 per cent per annum from RM5.5 billion in 2000 to RM7.4 billion in 2002, representing 43.8 per cent of the premium income.

10.51 In line with the recommendations of the FSMP, measures were undertaken to enhance the capabilities of domestic insurers. To develop the capacity of local insurers, rules in areas that promote market innovation were liberalised. In this regard, rules affecting the outsourcing of non-core activities and employment of expatriates were liberalised. With effect from 29 April 2002, insurers were allowed to outsource their non-core activities to external service providers or their group resources located in Malaysia. The move allowed greater access by insurers to cutting-edge technology, resources and expertise that in turn facilitated greater operational efficiency and innovation. In terms of employment of expatriates, the policy was reviewed to accelerate the development of skills and expertise to promote performance improvements and support innovation in the insurance industry. To promote the effective transfer of relevant skills and expertise to the domestic insurance industry, expatriates employed were also required to provide training in various forms to Malaysian personnel during the term of their appointment.

10.52 In enhancing the distribution channels, a number of measures were undertaken. In terms of bancassurance, BNM was in the process of revising the bancassurance policy in line with the focus on capacity building under Phase 1 of the FSMP. The policy to allow financially stronger and well-managed Malaysian-owned insurers to have greater flexibility in opening and relocating branches was also reviewed. To enhance the roles of insurance brokers in the marketing of life insurance products, the Insurance Brokers Association of Malaysia implemented guidelines, which set out the framework for the marketing of individual life policies by brokers on 1 September 2001.

10.53 To strengthen the financial resilience of insurers and increase protection of consumer interests, the professionalism of insurance agents was enhanced. In this regard, the minimum entry requirements for the agency force were raised and the requirement for agents to undergo Continuous Professional Development Programme was introduced to ensure that they continuously upgrade their knowledge and skills on insurance matters. Measures were also taken to strengthen regulations on unfair trade practices in the insurance industry. To enhance consumer protection, the role of the Insurance Mediation Bureau was expanded and the limits of claims within its purview were increased. At the same time, efforts were being made to merge the mediation bureaus of both banking and insurance sectors into a single new Financial Mediation Bureau to serve as a one-stop centre. A programme was initiated to enhance consumer awareness and education on insurance matters. Insurance companies also established complaint units to respond effectively to clients' requirements.

10.54 As a measure to improve the consolidation process among the insurers, the minimum paid-up capital of direct insurers was increased from RM50 million to RM100 million with effect from 30 September 2001. The higher capital requirement served as a catalyst to further advance the consolidation of the insurance industry. With the completion of 15 mergers, the number of direct insurers in the industry was reduced to 43 at the end of June 2003 compared with 58 in 1999. In addition, a benchmarking programme was launched for the insurance industry to drive performance improvements and enhance their competitiveness. As part of the benchmarking initiative, the development of a service quality index was commissioned to provide an objective assessment of service levels from a consumer perspective.

Takaful

10.55 During the review period, the *takaful* industry continued its growth momentum. Total assets of *takaful* funds grew at an average annual rate of 39.1 per cent from RM1.9 billion in 2000 to RM3.6 billion in 2002. The family *takaful* funds accounted for 87.2 per cent of the total assets, while the remaining was contributed by the general *takaful* funds. In terms of the portfolio of *takaful* fund assets, investments in corporate debt securities amounting to RM1.6 billion accounted for the largest share at 43.9 per cent of total assets in 2002. This was followed by investment deposits placed with Islamic banks and banking institutions amounting to RM1.4 billion or 37.4 per cent and Government investment issues amounting to RM319.9 million or 8.8 per cent.

10.56 Total contributions from family and general *takaful* business registered an average annual growth of 31.8 per cent from RM575.7 million in 2000 to RM1.0 billion in 2002. Its strong growth was partly attributed to the aggressive marketing efforts of the *takaful* operators including the opening of more branch offices and *takaful* desks. As at the end of June 2003, there was a total of 126 branch offices and *takaful* desks throughout the country. Other factors included the higher level of awareness and knowledge on the benefits of participating in *takaful* as well as the increase in the number of *takaful* products.

10.57 During the review period, continuous efforts were taken to develop an efficient and progressive *takaful* industry as envisaged in the FSMP. As part of the strategic focus to accelerate the expansion of *takaful* business, two new operators were approved to conduct *takaful* business, increasing the number of *takaful* operators to four. In addition, the Malaysian Takaful Association was established in 2002 to serve as an official platform to represent the interest of its members as well as encourage uniformity in market practices. The regulatory framework was further strengthened by reviewing the Takaful Act, 1984 and the introduction of the Model Financial Statements for *takaful* operators by the end of 2003.

10.58 During the review period, *takaful* operators were required to conduct stress tests on their financial performance to serve as an early warning system of possible sources of vulnerability. In addition, a benchmarking exercise, which covered financial resilience, financial performance and productivity, was implemented to provide relevant information on possible areas of improvement to enhance efficiency and competitiveness of *takaful* operators. IBFIM, as the centre for research and training in Islamic financial services, continued to conduct training programmes to improve the skills, knowledge and expertise of *takaful* industry personnel.

Capital Market

Capital Market Master Plan

10.59 The launch of the Capital Market Master Plan (CMP) in February 2001 represented a significant milestone. It marked the first comprehensive plan, formulated in collaboration with market participants to chart the development of the capital market for the next 10 years. The CMP envisaged the establishment

of an internationally competitive capital market providing an efficient conduit for the mobilisation and allocation of funds and was supported by a facilitative and strong regulatory framework. The realisation of this vision through 152 recommendations contained in the CMP was underpinned by six broad objectives and 24 strategic objectives.

10.60 During the review period, the first phase of implementation of CMP was initiated with the objective of strengthening domestic capacity as well as developing strategic and nascent sectors of the capital market. Towards this end, the key strategies that were implemented included enhancing efficiency and competitiveness of domestic players, providing a conducive environment for investors, positioning niche markets and strengthening the regulatory framework. In implementing the CMP, a consultative and collaborative approach was adopted that included the setting up of an independent advisory group, the Capital Market Advisory Committee and specific committees on market institutions, market intermediaries, investment management and the Islamic capital market.

Fund Raising Activity

10.61 The capital market assumed an increasingly significant role in raising funds for economic development, thus enhancing the diversity of sources of financing. Despite the difficult external economic conditions, the capital market continued to grow from strength to strength. From January 2001 to May 2003, the net funds raised by the capital market amounted to RM91.8 billion of which RM71.5 billion was sourced from the bond market while the balance was provided by the equity market largely in the form of rights issues and initial public offerings (IPOs).

10.62 The bond market grew at a rapid pace with the public sector raising a total of RM35.8 billion through net new issuances to meet the financing needs of the Government while the private sector raised RM35.7 billion. The growth of the PDS market was a critical development. The diversification of the sources of funding not only strengthened the resilience of the financial system but also provided the private sector an alternative and cost-effective source of financing. It allowed the private sector to better match the maturities of their liabilities with their funding requirements, which in turn, enhanced their ability to participate in large-scale projects, thus promoting economic growth. This increase in the availability of non-recallable sources of long-term loans reduced the vulnerability of the economy to external shocks and contagion risks.

10.63 Various initiatives were implemented to accelerate the development of the bond market. The introduction of a full disclosure-based framework and the shelf registration scheme lowered the cost of issuance of corporate bonds by streamlining the approval process. To further facilitate the issuance of PDS, rules pertaining to the utilisation of proceeds from PDS issues were relaxed. Efforts were also focused on developing the securitisation market to unlock illiquid assets as well as to expand the range of financing and investment options for domestic corporations. Asset-backed securities were introduced and in order to facilitate its issuance, the Guidelines on the Offering of Asset-Backed Debt Securities was introduced in April 2001 while the stamp duty and real property gains tax on transactions relating to the transfer of assets to a Special Purpose Vehicle were removed. As at the end of June 2003, 13 securitisation proposals amounting to RM7.2 billion were approved by the Securities Commission (SC).

10.64 In order to broaden the intermediation structure in the bond market, in October 2002, Guidelines on Dealings in Unlisted Debt Securities by Universal Brokers (UBs) was released, which allowed UBs to deal directly in both primary and secondary unlisted debt securities. The direct participation of UBs in the unlisted debt securities market represented a positive step towards enhancing liquidity in the secondary bond market.

10.65 Reflecting the improvements in the fund-raising process, market capitalisation on the Kuala Lumpur Stock Exchange (KLSE) increased from RM444.4 billion in 2000 to RM572.3 billion as at the end of September 2003, as shown in *Table 10-7*. During the same period, the KLSE Composite Index (KLCI) also registered an increase from 680 points to 733 points, underpinned by the conducive domestic conditions of ample domestic liquidity and economic strength fostered by timely and appropriate Government policies.

Enhancing Competitiveness and Efficiency of Market Institutions

10.66 To enhance the strategic positioning of Malaysia's capital market, efforts were focused on creating a single consolidated Malaysian exchange as encapsulated in the CMP. The initial measures to merge the various exchanges and clearing houses to concentrate liquidity and widen access to investments and products through a single market place were completed.

10.67 The Kuala Lumpur Options and Financial Futures Exchange Berhad and the Commodity and Monetary Exchange of Malaysia were merged to form the Malaysia Derivatives Exchange Berhad (MDEX) in June 2001 as a single derivatives

TABLE 10-7

**KEY INDICATORS OF
KUALA LUMPUR STOCK EXCHANGE, 2000-2003¹**

<i>Indicator</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003²</i>
Price Indices ²				
Composite	680	696	646	733
Emas	160	165	157	182
Second Board	133	134	98	122
Industrial	1,217	1,348	1,349	1,612
Finance	5,071	5,096	4,858	6,088
Property	633	600	541	688
Plantation	1,362	1,615	1,853	1,963
Mining	193	204	194	309
Price Earning Ratio - Composite Index	16.5	23.4	18.0	19.1
Market Capitalisation (RM billion)	444.4	465.0	481.6	572.3
Number of Listed Companies	795	812	865	889
Turnover (cumulative)				
Volume (billion units)	75.4	54.9	62.7	80.0
Value (RM billion)	244.1	96.0	131.9	127.1

Notes:

¹ Figures shown are as at the end of the period except for turnover, which is cumulative.

² As at the end of September 2003.

exchange under the KLSE group. Merging the entities lowered administrative costs and allowed for the standardisation of trading operations and procedures within the derivatives market. The volume of contracts traded on MDEX increased significantly since its merger from 74,674 lots in May 2001 to 207,755 lots in June 2003. In an effort to increase the product range, the Five-Year Malaysian Government Securities Futures was introduced in March 2002. This new derivative instrument provided an opportunity for market participants to better manage interest rate risks, by hedging their bond portfolios.

10.68 The establishment of Malaysian Exchange of Securities Dealing and Automated Quotation Berhad (MESDAQ) Market at KLSE effective 18 March 2003 completed the KLSE-MESDAQ merger. The merger resulted in significant increases in liquidity and trading volumes on MESDAQ Market, where the pre-merger average daily trading volume was 64,000 units compared with 3.2 million

units post-merger. In addition, the total number of listed companies on MESDAQ Market rose from five prior to the merger to 25 as at 19 August 2003. The merger also increased the number of market intermediaries with access to the MESDAQ Market and expanded investor base. Integrating MESDAQ into the mainstream exchange enlarged the distribution channels and substantially enhanced trading liquidity. This reduced risk premiums on MESDAQ stocks and hence substantially lowered the cost of capital for technological start-ups as well as promoted greater incentives for venture capitalists by enhancing potential exit values.

10.69 A single clearing-house was also established in August 2002 to rationalise and streamline the operations and functions of the Clearing, Settlement and Depository Group of the KLSE comprising Securities Clearing Automated Network Services (SCANS), Malaysian Central Depository Sdn. Bhd. and Malaysian Derivatives Clearing House Berhad. This was subsequently followed by substantial work to demutualise the KLSE, a process of transforming company limited by guarantee into a shareholder-owned company, to enable the KLSE to respond to global challenges more effectively and strengthen its international competitiveness and positioning in line with the vision outlined in the CMP.

10.70 On-going efforts were made to improve the capacity and standards of systems and processes for market transactions, benchmarked against international best practices. In 2001, trading on the MDEX shifted from an open outcry system to a fully electronic system, increasing the cost-effectiveness and transparency of the trading process. The KLSE implemented a circuit breaker mechanism in March 2002 to promote market stability. The mechanism manages the sharp and sudden downward movement of the KLCI by halting trading temporarily to enable information to be disseminated to market participants.

10.71 In line with the objective of reducing overall transaction costs for investors, the SCANS clearing fee, System on Computerised Order Routing (SCORE) fee and the SC levy were reduced. Effective from 1 July 2001, the SCANS clearing fee was reduced from 0.05 per cent to 0.04 per cent subject to a maximum of RM200 per contract, SCORE fee was reduced from 0.01 per cent to 0.0025 per cent and the SC levy fee was reduced from 0.03 per cent to 0.015 per cent. Stamp duty was capped at RM200 per contract, effective from 17 March 2003.

Enhancing Stock Market Liquidity

10.72 Proactive efforts were undertaken to strengthen liquidity in the KLSE. In this regard, the Government announced several measures to enhance liquidity

in the stock market in March 2003. The measure to standardise board lots to 100 units was fully implemented on 26 May 2003 to enable investment in securities to be affordable as well as enhance the shareholding spread of securities. To increase liquidity and ensure greater availability of shares in the market, the moratorium on promoter's shareholding for all IPOs and reverse takeovers was reduced from four years to one year. To facilitate the IPO process, processing time was reduced by 50 per cent from six months to three months. In addition, steps were taken to enable SC to become the one-stop approving centre for securities issues.

10.73 To attract greater investor participation, efforts were focused on increasing the presence of large premier companies on the KLSE. New facilitative guidelines on the listing of large companies was introduced in April 2003, which allowed companies with a minimum market capitalisation of RM250 million and an after-tax profit of RM8 million for the latest financial year, to be exempted from the three to five years profit record requirement. In addition, the Government announced that it would facilitate the merger of Government-linked companies within common sectors as well as to focus on increasing the shareholder value of these Government-linked companies so as to increase the presence of large premier companies on the KLSE. To further enhance the nation's competitiveness in attracting foreign direct investment, Foreign Investment Committee guidelines was liberalised to provide greater flexibility on foreign equity participation in local companies. To enhance market participation in the KLSE, *Valuecap Sdn. Bhd.*, a RM10 billion joint-venture asset management company was formed with the participation of *Khazanah Nasional Berhad*, *Kumpulan Wang Amanah Pencen* and *Permodalan Nasional Berhad*.

Building Resilient and Competitive Intermediaries

10.74 Efforts were made to promote consolidation in the stockbroking industry so as to establish highly-capitalised stockbroking companies (SBCs) with a diversified revenue base. This led to the creation of Universal Brokers, a category of full-service brokers with extensive branching capabilities. As at 15 March 2003, the number of SBCs was reduced from 66 to 39 of which six were granted Universal Brokers status.

10.75 The introduction of full-services Universal Brokers marked the first step towards the deregulation of restrictions on the scope of activity for domestic SBCs. Additional services that Universal Brokers can offer included corporate finance activities and submission of corporate proposals to the SC on behalf of

clients. Restrictions on Universal Brokers were deregulated to allow these intermediaries to broaden their market reach and improve accessibility for their clients. The release of the Guidelines on the Establishment of Electronic Access Facilities by a Universal Broker in August 2001 enabled Universal Brokers to set up electronic access facilities to complement the services offered by their traditional branch offices. These Guidelines were aimed at creating a framework for the orderly and effective implementation of electronic commerce in the capital market.

10.76 Continuous efforts were undertaken to strengthen the supervision of market intermediaries and to refine the capital adequacy requirements framework to ensure that the Malaysian intermediary services were anchored on appropriate prudential standards. To ensure the cost effectiveness of capital market services, commission rate structures were liberalised. Within the equity market, commission rates were allowed to be fully negotiable, subject to a cap of 0.7 per cent in 2002. With regard to the derivatives market, the futures broking commission rates and the commission sharing structure between futures brokers and their representatives became fully negotiable since the end of 2001.

10.77 Various initiatives were undertaken to raise the level of skills of industry personnel so as to ensure higher standards of professionalism. A structured mandatory Continuing Professional Education (CPE) programme was introduced for licensed representatives to enhance the level of technical knowledge and skills. Since its inception in January 2001 to end 2002, 441 courses were approved for CPE and conducted by 72 CPE providers. The Licensing Examination Advisory Panel was established in March 2002 to streamline licensing examinations for capital market professionals. Emphasis was placed on further developing the skills, knowledge and competencies of Bumiputera intermediaries through the Bumiputera Training Fund. As at March 2003, the KLSE contributed RM5 million to enhance the skills and knowledge of Bumiputera remisiers and paid dealers' representatives to strengthen their role in the capital market. The Capital Market Graduate Training Scheme was initiated in a move to increase the supply of skilled manpower to the Malaysian capital market.

Enhancing Corporate Governance

10.78 During the review period, the corporate governance framework continued to be enhanced with the adoption of various measures. The introduction of the revamped KLSE Listing Requirements on 22 January 2001 represented the successful

implementation of a significant set of recommendations contained in the Malaysian Code on Corporate Governance. This initiative enhanced both the board-level and shareholder-level controls on the corporate conduct of public listed companies principally through the introduction of new provisions and the strengthening of existing provisions in areas relating to disclosure, internal controls, board committees, independent directors and financial reporting.

10.79 Another important development was the introduction of the Mandatory Accreditation Programme that required directors of listed companies to undergo training programmes to raise the standards of governance. As part of efforts to encourage institutional investors to promote corporate governance, the Minority Shareholder Watchdog Group commenced operations in July 2001. In 2002, the Internal Audit Guidelines for PLCs was issued while efforts were made to introduce further measures to strengthen auditor independence and whistle-blowing provisions. Within the region, Malaysia's initiative to strengthen the corporate governance framework was ahead of its regional jurisdictions and there was growing international recognition of the nation's progress and leadership in this area.

Strengthening the Regulatory Framework

10.80 The completion of the transition to disclosure-based regulation in April 2003 marked a major milestone in the shift from merit-based regulation of the capital market and enhanced the efficiency of the fund-raising process. In this regard, new approaches to the review of corporate proposals were implemented to ensure faster approvals through more facilitative and market-based rules. Investor protection remained a priority with a strong emphasis on high standards of disclosure, due diligence and corporate governance. To implement market-based regulation across all segments of the capital market, a Self Regulation Framework for the capital market was introduced during the review period to enhance the capabilities of industry associations to take on a proactive role in regulation.

10.81 This increasingly facilitative regulatory framework and approach was complemented by the strategic approach to surveillance and enforcement. This was reflected by the number of convictions and the high profile campaigns that were conducted against spot commodity firms. Emphasis was also placed on supervising and facilitating the restructuring of Practice Note 4 companies. Cooperation with other enforcement agencies was strengthened and the SC enhanced its financial surveillance of public listed companies by operating on

an early warning basis. Further enhancements were made to the regulatory capacity so as to ensure effective and efficient regulatory enforcement. The measures undertaken included the increase in the number of enforcement officers, on-going training for its officers as well as the establishment of the database systems.

Islamic Capital Market

10.82 During the review period, Malaysia's Islamic capital market continued to grow and the Islamic bonds became an established means of fund raising. In 2002, Islamic bonds accounted for 51.8 per cent of total gross corporate bonds issuance. This was due to growing market demand and appreciation for instruments from Islamic funds, which encouraged many companies to use Islamic bonds as a fund raising tool. In further promoting greater innovation of Islamic bonds, the Government introduced tax incentives, which allowed tax deduction for expenditure incurred on issuance of Islamic Private Debt Securities based on *ijarah*, *mudarabah* and *musyarakah* for income tax purposes commencing from 2003 year of assessment.

10.83 As at April 2003, KLSE had 704 or 81 per cent Syariah-approved counters. The availability of Syariah-approved stocks facilitated the development of the Islamic unit trust industry, which performed well as indicated by the positive growth of the key indicators. The number of Syariah-based funds increased from 17 in 2000 to 52 as at July 2003, as shown in *Table 10-8*. During the same period, the net asset value of Syariah-based unit trust funds also increased from RM 1.7 billion to RM4.5 billion. The range of Islamic products increased with the first Syariah index fund introduced in January 2002.

10.84 In line with the recommendation of the CMP to enhance the international profile of the Malaysian Islamic capital market, the Government launched the world's first sovereign Islamic bond for US\$600 million in June 2002. The issue was the first Islamic financial instrument endorsed by the Syariah Supervisory Council of the International Islamic Financial Market (IIFM). The successful launch of this landmark issuance was met with tremendous demand, with more than half of the investor base coming from the Middle East. This issue won several awards including the most Innovative Capital Markets Transaction and Bond Deal as well as Best Asian Sovereign Bond 2002.

10.85 International recognition of Malaysia's achievements in Islamic finance resulted in a mandate being given to SC by the International Organisation of Securities Commissions to lead a task force to assess developments and

TABLE 10-8				
SELECTED INDICATORS OF SYARIAH- BASED UNIT TRUST FUNDS, 2000-2003				
<i>Indicator</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003¹</i>
Units in Circulation (billion)	3.2	4.3	5.8	8.2
Number of Management Companies	15	23	27	28
Number of Approved Funds	17	32	44	52
Number of Accounts	236,383	266,917	302,790	333,751
Total Net Assets Value of Funds (RM billion)	1.7	2.4	3.2	4.5
<i>Note:</i> ¹ As at 31 July 2003 and includes funds approved but not yet launched.				
<i>Source:</i> Securities Commission				

regulatory implications of Islamic capital markets globally. Members of the task force included securities regulators from Australia, Indonesia, Italy, Jordan, Nigeria, South Africa, Thailand, Turkey, United Kingdom and United States of America.

Unit Trust Industry

10.86 The number of unit trust funds that were launched increased from 127 in 2000 to 213 as at July 2003, as shown in *Table 10-9*. By the end of July 2003, the net asset value of funds managed by unit trust management companies was RM66.0 billion or 11.7 per cent of KLSE's market capitalisation. The number of unit trust accounts increased by about one million to reach 10.3 million over the corresponding period. In addition, the total approved fund size and unit trust management companies also registered improvements.

10.87 In line with measures to gradually liberalise the investment management industry, a new policy to allow a group of companies or individuals to have interests in more than one unit trust management company was introduced in May 2002. This flexibility was introduced in recognition of the growing complexity of shareholding structures with a group of companies. Trustees and management companies of unit trust funds were allowed to negotiate on trustee fees without any minimum restriction with effect from 1 July 2002. The revised guidelines on property trust funds were released in November 2002 to encourage the expansion of Malaysia's property trust industry. The revision to the guidelines,

TABLE 10-9

SELECTED INDICATORS OF UNIT TRUST FUNDS, 2000-2003

<i>Indicator</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003¹</i>
Units in Circulation (billion)	63.8	71.4	84.5	92.8
Number of Management Companies	34	37	39	37
Number of Approved Funds	127	163	188	213
Total Approved Fund Size (RM billion)	90.4	110	135	161
Number of Accounts (million)	9.6	10	10.2	10.3
Total Net Assets Value (NAV) of Funds (RM billion)	43.3	47.3	53.7	66.0
% of NAV to KLSE's Market Capitalisation	9.7	10.2	11.2	11.7

Note: ¹ As at 31 July 2003 and includes funds approved but not yet launched.

Source: Securities Commission

among others, allowed property trust funds to be opened to a wider group of investors and to invest in more diversified classes of assets.

Venture Capital Financing

10.88 The venture capital industry continued to grow as an alternative source of financing for high technology industries. The number of venture capital funds/companies increased from 31 in 2000 to 46 as at the end of 2002. Correspondingly, the total number of investee companies backed by venture capital investments increased from 159 in 2000 to 297 in 2002. During the period 2001 - 2002, the venture capital companies invested a total of RM310.1 million in 127 companies. The bulk of venture capital investments were channelled to the ICT, manufacturing, biotechnology and pharmaceutical sectors.

10.89 During the review period, the Government continued to support the venture capital industry by providing adequate liquidity to meet industry needs. In this respect, the Malaysia Venture Capital Management Berhad (MAVCAP) was set up in April 2002 with a fund of RM500 million to provide venture capital financing in strategic areas such as ICT, biotechnology and life sciences. In addition, the Malaysia Debt Ventures (MDV) with a total fund of RM1.6 billion was established in 2002. The MDV provided contract-based financing such as project-based loans, bank guarantees and export financing to high value added and high-growth sectors.

10.90 The Venture Capital Consultative Council was established in July 2002 to enhance the development of the venture capital industry. To promote venture capital financing through fiscal incentives, two tax incentive packages were gazetted in 2001. Further, to facilitate the application for tax incentives, the Guidelines for the Annual Certification for the Venture Capital Industry was issued in August 2001. The exit mechanism for the venture capital industry was enhanced by liberalising several listing rules on the MESDAQ Market including the requirement of 70 per cent of the listing proceeds to be used in Malaysia as well as allowing the listing of technology incubators.

Labuan International Offshore Financial Centre

10.91 During the review period, further efforts were undertaken to develop Labuan as a reputable International Offshore Financial Centre (IOFC). As a result, the Labuan IOFC continued to record an increase of 73.9 per cent in the total number of offshore companies from 2,309 in 2000 to 4,016 companies as at the end of September 2003. The companies established in Labuan IOFC included offshore banking, leasing, insurance and insurance-related companies, as shown in *Table 10-10*.

TABLE 10-10				
TYPE OF COMPANIES ESTABLISHED IN LABUAN IOFC (as at 30 September 2003)				
<i>Type</i>	<i>Offshore Companies</i>	<i>Foreign Offshore Companies</i>	<i>Domestic Companies</i>	<i>Total</i>
Banks	19	35	2	56
Leasing	45	-	-	45
Insurance	32	20	1	53
Insurance-Related	49	1	-	50
Fund Management	14	-	-	14
Trading & Non-Trading	3,722	19	-	3,741
Trust Companies	-	-	20	20
Audit Firms	-	-	17	17
Liquidator Firms	-	-	20	20
Total	3,881	75	60	4,016

10.92 Initiatives were undertaken to enhance Labuan's role as a channel for Malaysian companies, particularly financial institutions and large corporations to expand overseas and compete globally. In this regard, the Securities Commission Act, 1993 was amended to allow licensed offshore banks and insurance companies to participate in the issue, offer or invitation made in relation to a foreign currency-denominated debenture.

10.93 As part of efforts to expand the range of products available in Labuan, offshore life insurance companies were allowed to sell investment-linked insurance products to Malaysians of high networth and to collaborate with offshore banks to sell bancassurance. In addition, new investment opportunities were created where Malaysian unit trust companies and fund managers were allowed to invest up to US\$5 million each in the instruments listed on the Labuan International Financial Exchange (LFX).

10.94 The LFX received a boost with the inaugural listing of US\$250 million bonds by First Silicon in June 2001. Another significant development was the listing of the sovereign global Islamic Sukuk amounting to US\$600 million issued by the Government of Malaysia in September 2002. As at 30 June 2003, there were 12 listings comprising investment funds, Islamic notes and debt securities on the LFX.

III. PROSPECTS, 2004-2005

Finance

10.95 For the remaining Plan period, the finance, banking and insurance sector is expected to expand by 6.7 per cent per annum. The FSMP and CMP will continue to provide a comprehensive framework for the strategic development of the financial sector. In this regard, concerted efforts will be geared towards further strengthening domestic capacity and increasing domestic competition to ensure an orderly adjustment to a progressively more liberalised and competitive market.

10.96 The overall thrust of these Master Plans is to enhance the resilience, efficiency and competitiveness of the financial sector to contribute towards sustained economic growth. In this regard, the financial institutions will need to continue practising financial prudence, good corporate governance and sound

risk management as well as increasing investment in human capital. The key measures that will be undertaken to facilitate the development of the financial sector during the remaining Plan period include:

- ❑ *improving the capabilities and capacity of the banking institutions to enhance the competitiveness and resilience of the banking sector;*
- ❑ *promoting and ensuring that DFIs perform their developmental roles to complement the established banking institutions;*
- ❑ *enhancing the capital market and gradually liberalising market access to meet funding needs and promote financial stability;*
- ❑ *developing Islamic financing as a strategic niche market segment to further contribute towards growth in the financial sector;*
- ❑ *strengthening the domestic venture capital industry to accelerate the development of high technology and high value added industries; and*
- ❑ *enabling the insurance industry to raise performance standards and more effectively mobilise long-term savings to support economic growth.*

Banking System

10.97 During the remaining Plan period, the banking sector will further enhance its role in mobilising and providing sources of financing to generate economic growth. Towards this end, further efforts will be focused on preserving the resilience and stability of the banking sector as well as improving the productivity and effectiveness of banking institutions. The benchmarking exercise will be expanded to incorporate benchmarks on the quality of customer service and develop service quality index for banking institutions. An enabling environment will also be created to promote the merger of commercial banks and finance companies within a domestic banking group into a single entity that provides the whole spectrum of financial products. In this respect, the BAFIA, 1989 will be amended to allow the merger to take place. In addition, BNM and SC will jointly regulate investment banks that will be created from mergers of merchant banks, stockbroking companies and discount houses. These efforts will be complemented by the progressive deregulation of certain policies to allow greater flexibility for banking institutions to introduce new products and services.

10.98 In view of the vast potential of Islamic banking, measures will be undertaken to further develop Islamic banking. These include the strengthening of the institutional structure of the conventional banks participating in the Islamic Banking Scheme and the licensing of foreign Islamic banking players to stimulate greater competition. In tandem with these developments, the Islamic financial regulatory infrastructure encompassing the prudential, legal and Syariah framework will be further enhanced. In view of the significant development of Islamic banking on the domestic front and to accelerate the process for Malaysia to evolve into a regional Islamic financial centre, financial liberalisation for the Islamic banking sector will be brought forward. This will entail the issuance of new Islamic bank licences to qualified foreign Islamic banking participants.

10.99 Initiatives will continue to be undertaken to enhance consumer protection and encourage active participation of consumers. In this context, a structured ten-year consumer education programme will continue to be implemented. The measures that will be undertaken include a strengthened institutional framework for consumer redress as well as enhanced institutional and product transparency that will improve consumers' financial literacy. In addition, regulations on competition policy will be developed and a deposit insurance fund will be established. The competition policy will promote healthy competition, curb unfair trade practices and contribute towards a comprehensive consumer protection framework. The policy objectives of the proposed deposit insurance system include enhancing deposit protection in Malaysia, strengthening the financial safety net, boosting confidence and ensuring viability through compulsory membership, promoting greater market discipline through limited coverage, strengthening incentives for sound financial and business practices through differential premiums and protecting Islamic deposits in a manner consistent with Syariah principles.

10.100 Recognising that SMEs have a vital role in contributing towards economic growth, a comprehensive and integrated approach will be adopted to expedite the development of SMEs. In this regard, the Small and Medium Industries Development Corporation will coordinate the various activities and support programmes undertaken by agencies involved in the development of SMEs. Measures will be targeted towards building capacity and capability of SMEs and improving their access to financing. Amongst others, efforts will be made to ensure that SMEs are provided adequate and easier access to funding, particularly to improve efficiency of the loan approval process, develop alternative mode of financing as well as provide reasonable cost of borrowing and special product packages to cater for SMEs. BPM and BSN will continue to provide micro

financing to micro enterprises involved in agricultural and non-agricultural projects, respectively. The Government will develop appropriate insurance protection and services for the agriculture sector to complement efforts to enhance credit sources of financing agricultural activities.

10.101 The establishment of the International Centre for Leadership in Finance will enhance human resource development in the financial sector. In this regard, the Centre will provide strategic management courses as well as specialised programmes to the financial services industry through strategic alliances with renowned international business schools and institutions of higher learning. The Centre will also serve as a regional centre of excellence devoted to enhancing the quality of human capital of the domestic and regional financial industries.

Developmental Financial Institutions

10.102 The DFIs will continue to complement the banking institutions to meet the financing requirements of a dynamic economy, especially in priority and new growth areas. In this regard, privatised and key infrastructure projects that have long gestation periods as well as technology ventures will be accorded high priority. The DFIs also have an important role to support the development of SMEs. Towards this end, measures will be implemented to enable DFIs to contribute more efficiently and effectively towards channelling required funds to such enterprises. The DFIs will provide support to SMEs, particularly in areas of financing new ventures and start-ups by providing mezzanine financing and ancillary services such as marketing research, insurance solution as well as business advisory and consultancy. Efforts will be made to improve the operational capabilities and capacities, enhance the performance measurement and evaluation as well as strengthen corporate governance of DFIs.

Capital Market

10.103 In moving forward to the next stage of capital market development, the Government will focus upon further enhancing the value proposition of the capital market by strengthening the key sectors of the capital market and continuing with the phased approach towards deregulation and liberalisation of increasing market access. In this regard, efforts will be geared towards implementing the second phase of the CMP to build on the successes achieved during the first phase.

10.104 One key area of focus identified for Phase 2 is the need to continue efforts to further enhance liquidity in the capital market. Recent global developments have reduced the supply of external funds and additional initiatives will be required to strengthen the mobilisation and efficient use of domestic capital with a view to enhancing liquidity in the capital market. In addition, to ensure that the Malaysian equity market remains attractive to issuers and investors, the breadth of listings will be gradually widened to include foreign companies while initiatives will be identified to increase the number of premier listings on the KLSE.

10.105 The demutualisation exercise of KLSE is expected to be completed in 2004. It will enable KLSE to function with greater flexibility to further enhance efficiency and adaptability in a fast changing environment. It will address the need to be a commercially-focused and business-driven market institution that represents all its stakeholders, without compromising its role as a front-line regulator.

10.106 As part of measures to further broaden and deepen the capital market, efforts will focus on further developing the bond market. The establishment of a single platform for the clearance and settlement of listed and unlisted bonds will be explored with the view to improving the order flow and minimise market fragmentation. The centralisation of the clearing and settlement system is expected to assist in strengthening the building of liquidity in the secondary bond market.

10.107 Efforts will also focus on enhancing the competitiveness and efficiency of market intermediaries. As the Malaysian economy becomes increasingly sophisticated, there is also a need to not only emphasise on cost efficiencies but for Malaysia's intermediaries to build their brand value and to re-engineer their business models. Various initiatives focusing on value creation will be identified to enhance the long-term rate of return and, concomitantly, to increase market valuations. These include initiatives focusing on increasing shareholder value, wealth management and risk management practices.

10.108 The financial services industry must also keep pace with rapid technological change. The significant growth of cross border trades, greater linkages among markets and mobile portfolio investments have necessitated continued improvements and enhancements to the clearing, settlement and depository infrastructure. In this regard, the KLSE is exploring the development of a common trading platform through a technology alliance with leading global suppliers. Adopting a single integrated trading system will eliminate duplication of resources

in terms of investments in upgrades, capacity enhancements, training and surveillance systems. Another initiative is the establishment of an integrated clearance and settlement payment system for all exchange-traded products, which can result in cost savings and operational efficiencies.

10.109 Another strategy to remain competitive in a global environment is to leverage on the potential offered by the Islamic capital market. Measures will focus upon introducing more competitive and innovative Islamic products as well as to diversify the product base through the mobilisation of untapped Islamic assets. Initiatives will also be directed at developing mutually beneficial strategic alliances with other major Islamic capital markets to create opportunities for both Malaysia and its partners by enhancing the matching of the global pool of funding sources from Islamic communities with Syariah-compliant investment opportunities.

Venture Capital Financing

10.110 Venture capital financing will continue to be actively promoted in view of its importance in nurturing and developing the high technology industries as well as to fill a financing gap not well covered by the traditional financial intermediaries. Further improvements to the package of fiscal incentives will be considered with a view to accelerating the growth of the venture capital industry. In addition, measures that will be undertaken to improve the quality of deal flows include the establishment of a mechanism to involve venture capitalists in the research and development (R&D) project funding process as well as the formulation of a comprehensive framework on intellectual property rights to encourage innovation and motivate researchers to commercialise their research findings. Measures to enhance the national innovation system and promote a culture of excellence in R&D will also be undertaken. To expedite the development of the venture capital industry, measures will be undertaken to create a strong network of business angels, knowledge workers and entrepreneurs as well as to strengthen risk-taking culture.

Insurance

10.111 During the remaining Plan period, the recommendations outlined in the FSMP for the insurance sector will be implemented to further advance the capacity and capabilities of domestic insurers to meet the challenges of intensifying

competition, changing business models and more informed consumers. Towards this end, the Government will continue to provide a conducive environment by devoting resources towards improving the regulatory environment and strengthening the supervisory infrastructure.

10.112 Prudential standards will be regularly reviewed to support the transition from a prescriptive to a performance-based supervisory regime. Emphasis will be focused on the development of risk-based capital regulations for the insurers and further enhancing the surveillance system to facilitate early identification of potential areas of weaknesses and implementation of prompt corrective measures. In addition, collaborative efforts among the regulators, stakeholders and industry participants will continue to be undertaken to accelerate the pace of development of the domestic insurance industry. In particular, efforts will be directed towards improving the performance of the insurance sector and ensuring that consumers have access to products and services that meet international standards at competitive prices. A framework for financial advisers will be introduced as a new distribution channel to enhance life insurance market penetration and increase the level of professionalism in the marketing of life insurance products.

Takaful

10.113 During the remaining Plan period, efforts will continue to focus on enhancing financial infrastructure and improving the institutional capacity of *takaful* operators to enable the industry to increase their market share in the financial system. In addition, the *Takaful* Operators Statistical Submission System will be implemented in 2004 to facilitate comprehensive and timely submission of statistical returns to BNM.

Labuan International Offshore Financial Centre

10.114 During the remaining Plan period, the Labuan IOFC will continue to be developed holistically to support the development of the island as well as to complement the activities of the domestic financial market. In line with the FSMP, further efforts will be focused on diversifying the financial institutions and activities in the IOFC, strengthening the capital market, e-commerce and other ancillary activities. Recognising the need to differentiate Labuan IOFC with other offshore financial centres, more emphasis will be placed on building and developing Islamic banking and finance as a niche market. Further efforts

will be undertaken to provide innovative Syariah-based financial products and services that meet the standards for best practices developed by the IIFM Board.

IV. ALLOCATION

10.115 The revised Plan allocation for finance is RM4.0 billion, as shown in *Table 10-11*. Of this amount, RM1.7 billion will be to provide venture capital funding for high technology industries while RM1.3 billion will be to increase Government equity participation in DFIs. The remaining allocation of RM1.0 billion will be used to provide credit and other financial services to expedite the development of SMEs.

TABLE 10-11				
DEVELOPMENT ALLOCATION FOR FINANCE, 2001-2005 (RM million)				
<i>Sector</i>	<i>8MP Allocation</i>		<i>Estimated Expenditure, 2001 - 2003</i>	<i>Balance, 2004 - 2005</i>
	<i>Original</i>	<i>Revised</i>		
Venture Capital	768.0	1,663.5	1,553.9	109.6
Small & Medium Enterprises Loans	566.6	1,013.0	857.5	155.5
Other Financial Services	44.2	60.4	30.4	30.0
Government Equity	1,465.7	1,282.6	969.2	313.4
Total	2,844.5	4,019.5	3,411.0	608.5

V. CONCLUSION

10.116 During the review period, the financial sector registered significant progress, despite the challenging and uncertain economic environment as well as increased competitive pressures. This was largely due to the measures implemented that resulted in a more effective and resilient financial sector, which enhanced the tolerance level of the economy to withstand a more difficult and demanding environment. For the remaining Plan period, concerted efforts will be undertaken to preserve the resilience and stability of the financial sector as well as enhance the efficiency and effectiveness of financial institutions in performing their

intermediation functions and contribute positively to socio-economic growth. Initiatives will continue to be taken to improve access to financing by all segments of the economy. These include strengthening the existing infrastructure and improving the access to financing by both SMEs and micro enterprises. Emphasis will also continue to be accorded towards ensuring that the objectives set out in the FSMP and the CMP are achieved. Given the challenging environment, the development of the financial sector will continue to be an important element in strengthening the growth prospects for Malaysia.

Chapter 11

Tourism and Distributive Trade

11

TOURISM AND DISTRIBUTIVE TRADE

I. INTRODUCTION

11.01 During the review period, the tourism industry emerged as an important contributor to economic growth through the generation of foreign exchange earnings, employment and income. The distributive trade sector benefited from the expansionary fiscal and accommodative monetary policies, resulting in higher disposable income and increased consumer spending.

11.02 For the remaining Plan period, to realise the full potential of the tourism industry, the key measures to promote international and domestic tourism will continue to be vigorously pursued in addition to intensifying efforts in areas such as customer-focused tourism product development as well as marketing and promotion. The distributive trade sector is also expected to experience steady growth, taking into account the effect of the Package of New Strategies and other measures that will be implemented to increase domestic demand.

II. PROGRESS, 2001-2003

Tourism

Tourist Arrivals

11.03 During the period 2001-2002, tourist arrivals increased at an average rate of 14.0 per cent per annum surpassing the Plan target of 6.9 per cent. There was a significant growth in tourist arrivals during the first eight months of 2001 with the number of tourists visiting Malaysia exceeding one million for each respective month. Despite the September 11 incident in 2001, the total number of tourist arrivals increased from 12.8 million in 2001 to 13.3 million in 2002,

as shown in *Table 11-1*. However, the invasion of Iraq and the outbreak of the Severe Acute Respiratory Syndrome affected tourist arrivals in the early part of 2003. During the period January-August 2003, the monthly average number of tourist arrivals recorded was 771,762, a decline of 30.9 per cent compared with the monthly average of 1.1 million for the same period in 2002.

TABLE 11-1			
SELECTED TOURISM INDICATORS, 2001-2003			
<i>Indicator</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>
Number of Tourist Arrivals ('000)	12,775	13,292	11,000
By Country of Origin (%)			
ASEAN	72.1	74.3	75.4
Japan	3.1	2.7	2.0
Australia	1.7	1.5	1.3
United Kingdom	2.1	2.0	1.1
Others	21.0	19.5	20.2
Total Tourism Receipts (RM million)	25,832.1	26,877.7	21,335.6 ¹
Number of Hotels	1,776	1,878	1,989
Number of Hotel Rooms	130,757	136,542	143,380
Average Length of Stay (nights)	6.1	7.8	-
Average Occupancy Rate of Hotels (%)	58.6	57.9	48.1
Employment	386,756	403,000	415,090
<i>Note:</i> ¹ Tourist receipts exclude excursionist receipts.			

Tourism Receipts and Expenditure

11.04 In tandem with the increase in tourist arrivals, tourism receipts recorded an annual growth of 4.0 per cent from RM25.8 billion in 2001 to RM26.9 billion in 2002. Tourism receipts accounted for 7.8 per cent share of Gross Domestic Product in 2001 and 7.5 per cent in 2002. Another positive development was the increase in the average per capita expenditure by 11.8 per cent from RM1,696 in 2001 to RM1,896 in 2002. Similarly, the average per diem expenditure increased by 5.9 per cent from RM293.40 in 2001 to RM310.80 in 2002.

TABLE 11-2			
TOURISM RECEIPTS BY COUNTRY, 2001-2003			
(RM million)			
<i>Country</i>	<i>2001</i>	<i>2002</i>	<i>2003^e</i>
ASEAN	15,867.6	17,208.3	12,862.8
Japan	1,014.0	908.9	967.4
Taiwan	595.0	505.6	490.6
United Kingdom	733.7	697.1	631.0
China	1,270.1	1,489.5	1,049.0
Australia	606.3	547.0	554.8
Hong Kong SAR	314.5	257.4	212.8
Others	5,430.5	5,265.9	4,567.3
Total	25,832.1	26,877.7	21,335.6¹
<i>Note:</i> ¹ Tourist receipts exclude excursionist receipts. ^e Estimate.			

11.05 There was a slight change in the distribution of tourism receipts by country during the review period, attributed mainly to the measures undertaken to diversify the tourism market. Tourist expenditure from the Association of Southeast Asian Nations (ASEAN) countries contributed a total of RM17.2 billion in 2002, a rise of 8.4 per cent from the RM15.9 billion recorded in 2001, as shown in *Table 11-2*. Among the ASEAN countries, Singapore maintained its position as the top tourist revenue generating market with a share of 52.6 per cent of total tourism receipts in 2002 followed by Thailand at 3.8 per cent. Among the non-ASEAN countries, China was the biggest contributor at RM1.5 billion, representing 5.5 per cent of total receipts in 2002.

11.06 Tourist arrivals from traditional markets registered a decline while the number of arrivals from the Middle East countries recorded an increase of 15 per cent in 2002 compared with 2001. The increase was mainly from Kuwait, Syria, Oman, Saudi Arabia and the United Arab Emirates, as shown in *Table 11-3*. Promotional and marketing efforts by the Government included road shows, meetings with travel agents, arranging special tour packages to cater to the needs of the Middle Eastern tourists, increasing flight frequencies to Malaysia as well as producing documentaries and publishing pamphlets on Malaysia in Arabic.

TABLE 11-3

TOURIST ARRIVALS FROM MIDDLE EASTERN COUNTRIES, 2000-2003

<i>Country</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003¹</i>
Saudi Arabia	27,808	39,957	45,007	10,579
Turkey	8,705	6,392	5,742	3,310
United Arab Emirates	2,391	13,762	14,124	3,630
Jordan	2,888	3,688	3,611	1,250
Kuwait	1,095	7,428	10,470	1,921
Lebanon	899	4,443	5,336	4,921
Syria	2,784	18,205	21,109	11,460
Oman	1,223	7,284	8,432	3,824
Others	5,577	13,617	17,948	7,739
Total	53,370	114,776	131,779	48,634

Note : ¹ Refers to January-August 2003.

11.07 The average length of stay increased by 27.9 per cent from 6.1 nights in 2001 to 7.8 nights in 2002, indicating a favourable response to the strategy of encouraging tourists to stay longer. Tourists staying more than 10 days in Malaysia were mostly from India, Indonesia, Italy, the Netherlands, Thailand and Middle East countries. The breakdown of tourist expenditure is shown in *Table 11-4*. In terms of tourist expenditure pattern, accommodation remained the largest component increasing from 34.9 per cent in 2001 to 36.6 per cent in 2002.

Domestic Tourism

11.08 Domestic tourism continued to be an important component of the tourism sector, especially to make up for the slowdown from inbound tourists. In this regard, the promotional activities under the theme of *Cuti-Cuti Malaysia* generated a heightened level of interest in domestic tourism. As part of the *Cuti-Cuti Malaysia* promotional programme, exhibitions and road shows were organised where a total of 20,006 tour packages valued at RM4.9 million was sold during the period 2001-2002. This represented a substantial increase compared with only 1,558 tour packages amounting to RM300,000 sold in 2000. The introduction of Air Asia, Malaysia's second national airline, reduced the cost of airfares for

TABLE 11-4

COMPOSITION OF TOURIST EXPENDITURE¹, 2001 AND 2002
(RM million)

<i>Type of Expenditure</i>	<i>2001</i>	<i>%</i>	<i>2002</i>	<i>%</i>
Accommodation	8,953.3	34.9	9435.9	36.6
Shopping	5,183.4	21.4	5,310.9	20.6
Food & Beverages	4,020.8	16.6	4,469.5	18.5
Local Transportation	2,058.8	8.5	2,268.7	8.8
Organised Sightseeing	816.2	3.7	7,99.2	3.1
Domestic Air Fares	1,356.4	5.6	1,263.3	4.9
Entertainment	1,138.4	4.7	1,185.9	4.6
Others	1,114.2	4.6	747.7	2.9
Total	24,221.5	100.0	25,781.1	100.0

Note: ¹ Tourist expenditure excludes excursionist expenditure.

domestic flights. As part of its promotional efforts, the airline together with local hotels offered special packages consisting flight, accommodation and tour arrangements to destinations such as Kota Bharu, Kota Kinabalu, Kuching, Langkawi and Pulau Pinang. The number of domestic tourists was estimated at 15.6 million in 2001 and increased to 16.4 million, generating RM4.2 billion in tourism-related expenditure in 2002.

Investment

11.09 As part of efforts to increase investment and upgrade the development of tourism products, the Special Fund for Tourism and Infrastructure was launched in October 2002 with an allocation of RM400 million. This Fund was to encourage and facilitate the private sector to take the lead to invest in tourism projects and provide various tourism-related products and services. As at January 2003, a total of RM81 million was approved under this Fund. To further enhance the effectiveness of tourism programmes, the Tourism Infrastructure Fund was increased from RM200 million to RM700 million in the Package of New Strategies launched on 21 May 2003. To counteract the effect of low occupancy rate, service tax exemption was extended on complimentary rooms provided by hotel operators

commencing from 1 June 2003. The number of hotels increased by 5.7 per cent from 1,776 in 2001 to 1,878 in 2002 resulting in the increase in the number of hotel rooms from 130,757 in 2001 to 136,542 in 2002.

Employment and Training

11.10 Human resource development and the provision of quality services in the tourism industry continued to be given priority. During the review period, employment in the tourism industry grew at an average annual rate of 4.2 per cent to reach 403,000 employees in 2002. The National Tourism Human Resource Development Council (NTHRDC) continued to provide policy planning and strategy on the development of human resource of the tourism industry, coordinate and liaise with institutions which offer tourism-related courses, develop training modules and courses as well as set standards. The *Mesra Malaysia* and *Think Tourism* courses organised by the Government were participated by about 5,500 front-liners and other tourism-related personnel. In addition, 52 private training institutes licensed by the NTHRDC complemented Government efforts by also conducting various tourism courses.

11.11 During the review period, additional National Occupational Skills Standard (NOSS) was developed in order to upgrade standards and improve the quality of services within the tourism industry. In line with this effort, 40 private training institutions, four hotels and one public training institution were recognised by the National Vocational Training Council (NVTC) to undertake and organise tourism-related courses. The NVTC itself organised numerous tourism-related courses for tourist guides, ticketing clerks, hotel front-liners, chef de party, cooks, kitchen helpers as well as food and beverages chefs. About 2,100 participants attended these courses during the review period. At the same time, the NVTC developed additional NOSS for conventions, house keeping, front office, sales, food and beverages chef. At the end of 2002, a total of 77 NOSS was developed, 33 in the hotel industry, 30 in the tourism and travel trade and the remaining 14 for the theme parks and recreational industry.

Sustainable Tourism Development

11.12 Sustainable tourism development was given priority in all tourism planning and implementation. Towards this end, a study on the development of six hill stations was undertaken in 2001. Among the recommendations of the study that were implemented included a balanced and sustainable tourism development in

highlands, controlling and monitoring opening of new land areas for development as well as introducing a systematic agricultural method. In addition, the strategy on sustainable development of highlands was adopted for implementation by the relevant state and local authorities to promote sustainable development of highlands. The Cabinet Committee on Coordination of Development on Highlands and Islands was established during the review period with the task of reviewing laws and regulations pertaining to development in highlands and islands as well as monitoring the enforcement of development in these areas.

Creating a Carnival Atmosphere

11.13 During the review period, tourism programmes and activities were organised to portray Malaysia as an exotic place with year-round events filled with a carnival atmosphere, with more than 500 events held nationwide. The major events that were organised included the Malaysian Festivals, Mega Sales Carnivals, the Merdeka Celebration, International Art Month, *Ramadan* Bazaar, Colours of Malaysia, National Water Festival, Food and Fruits Festival as well as the Malaysia Agriculture, Horticultural and Agro-tourism Show. In addition, world-class events such as the Formula One Grand Prix, World Motor Cycle Grand Prix, Le Tour De' Langkawi, Mount Kinabalu Climbathon, Johor International Kite Festival, Formula One Power Boat Race, Towerthon, Sixth Monsoon Madness and Malaysia International Championship of Extreme Skydive Base Cup were also organised.

11.14 Greater efforts were also made to promote Malaysia as an international shopping destination to attract more tourists and encourage them to spend more. Mega Sales Carnivals were held nationwide thrice a year involving an average of 4,780 retailers in 2001 and 4,940 in 2002. These sales carnivals provided the best bargains for goods and services as well as entertained shoppers with many attractive events. A study on Malaysia as an international shopping destination was conducted during the review period to assess Malaysia's current shopping environment and benchmark Kuala Lumpur with other cities to make Malaysia one the regional shopping destination.

Product Development and Promotion

11.15 During the review period, the key tourism products that were promoted included eco-tourism, agro-tourism, cultural and heritage tourism, cruise, yachting and boating activities, education and health tourism as well as meetings, incentives,

conventions and exhibitions (MICE). To further develop the eco-tourism sector, four interpretive centres were established at strategic locations around the National Park. The centres established at Kuala Gandah, Jenderak, Bukit Rengit and Kuala Tahan in Pahang, served to disseminate information and provide materials to guide visitors on the ecology of the area. In addition, events such as White Water Rafting in Sungkai, Perak, Rainforest Challenge in Hulu Selangor, Selangor and Kinabalu Climbathon in Sabah were organised to create awareness of the ecology and promote eco-tourism.

11.16 Numerous eco-tourism, agro-tourism and home-stay programmes were developed with the participation of the rural population, especially the farmers and fishermen. These programmes provided tourists with the choice of either day visits or farm-stays based on the bed and breakfast concept, where the locals offered accommodation at their homes to tourists at a reasonable price. As at 1 June 2003, 882 participants in 50 villages were registered under the homestay programme while 206 eco-tourism and agro-tourism sites were developed throughout the country.

11.17 The cruise travel market gained popularity with the development of numerous short and long cruise excursions. Among the popular destinations were cruises from Port Klang to Pulau Pinang and Langkawi. In an effort to further promote cruise tourism, existing port facilities for passengers were improved and attractive land tour packages were offered. The completion of the Batu Uban jetty in Pulau Pinang and the Kuala Kedah jetty and marina in Kedah in 2003 also facilitated the expansion of the cruise industry in Malaysia. The development of infrastructures for marina at other strategic locations such as Port Klang in Selangor, Muar in Johor, Kampung Tekek in Pulau Tioman and Pulau Melaka in Melaka were at various stages of implementation during the review period. To further stimulate the growth of leisure and recreational boating activities, the Langkawi International Yacht Registry was launched.

11.18 In view of the tremendous potential for education tourism and student tourism, greater efforts were made to promote Malaysia as a centre of educational excellence. During the review period, a Committee on Education Tourism was established to spearhead the development of education tourism, which includes marketing and promotion of education as well as the facilitation of administrative procedures for students and parents. Apart from participating in nine educational promotion activities organised by international agencies, Malaysia also conducted a total of 15 exhibitions and road shows in selected countries in the Middle East, ASEAN, Africa and the Asia Pacific. A Middle East Delegation Educational Visit was also organised to enable officials from Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria and Yemen to evaluate existing educational facilities and

facilitate accreditation to the courses offered by the universities and colleges in Malaysia.

11.19 In order to position Malaysia as a centre of academic excellence, a plan to promote edu-tourism was also prepared. The scope of education offered included long-term courses such as masters and doctoral degrees as well as short-term courses. A total of 36,468 foreign students was registered with institutions of higher learning and schools in the country in 2002. Of this total, 22,820 foreign students were registered with private institutions of higher learning, 5,159 with public institutions of higher learning while 5,668 and 2,776 students with private and public schools, respectively. The foreign students were from 155 countries with the majority coming from Bangladesh, China, India, Indonesia, Japan, Pakistan, Singapore, South Korea, Thailand and Yemen.

11.20 The MICE market continued to be an important source of growth for the tourism sector due to its capability to attract quality and high-spending tourists. During the review period, the Government worked closely with the private sector to promote Malaysia as a venue for MICE. In this regard, a total of 2,174 events was held and attended by 699,924 participants generating RM2.2 billion in revenue in 2002, an increase of 72.4 per cent compared with 2001. The majority of MICE participants were from Australia, China, Japan, Singapore, Thailand and United Kingdom. Among the world class events held during the review period included the Pacific Asia Travel Association Annual Conference 2001, the 10th World Economic Development Congress 2001, the 2nd Islamic Conference of Tourism Ministers, the Langkawi International Dialogue 2002, the 13th Non-Aligned Movement Summit and the 10th Organisation of Islamic Countries Summit. The *Global Meet* programme was also organised to position Malaysia as the intermediary point between MICE providers and purchasers. In addition, the *Meet and Experience Malaysia Truly Asia* campaign that combined the resources of the Government and the MICE industry partners was launched in 2002 aimed at offering the best products and incentives to potential event organisers with prices and special offers that were guaranteed for a specific period of time.

11.21 The *Malaysia-My Second Home* programme was introduced as an extension of the Silver Hair Programme to encourage foreigners, their spouses and dependants to choose Malaysia as their second home. Under this revised programme, foreigners are allowed to stay up to five years on a social visit pass with multiple entries, which is renewable. The requirement for a reputable sponsor was waived if their background and financial status were satisfactory. During the period of

2001-2002, a total of 1,014 foreigners joined the programme. Between January to May 2003, a total of 432 applications was received with 30 per cent of the applicants comprising Chinese citizens.

11.22 Promotional efforts based on the theme *Malaysia Truly Asia* were undertaken to create an identifiable image, generate interest and facilitate recall in the choice of destination. The Colours of Malaysia that was held in 2002 attracted 120,000 visitors, including 3,000 foreigners as well as 70 television stations from all over the world. A total of 20 Malaysian cultural bodies was also established in several countries overseas to showcase cultural dances that reflected Malaysia's rich, diverse and unique culture. Emphasis was also given to strategic markets such as the Middle East countries, China, India and Japan. To create a more cosmopolitan atmosphere, foreigners were allowed to operate restaurants on islands such as Pulau Tioman and Pulau Langkawi. The usage of information and communications technology continued to be given priority, particularly to enhance information sharing and marketing activities. The development of a tourism portal was initiated during the review period to coordinate promotional efforts, marketing and electronic commerce in the tourism industry.

11.23 The National Committee to Encourage Medical and Health Tourism in Malaysia was established to promote Malaysia as the regional centre for health care. In 2002, foreign patients spent a total of RM150 million for healthcare and treatment services in Malaysia. The number of patients seeking treatment also increased significantly, totalling 191,900 in 2002 compared with 78,318 in 2000. Treatment sought was mainly in the areas of cardiology, orthopaedics, obstetrics, gynaecology, nephrology and urology as well as ophthalmology.

11.24 Recognising the importance of a holistic and integrated tourism development approach, 16 State Tourism Action Councils were established in all the states as well as in Wilayah Persekutuan Kuala Lumpur, Wilayah Persekutuan Labuan and Langkawi. The Councils' main tasks included monitoring state tourism development projects, enhancing tourism infrastructure, working closely with both service providers and potential purchasers, organising and monitoring promotion and marketing programmes as well as establishing task forces to manage crisis situations affecting the tourism industry. These councils also worked closely with Tourism Malaysia to plan for the promotion domestically and overseas and upgrading of tourism products.

11.25 The completion of the Gunung Mat Cincang cable car project during the review period served as an added attraction to Pulau Langkawi and enabled

tourists to view the natural environment and scenic beauty of the island. In an effort to attract more tourists to visit Pulau Tioman, it was declared as a duty-free island in 2002. The new Administrative Centre of the Federal Government of Malaysia in Putrajaya became a popular tourist destination due to its unique characteristics. Stretching about 4,900 hectares, Putrajaya housed beautiful administrative complexes with different architectural designs that included the stately Perdana Putra building that housed the Prime Minister's office and the serene Putra Mosque. In addition, as more than 70 per cent of Putrajaya was covered with greenery, water bodies and 13 different gardens, it also provided a balance between the needs of development and environmental conservation.

Accessibility and Security

11.26 During the review period, considerable efforts were undertaken to enhance accessibility to support the growth of the tourism industry. In order to facilitate access to KLIA, roads leading to KLIA, particularly from Banting and Dengkil, Selangor and Putrajaya were widened and upgraded. The opening of KL Sentral in 2001 provided easier access between KLIA and the Klang Valley using the KLIA Express and the KLIA Transit. The Mulu and Miri airports in Sarawak were upgraded and roads to tourist destinations such as Taman Negara in Peninsular Malaysia and Taman Bukit Tawau in Sabah were improved. Efforts were also made to upgrade the railway from Kota Kinabalu to Tenom in Sabah covering a distance of 134 kilometres. In addition, efforts were made to ensure the comfort and safety of passengers in road, rail, sea and air transport. Improvements were also made to entry and exit procedures to provide hassle-free travel for tourists. In addition, the Government undertook measures to ensure the safety and security of tourists. Malaysian cities remained as one of the safest in the world with crime rates maintained at relatively low levels.

Distributive Trade

11.27 During the review period, the distributive trade sector continued to grow at an average annual rate of 3.3 per cent with the share of contribution to the GDP remaining constant at around 12.9 per cent, despite the weak global economy. The positive growth of the sector was largely due to the increased private consumption arising from improved disposable income and growth in consumption credit. The Mega Sales Carnivals held three times a year also contributed to the increase in consumer spending. The retail trade, with 153,724

establishments in 2001, generated a revenue of RM71.6 billion, providing employment for 512,337 people. The wholesale trade comprising 16,385 establishments generated RM114 billion in 2001, employing 179,537 workers. The highest number of retail establishments was in Johor while the highest number of wholesale establishments was in Wilayah Persekutuan Kuala Lumpur.

Promoting Healthy Competition

11.28 During the review period, the Government undertook measures to prepare the country to face the challenges of globalisation and liberalisation in trade and services. The conceptual framework for a fair trade policy to prevent anti-competitive behaviours such as collusion, cartel, price-fixing and abuse of market power was finalised and initiatives were taken to formulate the relevant legislation. Workshops and dialogue sessions were held to create awareness on the importance of having a fair trade policy and legislation. A Restricted Business Practices Study was conducted during the review period to provide insights into the different anti-competitive behaviours and business practices that exist in the Malaysian market. The business entities covered by the study included those in the livestock, fertilizer and pesticide, pharmaceutical, cement, concrete, automobile parts and accessories, air conditioner, department store and supermarkets, hospital as well as travel and tour industries. Initial findings of the study indicated that there were certain restrictive practices in the various industries such as exclusive dealing and retail price maintenance, exclusive arrangement, price undercutting, price leading, price fixing and tied selling.

Development of New Distribution Modes

11.29 The total number of *direct selling* licenses declined from 712 in 2000 to 413 in 2002, as shown in *Table 11-5*, due to the actions taken by the Government against operators of get-rich-quick schemes in the sector. The annual turnover of direct selling industry declined from RM4.5 billion in 2000 to RM3.5 billion in 2002. Of the total 413 direct selling companies registered in 2002, 112 companies had Bumiputera equity exceeding 50 per cent. In addition, 50 Malaysian companies marketing local products penetrated into markets such as India, Myanmar, Singapore, Taiwan, Thailand and the Philippines.

11.30 As part of efforts to develop the *franchise* industry, the Franchise Development Programme continued to be given emphasis to nurture new businesses

TABLE 11-5

NUMBER OF DIRECT SELLING LICENSES ISSUED, 2000-2002

	<i>Number of Licenses</i>	<i>Number of Agents (million)</i>	<i>Type of Licenses</i>			
			<i>Single- level</i>	<i>Multi- level</i>	<i>Mail order</i>	<i>Single- level/Mail order</i>
2000	712	1.2	199	427	69	17
2001	385	1.0	117	213	31	24
2002	413	1.1	124	230	28	31

and entrepreneurs. The Franchise International Malaysia 2001, comprising a conference and exhibition was organised in August 2001 to increase awareness on the benefits of franchising as well as provide an opportunity for potential foreign franchise investors to participate in the local franchise industry. As at 1 July 2003, a total of 196 franchise products was registered, as shown in *Table 11-6*. The food sector recorded the highest number of registration accounting for 31.6 per cent of the total, followed by education at 8.7 per cent, and leather goods and apparel at 6.6 per cent.

11.31 The increase in the number of *hypermarkets* changed Malaysia's retail landscape, offering better shopping facilities to shoppers. The number of foreign hypermarkets increased from 16 in 2000 to 27 at the end of June 2003, as shown in *Table 11-7*. The presence of the hypermarkets affected the services of small traditional retailers. To ensure an orderly development of hypermarkets and to protect the interest of local retail businesses, the Government issued guidelines that stipulated, among others, that hypermarkets should operate outside the radius of 3.5 kilometres from housing estates and town centres, with only one hypermarket for every 350,000 inhabitants. In addition, the hypermarkets should be freestanding at the suburb of the town and equipped with standard facilities.

11.32 The foreign hypermarkets established international procurement centres to operate distribution activities such as bulk purchasing, grading of products, repackaging into retail quantities, labelling and exporting value added products overseas. The hypermarkets also worked closely with the Government by supporting

TABLE 11-6

NUMBER OF FRANCHISE PRODUCTS REGISTERED BY SECTOR¹

<i>Sector</i>	<i>Number</i>	<i>(%)</i>
Food	62	31.6
Education Centres	17	8.7
Leather & Apparels	13	6.6
Supermarket/Minimarket	8	4.1
Beauty Centre & Beauty Products	8	4.1
Clothes	8	4.1
Kindergarten	7	3.6
Book Shops	5	2.6
Optometry Shops	4	2.0
Cosmetics/Accessories	4	2.0
Car Service Centre	4	2.0
Pharmacy	4	2.0
Telecommunication	4	2.0
Hotels	3	1.5
Others	45	23.0
Total	196	100.0

Note : ¹ As at 1 July 2003.

efforts to enhance the competitive edge of their local suppliers. Apart from procuring supplies, the hypermarkets extended consultancy and advisory services to their suppliers in the areas of adherence to minimum product specification level, maintaining product quality, packaging, pricing and marketing.

11.33 During the review period, efforts were also continued to increase Bumiputera participation in the marketing and distribution of petroleum products, managing petrol stations and bunkering services. Of the total of 5,294 companies involved in the retailing of petroleum products, 2,806 were operated by Bumiputera entrepreneurs. In addition, convenience stores of most hyperstations were also established, offering longer operating hours for road users and the general public. Of the total 2,776 petrol stations registered at the end of June 2003, 2,600 were operating such facilities.

TABLE 11-7		
NUMBER OF FOREIGN HYPERMARKETS BY STATE, 2000 AND 2003 ¹		
<i>State</i>	<i>2000</i>	<i>2003¹</i>
Selangor	5	9
Wilayah Persekutuan Kuala Lumpur	4	5
Johor	3	5
Pulau Pinang	2	3
Negeri Sembilan	0	2
Melaka	0	1
Perak	1	1
Pahang	0	1
Total	16	27
<i>Note:</i> ¹ As at the end of June 2003.		

11.34 The *Mega Sales Carnivals* spurred domestic consumption and increased tourist arrivals. The sales carnivals were organized to coincide with the holiday seasons to attract tourists to spend their vacation in Malaysia as well as to shop conveniently. In this regard, tourist arrivals increased by about 30 per cent during the months when the mega sales carnivals were held. In general, 60 per cent of the tourists shopped during their stay in Malaysia.

Expanding E-Commerce

11.35 E-commerce revolutionised the conduct of businesses, characterised by increasing capabilities, global competition and customer expectations. E-commerce provided opportunities for businesses to market their products at a lower cost, obtain access to market information and improve their distribution channels. The security of e-commerce, particularly on online transactions remained an issue of concern for both customers and retailers. In this regard, measures were taken to educate customers and retailers on the security of online transactions. Retailers were educated to be Secure Sockets Layer compliant. In addition, the Government initiated the drafting of the Electronic Transaction Act.

Increasing Bumiputera Participation

11.36 The *Projek Usahawan Bumiputera Dalam Peruncitan* (PROSPER) was implemented to increase the involvement of Bumiputera in the retail trade. As at the end of May 2003, PROSPER received 1,114 business plans of which 310 were approved. A total of 224 companies was already in operation, involving a disbursement of RM17 million. To ensure the success of the projects approved, the recipients were required to upgrade their skills in financial management, accounting and marketing. PROSPER also conducted courses for corporate directors to improve governance and provide a better understanding of their roles and responsibilities. As for potential entrepreneurs, PROSPER encouraged on-the-job training to enable them to gain the necessary experience. In addition, under its retail entrepreneur training programme, *Majlis Amanah Rakyat* trained 3,161 potential entrepreneurs in activities such as tailoring, electrical and wiring, automotive repair, plumbing and welding. An Entrepreneur Development Council was established during the review period to monitor and coordinate efforts to develop and enhance Bumiputera participation in business and trade.

Ensuring Price Stability

11.37 Efforts were undertaken to ensure price stability by fostering cooperation with industry players and getting their commitment to provide adequate supply of goods in the market, especially during the festive seasons. Inspections were also done regularly to prevent hoarding of essential goods. The Ministry of Domestic Trade and Consumer Affairs monitored the prices of 255 essential goods on a weekly basis and reported the findings to the Cabinet. The price analysis and monitoring mechanism provided an early warning system to enable timely measures to be taken to ensure price stability. In addition, new price adjustments were carefully planned and implemented in a manner that minimised their impact on inflation.

Consumer Education and Protection

11.38 Numerous programmes were implemented to protect consumer interests. Brochures and flyers were published in four major languages to reach out to the different ethnic groups. Consumer education to increase awareness was undertaken through the electronic media and activities of consumer associations and consumer clubs. As more consumers became aware of their rights and interests, the number of cases filed with the Consumer Claims Tribunal increased from 1,155 in 2001 to 2,649 in 2002, as shown in *Table 11-8*.

TABLE 11-8

**CONSUMER CLAIMS TRIBUNAL –
STATUS OF CASES FILED AND RESOLVED, 2001-2003**

	<i>Number of Cases Filed</i>	<i>Type of Claim</i>		<i>Cases Resolved</i>			<i>Cases in Process of Hearing</i>
		<i>Goods</i>	<i>Services</i>	<i>Withdraw</i>	<i>Arbitrary</i>	<i>Hearing</i>	
2001	1,155	821	334	225	340	590	0
2002	2,649	1,489	1,160	1,088	495	1,066	0
2003 ¹	717	410	307	144	42	106	425
Total	4,521	2,720	1,801	1,457	877	1,762	425

Note: ¹ As at the end of March 2003.

III. PROSPECTS, 2004-2005

Tourism

11.39 The average annual growth rate of tourist arrivals to Malaysia is expected to remain at 6.9 per cent for the remaining Plan period. Priority will be accorded to ensure and promote Malaysia as a safe and pleasant place to visit. The emphasis of tourism development will be placed on the continuous improvement of tourism products and services as well as infrastructure upgrading. In this regard, the private sector will take the lead in the provision of tourism products and services while the Government will continue to provide and upgrade various infrastructural facilities. The Government will set up a 24-hour Help Line manned by trained personnel to assist tourists requiring emergency services.

11.40 To maximise the potential of the tourism industry, the key strategies of sustainable tourism development, holistic and integrated approach and creation of a carnival atmosphere will continue to be emphasised. The tourism development strategies that will be pursued include:

- ❑ *engaging in product development and marketing;*
- ❑ *enhancing human resource development; and*
- ❑ *encouraging and facilitating domestic tourism.*

Product Development and Marketing

11.41 Tourism development will continue to focus on attracting foreign tourists as well as encouraging domestic tourism. Marketing and promotional activities will concentrate on expanding the tourism market share by sustaining existing markets and developing newly identified markets. In this regard, tourism promotion missions to markets such as the Middle East countries as well as China, India, Japan and United States will continue to be undertaken. The unique selling points of the tourism industry will be marketed based on the tag line *Malaysia Truly Asia*. To further enhance the attractiveness of Malaysia as a shopping destination, entrepreneurs will be encouraged to increase efforts to obtain agency and dealership rights of new and emerging international consumer products and brand names. In addition, the possibility of establishing direct international flights from selected cities will also be explored to facilitate access to duty free shopping destinations in the country.

11.42 As part of efforts to increase tourist arrivals, more event-related activities will be organised and quality tourism products and services will be provided, based on the uniqueness and strength of niche products. In addition, efforts will be made to put in place a mechanism to award Blue Flag and Green Globe certifications to tourist sites. The Blue Flag is awarded to beaches while the Green Globe certification is given to eco-tourism sites that give commitment to environmental protection and improvement in line with a certain minimum requirement of international regulations. These awards will promote standards for sustainable development and establish responsible behaviour for the public and private sectors as well as the community. These awards will also lead to increased tourists satisfaction and gain international recognition. In addition, the Study on the Infrastructure Development of Islands that will be completed by the end of 2003 will provide a comprehensive plan of action for implementation to ensure the balance between the needs of development and environmental protection.

11.43 Eco-tourism, agro-tourism and rural tourism will be further developed to fully capitalise on the beautiful scenery, peaceful countryside and flora and fauna. Existing accommodation and attractions will be upgraded and new ones developed. In addition, the implementation of the *One District One Industry* programme will increase the participation of local communities as well as further develop the handicraft industry and strengthen linkages with the tourism sector.

11.44 To promote cultural and natural heritage sites, further efforts will be undertaken to secure the inclusion of Taman Negara in Peninsular Malaysia, Niah Caves in Sarawak and the Meliau Basin in Sabah as well as Historic Inner Cities of Melaka and Pulau Pinang in the list of World Heritage Sites. The establishment of state cultural centres and culture-based activities will further enrich tourist experience. In this regard, Malaysia's unique cultural heritage will be emphasised through the utilisation of traditional architecture as well as the wide array of attire, music, food, handicraft and the local arts.

11.45 To promote the cruise industry, cruise centres will continue to be developed and upgraded in various parts of the country. Towards this end, marinas will be built at strategic locations such as Pulau Pinang, Pulau Pangkor, Port Klang, Port Dickson, Melaka and Muar. In addition, cruise terminals at Pulau Pinang and Melaka will be upgraded. This will allow cruise ships and leisure boats to sail to different sites of interests as well as to enable tourists to engage in more activities and stay longer. In addition, existing jetties and passenger terminals will also continue to be upgraded to ensure comfort and safety of passengers.

11.46 The availability of a sophisticated and efficient health care delivery system, alternative therapies as well as an attractive natural environment has positioned Malaysia as an emerging health tourism centre. In this regard, special tour packages with health components will be introduced. Attractive elements such as visit to beauty salons providing skin care and hair treatment, health spas specialising in Asian relaxation therapy and hydrotherapy treatments as well as dental care and optical services centres, will be included in the packages. In addition, a comprehensive package including accommodation, health care and visa arrangements for patients and accompanying persons will be developed to promote and facilitate health tourism.

11.47 To further enhance edu-tourism, efforts will be undertaken to encourage private institutions of higher learning to improve education facilities and services, expand the curricula and enhance their teaching capabilities. Promotional efforts will be intensified to attract more foreign students to pursue academic knowledge in Malaysia. Rules and regulations pertaining to foreign students will be reviewed with the view to allowing flexibility and facilitating admission. In addition, private institutions of higher learning will also be encouraged to organise their convocations during festive seasons so as to encourage family members of foreign students to attend the ceremony and stay longer in the country.

11.48 Sports tourism offers vast potential in attracting tourists to the country. While continuing efforts to hold sports events during the remaining Plan period, a committee on new sports and sports tourism will be established to coordinate and identify potential sports in all categories as tourism products. Other measures to promote sports tourism include the enhancing of event management capabilities, presenting annual awards to the best sports tourism agencies as well as upgrading the official Sports Tourism Council website.

Human Resource Development

11.49 The tourism industry being service-oriented, will need to ensure that its manpower is equipped with the necessary skills to meet the varied demands and expectations of the tourists. To ensure professionalism in the delivery of services by tour operators, guides and tourism-related personnel, further efforts will be taken to coordinate training in the tourism industry. The NTHRDC will continue to improve the quality of course contents and develop more learning guides as well as intensify efforts on the implementation of NOSS in the industry. The importance of courtesy, graciousness and promptness of services will continue to be emphasised. In this regard, the NTHRDC together with the NVTC will develop a learning guide for hospitality and services. The *Train the Trainers* course will also be provided to all tourism training institutes registered with the NTHRDC. The Eco-Host Programme will be implemented to create awareness on the subject of eco-tourism among the front liners of the tourism industry. Modules for specialised activities based on eco-tourism such as caving, mountaineering, scuba diving and boating will be provided to tourist guides on a regular basis to increase their product knowledge and enhance services. Institutions of higher learning including public and private universities as well as private colleges will be encouraged to offer courses specialising in tourism.

Domestic Tourism

11.50 In line with the Government's efforts to reduce the outflow of foreign exchange, domestic tourism will be aggressively promoted to increase the awareness of the attractions and facilities for recreation. Domestic tourism promotion campaign focusing on the theme *Cuti-Cuti Malaysia* will be intensified. To support the promotion programmes, tour operators and airlines will be encouraged to develop specialised tour packages to suit the preferences of domestic tourists. A monitoring system will be established to monitor the activities and pattern of travel of

domestic tourists so as to enable the development of specific tourism product and formulation of strategic marketing plans. In addition, promotion campaigns will be intensified to inculcate the culture among Malaysians to schedule vacations as a means to improve the quality of life.

Distributive Trade

11.51 The distributive trade sector is targeted to grow at an average rate of 4.8 per cent for the remaining Plan period, taking into account the outlook in terms of the employment rate, consumer sentiment and disposable income. The distributive trade policy will provide a comprehensive framework to chart the strategic directions and action plan to accelerate the development of the sector. To further strengthen the distributive trade sector, measures that will be undertaken include:

- ☐ *promoting distributive trade competitiveness;*
- ☐ *forming strategic alliances;*
- ☐ *increasing Bumiputera participation;*
- ☐ *enhancing human resource development;*
- ☐ *expanding consumer education and protection; and*
- ☐ *improving the distributive trade database.*

Promoting Competitiveness

11.52 To further foster fair trade practices, efforts will continue to formulate the fair trade practices policy and legislation. The policy and legal framework will provide a conducive environment for market competition and fair trade through increased productivity and efficiency, reducing or eliminating barrier to market entry, providing access for all businesses and prepare the domestic distributive trade for the competitive environment of the international market place. It will also promote the entry and participation of small enterprises into the distributive trade sector. The fair trade practices policy and legislation will be implemented in stages to ensure a smooth transition and the support of main players in the market. The establishment of a fair trade practices unit and a fair trade practices commission will also be implemented in phases.

Forming Strategic Alliances

11.53 The existence of hypermarkets provides an avenue for domestic firms, particularly small and medium enterprises to market their products overseas. In this regard, the hypermarkets will be encouraged to establish working relationships with local producers to source locally produced goods of high quality at competitive prices. These products can also be marketed worldwide through the chain of outlets operated by the hypermarkets. The hypermarkets are also encouraged to obtain and display at least 30 per cent of their products from Bumiputera entrepreneurs. In addition, the hypermarkets will be required to provide space for local retail businesses at their premises to develop local retailers as well as increase the sale of local products.

11.54 Globalisation has provided wider opportunities for local brands to penetrate foreign markets. In this regard, there is a need to provide goods of excellent quality that adhere to international standards. Recognising the importance of marketing and promotion, further incentives for brand development will be introduced and more companies will be encouraged to participate in overseas trade fairs as well as improve packaging and advertising activities. Assistance will also be extended to Malaysian companies promoting local brands to defray part of the cost of development, registration of trademarks and patents.

Increasing Bumiputera Participation

11.55 During the remaining Plan period, greater efforts will be made to enhance Bumiputera participation in the distributive trade sector. The training programmes on product quality standards, packaging, branding and marketing will be improved to ensure that products produced will be of export quality and meet consumer demand. A mechanism that provides a means to share resources and information among Bumiputera producers will be put in place to create synergy and enhance their efficiency and competitiveness. Efforts will also be undertaken to encourage Bumiputera producers to form and join cooperatives to enhance their product materials purchasing power. In addition, a study will be undertaken to determine the viability of establishing a retail training institute with the objective of providing opportunities to existing and potential Bumiputera entrepreneurs to enhance their retail skills as well as prepare them for the challenges arising from trade liberalisation.

11.56 Further efforts will be undertaken to improve the programmes and activities of PROSPER. In this context, business plan workshops and business consultancy

clinics will be conducted to assist, guide and provide strategic directions to participants to enhance the effectiveness of the programmes and activities of PROSPER. In this regard, the development of concept shops for lighting, laundry and dry cleaning, home décor, mini market, sports shop and automotive workshop for future replication will be considered for implementation. In addition, efforts will be undertaken to support front-end retailers with selected wholesale and distributorship network by providing more premises at strategic locations in new shopping complexes and shoplots. These businesses will be given the option to either rent the premises or rent with the view to purchasing at a later date.

Enhancing Human Resource Development

11.57 As the distributive trade sector is a potential source of employment and doing business over the Internet gets more sophisticated, appropriate skills must be developed for existing entrepreneurs as well as new entrants into the sector. In this regard, local institutions of higher learning will be encouraged to offer courses in distributive trade to cater to the increasing demand for retail trade personnel such as managers, store supervisors and salesperson. The Government will complement these efforts by conducting specific courses in retail trade at its skills development and training centres. Unemployed graduates will also be encouraged to enrol in the training programmes to increase their employability.

Expanding Consumer Education and Protection

11.58 As increased awareness among consumers will act as a deterrent against unethical trade practices, consumer education programme and activities will be expanded. The findings of the Study on Laundry Services will be used to formulate a code of ethics to safeguard the interest of consumers by replicating the code used by the motor vehicle workshops. In this regard, the laundry shops will be required to display price tags for the different services offered. Measures will also be undertaken to regulate the operations of workshops by enacting the Motor Vehicle Maintenance Act as well as placing workshops in designated areas to enhance environmental protection and pollution control. To ensure that the rates paid by consumers commensurate with the level of service rendered, an accreditation system will be implemented on workshop personnel such as mechanics and foremen. In this regard, relevant programmes will be prepared with the cooperation of the NVTC and the motor vehicles-related associations.

11.59 To meet the increasing awareness on consumer rights, the Consumer Claims Tribunal will be established in all states in stages during the remaining Plan period. To address complaints filed by consumers against service providers and traders, an agency dealing with the public as well as the service providers will be established at the state level. This will also serve to safeguard the interest of consumers while at the same time enhance enforcement.

Improving Database

11.60 To improve the existing Patent and Trademark System, efforts will be made to enhance accessibility to enable registered patent agents to file new patents and search facilities online as well as facilitate and shorten the duration of the approval process. Local manufacturers will be encouraged to register the patent and trademark of their products to protect their intellectual property rights as well as encourage innovation and creativity. In addition, the database on distributive trade will also be strengthened to improve monitoring of the flow of goods and services as well as support the strategic development of the sector. The availability of data on a timely and regular basis will assist in strategic planning to develop the sector more effectively and guide investments in potential areas.

IV. ALLOCATION

11.61 The revised Plan allocation for the tourism and distributive trade sectors is RM2.0 billion, as shown in *Table 11-9*. Of this amount, a total of RM1.1 billion allocation for the tourism sector will be used to upgrade facilities and infrastructure, preserve and conserve national historical sites as well as beautify and protect the environment. The distributive trade sector will be allocated RM891.3 million to further develop small and medium businesses, upgrade trade services, acquire business premises as well as provide training and consultancy services.

V. CONCLUSION

11.62 During the review period, the tourism and distributive trade sectors continued to contribute significantly to income generation and employment creation. For the remaining Plan period, measures will be undertaken to further increase the contribution of tourism by improving marketing through the promotion of

TABLE 11-9

**DEVELOPMENT ALLOCATION FOR THE TOURISM AND DISTRIBUTIVE
TRADE SECTORS, 2001-2005**
(RM million)

<i>Sector</i>	<i>8MP Allocation</i>		<i>Estimated Expenditure, 2001 - 2003</i>	<i>Balance, 2004 - 2005</i>
	<i>Original</i>	<i>Revised</i>		
Tourism	990.2	1,118.3	758.7	359.6
Preservation of National/Historical Heritage	83.0	116.8	74.8	42.0
Accommodation	36.6	39.6	30.1	9.5
Beautification/Cleanliness & Environmental Protection	258.1	303.9	163.9	140.0
Cultural Product	18.0	22.0	18.0	4.0
Facilities & Infrastructure	519.9	574.3	453.8	120.5
Others	74.6	61.7	18.1	43.6
Distributive Trade	776.0	891.3	638.7	252.6
Fund For Petty Traders	288.0	366.0	258.0	108.0
Upgrading & Modernisation Of Trade Services	39.1	48.2	44.1	4.1
Business Premises	408.9	425.6	313.9	111.7
Training & Consultancy Services	40.0	51.5	22.7	28.8
Total	1,766.2	2,009.6	1,397.4	612.2

a variety of products and services as well as activities organised throughout the year to attract more tourists to stay longer, spend more as well as make repeat visits to Malaysia. To further enhance the growth and competitiveness of local producers, hypermarkets will be encouraged to source local products and facilitate the entry of these products into international markets. In addition, human resource development will be enhanced to prepare the sector for greater competition.

Chapter 12

Social Development

12

SOCIAL DEVELOPMENT

I. INTRODUCTION

12.01 Social development programmes, which include health, housing and other social services, have been an integral part of the socio-economic development of the country. With Malaysia moving towards the achievement of developed nation status, emphasis was given to ensure that economic development is balanced with advancement in the social sphere. During the review period, social development programmes were aimed at improving the quality of life of the people while simultaneously inculcating positive values and self-reliance.

12.02 During the remaining Plan period, social development programmes will continue to be implemented and will focus on achieving greater coverage and accessibility as well as creating a caring society. Since the impact of social development programmes is dependent not only on resource availability but also on the capacity to implement, emphasis will be given to improving the quality and delivery of social services. The recently launched National Social Policy (NSP) will provide the direction and framework for the planning and implementation of social development programmes in a more cohesive and synergistic manner involving both the public and private sectors as well as non-governmental organisations (NGOs). These efforts will contribute towards the formation of a society capable of participating effectively in the development process of the country.

II. PROGRESS, 2001-2003

Health

12.03 During the review period, the focus of health sector development was to further improve the scope and quality of primary, secondary and tertiary

healthcare towards enhancement of the health status of the population. In this regard, emphasis was given to enhancing the delivery system and optimising resources through greater cooperation and collaboration between the public and private sectors as well as NGOs.

12.04 As an integral part of the *preventive and promotive* health programme, the thematic healthy lifestyle campaign continued to focus on healthy behaviour such as healthy eating, exercise and fitness, good mental health and abstinence from smoking and *dadah*. The campaign emphasised the *Promotion of Healthy Families* in 2001 and *Promotion of Healthy Environment* in 2002. In an effort to consolidate and reinforce the programmes of the past years, the theme for 2003 was *Be Healthy for Life* in the school setting. This theme emphasised balanced diet, regular exercise, non-smoking and stress management. To promote the healthy lifestyle campaign as well as create a supportive environment for the promotion of healthy practices, four Health Promotion Community Resource Centres were established. These centres were equipped to provide general health information and educate the public on current health issues. In addition, a special health promotion programme, *Cegah Rokok, Alkohol dan Dadah (CERAH)*, to encourage youths to adopt a healthy lifestyle was introduced in 2001.

12.05 The coverage and scope of the childhood immunisation programme was further improved during the review period. In addition to achieving full coverage for Bacille Calmette-Guerin (BCG), the coverage for the triple antigen vaccine for diphtheria, pertussis and tetanus improved from 94.1 per cent in 2000 to 96.8 per cent in 2001, as shown in *Table 12-1*. The coverage for hepatitis B improved from 91.1 per cent to 95.0 per cent and polio from 93.4 per cent to 96.7 per cent. To further reduce morbidity and mortality among children against vaccine-preventable diseases, the haemophilus influenza B (HiB) vaccine and the new combination vaccine for mumps, measles and rubella (MMR) vaccines were incorporated as part of the childhood immunisation programme and provided free in all Government health facilities from July 2002.

12.06 In response to the outbreaks and spread of infectious diseases such as the Enterovirus 71 and Nipah virus, a Surveillance Section was established at the Ministry of Health in 2001. In addition, an Infectious Disease Research Centre and a bio-safety level three laboratory (P3 Lab) were established at the Institute for Medical Research (IMR) in 2001 and 2002, respectively. Surveillance and control of infectious diseases was further strengthened with the development of efficient surveillance systems, capacity building as well as greater collaboration and coordination between the various stakeholders, both local and foreign.

TABLE 12-1

**HEALTH FACILITY OF THE MINISTRY OF HEALTH
AND COVERAGE, 2000 AND 2003**

Category	Number		Facility Ratio to Population and Coverage (%)	
	2000	2003 ¹	2000	2003 ¹
Health Facilities				
Rural Health Facilities				
Community Clinics	1,924	1,934	1: 4,600	1: 6,693
Health Clinics	677	686	1: 13,073	1: 13,602
Mobile Units ²	204	168	1: 43,384	1: 55,540
Urban Health Facilities				
Health Clinics	166	172	1: 86,840	1: 88,365
Maternal & Child Health Clinics	104	94	1: 223,712	1: 260,957
Patient Care Services				
Hospitals	120	124	1: 193,883	1: 201,065
Total Beds ³	34,579	34,636	1: 885	1: 708
Dental Units ⁴	2,802	2,930	1: 8,303	1: 8,319
Beneficiaries ('000)				
Outpatient Visits ⁵	28,988	29,516 ⁶		
Inpatients ⁵	1,543	1,632 ⁶		
Rural Water Supply	8,398	7,867	93.5	94.1
Rural Sanitary Latrines	8,496	8,411	96.5	98.5
School Dental Clinics	4,303	4,267	90.7	85.2
Supplementary Feeding	5,186	5,125	22.3	20.9
Immunisation (Under one year)				
BCG	479	496 ⁶	100.0	100.0 ⁶
Diphtheria, Pertussis & Tetanus (3rd dose)	499	480 ⁶	94.1	96.8 ⁶
Hepatitis B (3rd dose)	483	471 ⁶	91.1	95.0 ⁶
Measles	457	458 ⁶	86.2	92.2 ⁶
Polio (3rd dose)	495	480 ⁶	93.4	96.7 ⁶

*Notes:*¹ Figures are for 2002.² Refers to dispensary services, village health teams, flying doctor services and mobile dental services.³ Refers to hospital beds under the Ministry of Health.⁴ Refers to dental chairs in Government clinics.⁵ Refers to attendances in general outpatient department, specialist outpatient clinics and emergency departments in hospitals and from public health facilities.⁶ Figures are for 2001.

New and additional guidelines for notifiable infectious diseases as well as communicable disease bulletins were developed and disseminated. In addition, regular epidemic intelligence training was undertaken. In response to the efforts by the World Health Organisation (WHO) to eliminate lymphatic filariasis, the first phase of the programme that involved the assessment and mapping of filariasis endemic areas was completed in 2002.

12.07 In 2003, Malaysia managed to contain the outbreak of the Severe Acute Respiratory Syndrome (SARS). In this regard, the experience gained during the outbreak of the Nipah virus in 1998-1999 proved useful. Malaysia's response to the global alert on SARS involved increased collaborative efforts through the establishment of an inter-agency committee, preparation and dissemination of reference materials and information on SARS as well as guidelines on the clinical management of SARS cases and public health surveillance. In addition, the P3 Lab at IMR was designated as the National Reference Laboratory for SARS. To obtain the expertise and experience of professionals to contain the spread of SARS, there was increased bilateral and regional collaboration as well as networking with international organisations including the WHO. In addition, the WHO Global Conference on SARS was held in Kuala Lumpur to review the epidemiological, clinical management and laboratory findings on SARS and discuss global control strategies.

12.08 Synonymous with the changing pattern of diseases seen in most developed countries, Malaysia also experienced an increase in the incidence of non-communicable diseases such as cancer, diabetes mellitus and cardiovascular diseases. In addition to the promotive and preventive programmes that were undertaken and to prevent further increases in the incidences of these diseases, the control of non-communicable diseases was included as an element in the provision of basic health care. With this inclusion, all health clinics were required to provide facilities for early screening, diagnosis and treatment as well as optimal management of complicated cases. To ensure the availability of care, treatment, control, protection and rehabilitation of persons with mental disorders, the Mental Health Act and a blueprint for the provision of mental health services was formulated in 2001.

12.09 Recognising the need for safe and quality food, an inter-agency National Food Safety and Nutrition Council was established in 2001. This Council ensures the adoption of an integrated approach throughout the total food production process, that is, from the farm to the table. Towards this end, the National Food Safety Policy and a Plan of Action were formulated in 2003 to provide direction and guidance to relevant agencies in the public and private sectors. Various steps

were also undertaken to ensure the quality and safety of locally produced and imported foods. These included the establishment of four more food laboratories, bringing the total to 14, and the mandatory requirement of food content labelling. To facilitate the inspection and adherence to food safety regulations, the control of imported foods was further enhanced through the installation of a computerised system linking the 34 entry points to the food laboratories. The analytical capability of these laboratories was also upgraded to enable the testing of genetically modified foods and veterinary drugs. In recognition of Malaysia's expertise and involvement in ensuring food safety, Codex Alimentarius Commission, the international reference point for food safety, appointed Malaysia as the Codex Coordinator for Asia for the 2001-2003 term.

12.10 Integrated programmes towards the provision of comprehensive family health services for the prevention of morbidity and mortality among specific subgroups, such as children, adolescents, the elderly and persons with special needs continued to be implemented. The early childhood development and stimulation programme for children below one year was introduced in all health clinics for early detection, diagnosis and prompt treatment for children with special needs. To address the needs of adolescents and ensure that they were equipped with sufficient and appropriate knowledge to be responsible for their own health, the National Adolescent Health Policy was formulated. Elderly health care services were provided in 513 health clinics throughout the country. In addition, the home care nursing service, which provided extended health services for the elderly and people with special needs, was introduced as a pilot project in five districts.

12.11 At the school level, emphasis was given to the inculcation of healthy lifestyle practices among children and the provision of information on nutrition and basic hygiene. Guidelines were issued to ensure the provision of safe and nutritious food in school canteens. The Integrated Healthy School Programme, which included regular medical examinations, nutritional education and promotion of recreation and sports, was introduced in all schools through the formulation of guidelines and the implementation of a standardised training programme for teachers and health personnel. In addition, the Incremental Oral Health Care Programme, which aimed to promote dental health and hygiene as well as detect and treat dental problems at an early age, continued to be implemented. Approximately 90 per cent of the primary school enrolment was involved in this programme.

12.12 During the review period, efforts were continued to ensure accessibility to health facilities and basic amenities, especially for the rural community. These included relocating and upgrading facilities to meet the needs and expectations

of the public. Although the facility ratio to population generally declined, the quality and level of care improved with services being provided by higher qualified manpower. In addition, these upgraded facilities were equipped with diagnostic equipment that contributed to improvements in the speed and quality of diagnosis. As part of the environmental health and sanitation programme, safe water supply was made available to 94.1 per cent of the households while 98.5 per cent were provided with sanitary latrines.

12.13 The occupational safety and health programme, which emphasised the creation of safer and healthier work culture and environment, continued to be implemented. The Action Plan on the Prevention of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) in the Workplace was formulated. In addition to the existing coverage for anatomical losses in industrial and commuting accidents, more comprehensive protection was provided for workers by extending coverage to include all forms of impairment and occupational diseases.

12.14 Taking into consideration the changing demography and disease patterns in the country and in a move to provide better quality care to the population, *medical care services* were expanded and upgraded through progressive specialisation in priority areas. Focus was given to key development areas that provided the maximum impact on health improvement of the population. These included perinatal and maternal health, trauma care as well as the management of cancer, diabetes mellitus, renal diseases and geriatric care. Highly specialised services were further developed on a regional basis and new centres of excellence for various disciplines were identified to ensure the provision of highly sophisticated quality care.

12.15 Although 45 hospitals out of the 124 hospitals under the Ministry of Health were identified to provide services for the five basic specialties, due to shortages of manpower, only 32 were able to do so. In addition, 12 out of the 15 secondary specialist services were provided by the 19 identified hospitals. Centres of excellence in nephrology, urology, neurology, neurosurgery, haematology, radiotherapy and oncology, obstetrics and gynaecology, paediatrics and clinical genetics were located at the Kuala Lumpur Hospital, while specialties of gastroenterology, hepatology, colorectal surgery, ophthalmology, hand and microsurgery, rheumatology and transplant surgery were based at Selayang Hospital. Putrajaya Hospital was designated the centre of excellence for breast cancer and specialties of endocrinology as well as the centre of excellence for rehabilitative medicine. In the northern region, centres of excellence in cardiology, cardiothoracic surgery, nuclear medicine and craniofacial surgery were located at the Pulau Pinang Hospital.

12.16 In an effort to provide more comprehensive care, the extended medical care programme was introduced as part of the curative health programme. This programme provided a continuum of care that included medical, nursing, rehabilitative and palliative care for patients with chronic debilitating illness and disabilities, mental illness and terminally-ill patients. For the implementation of this programme, 79 hospitals were provided with physiotherapy centres, 40 hospitals and four institutions with occupational therapy services while audiology and speech therapy services were provided in 19 and 12 hospitals, respectively. To cater for the needs of the elderly, geriatric services were provided in three hospitals, namely, the Kuala Lumpur, Seremban and Banting Hospitals.

12.17 During the review period, various efforts were undertaken to ensure the provision and distribution of sufficient health manpower. These included upgrading and expanding existing public training institutions to increase the number of training places, increasing the number of students sent abroad, outsourcing training to the private sector as well as employing foreign and retired personnel on contract. In spite of these efforts, health sector development was affected by shortages in various categories of manpower. The manpower requirement for allied health personnel was 72,532. However, only 55,843 personnel were available in the public sector. To minimise this shortage, the Government outsourced the training of about 1,100 personnel to 14 private sector training institutions. As for other medical personnel, the manpower requirement for doctors was 25,548 while that for dentists was 6,132 and for pharmacists was 12,263. In this regard, only 2,065 students in medicine, 284 in dentistry and 873 in pharmacy were trained. The manpower to population ratio however recorded improvements. The doctor-population ratio improved from 1:1,504 in 2000 to 1:1,395 in 2002 while the dentist-population ratio improved from 1:10,958 to 1:10,318 and that of pharmacists improved from 1:10,071 to 1:8,673 during the same period.

12.18 Various initiatives were undertaken to harness the potential of information and communications technology (ICT) to improve the accessibility to and quality of health care. The Total Hospital Information System (THIS), a facility-based integrated information system with the objective of providing efficient quality care in a paperless and filmless environment was implemented in the Selayang and Putrajaya Hospitals. The Multimedia Super Corridor-Telehealth (MSC-Telehealth) project, which is aimed at facilitating information sharing among healthcare providers and between healthcare settings so as to provide continuous seamless and borderless healthcare to the individual from 'womb to tomb' was implemented in the Kajang and Seremban Hospitals and the surrounding clinics. Emphasis was given to the implementation of the patient management and clinical

information systems. In addition, under the MSC-Telehealth project, teleconsultation services were also provided to almost all hospitals and clinics. To facilitate the undertaking of research, ICT was also used in the setting-up of the disease and clinical database for diseases such as cancer, cardiovascular, renal, cataract, neonatal as well as accident and occupational injuries.

12.19 *Health research and development* emphasised biomedical, clinical, public health as well as health systems research to support evidence-based medicine. In an effort to continuously improve health systems, the Institute of Health Systems Research was established as part of the National Institutes of Health. Clinical research involving evaluation of services in areas such as dialysis, ophthalmology and radiology were undertaken while efforts were under way to establish national-level registries for cancer, cataract surgery and renal disorders. The IMR achieved major breakthroughs with the discovery and commercialisation of rapid test kits for malaria and the detection of insecticide resistance as well as the production of insecticide emulsion paint. In addition, IMR's invention of the comprehensive resistance test kit enabled Malaysia to win the gold medal at the 30th International Invention, Innovation and Products Convention 2002, held in Geneva, Switzerland.

12.20 Recognising the potential in and the increasing use of traditional and complementary medicine (T/CM), the Government approved the establishment of the Herbal Medicine Research Centre in IMR to coordinate and integrate research activities pertaining to T/CM. In addition, the National Committee for Research and Development in Herbal Medicine was formed to provide the direction with regards to the practice, utilisation of raw materials and products, training and research in T/CM. To encourage research and interest in herbal medicine, the IMR published a compendium of 2002 herbal medicinal plants in the country. In recognition of the work undertaken to integrate T/CM into the modern healthcare system, Malaysia was given the honour to establish the Global Information Hub for Integrated Medicine that will promote the dissemination of T/CM information, provide evidence-based information for policy-making, clinical practice, research and trade development.

12.21 The control of pharmaceuticals and traditional medicine including cosmetics available in the Malaysian market was further strengthened through more stringent requirements for registration and increased surveillance and enforcement to ensure the safety, efficacy and quality of products. The registration of traditional products was continued during the review period, with a total of 2,208 new products registered, out of which 1,184 were local products. The National

Pharmaceutical Control Bureau was accepted as the 26th member of the Pharmaceutical Inspection Cooperation Scheme in 2002, reflecting the quality of auditing conducted on local manufacturers of pharmaceutical and traditional medicine in ensuring compliance to international standards.

12.22 Greater integration and networking was initiated between the public and private sectors to ensure efficiency and optimal utilisation of resources. Recognising the availability of sophisticated health facilities in the private sector, the Government continued to purchase a number of medical services during the review period. These included radiotherapy, cardiology and cardiothoracic surgery, diagnostic imaging, angiograms and lithotripsy treatment. In an effort to overcome the manpower shortages in the public sector, private medical practitioners continued to be employed on a sessional basis to serve in Government hospitals. Private medical practitioners were also allowed to use public sector facilities, such as operation theatres and wards, on a contractual basis. To complement Government efforts in training, four private institutions of higher learning provided training for medical undergraduates while training of allied personnel was undertaken in 14 private institutions.

Housing

12.23 During the review period, housing development programmes continued to be implemented to provide adequate, affordable and quality housing to Malaysians of all income levels, particularly, the low-income group. To ensure better quality of life, the programmes also emphasised on safety, health, convenience and conducive living environment. Housing development projects were planned based on the human settlement concept, where housing areas were provided with basic infrastructure and social amenities as well as landscaped surroundings.

12.24 A total of 615,000 units of houses was targeted to be built by both the public and private sectors during the Plan period. At the end of the review period, 461,972 units or 75.1 per cent were completed, as shown in *Table 12-2*. Of this total, 339,854 units or 73.6 per cent were built by the private sector and the balance by the public sector. The achievement by the public sector was lower than the target mainly due to the delay in possession of sites as a result of difficulties in identifying suitable sites and the resettlement of squatters. In the low- and low-medium cost housing categories, a total of 177,253 units or 48.8 per cent of the target was completed. Of this total, 97,275 units or 54.9 per cent were constructed by the private sector and cooperatives while the

TABLE 12-2

PUBLIC AND PRIVATE SECTOR HOUSING TARGETS AND ACHIEVEMENTS, 2001-2005

(units)

Programme	Target						Achievement, 2001-2003										Expected to be Completed, 2004-2005					
	Housing for the Poor	Low-cost	Medium-cost	Low-Medium-cost	High-cost	Total	Housing for the Poor	% of Target	Low-cost	% of Target	Medium-cost	% of Target	High-cost	% of Target	Total	Housing for the Poor	Low-cost	Medium-cost	High-cost	Total		
Public Sector	16,000	192,000	37,300	46,700	20,000	312,000	11,557	72.2	53,749	28.0	26,229	70.3	21,810	46.7	8,773	43.9	122,118	39.1	19,518	8,600	112,273	
Public Low-cost Housing	-	175,000	-	-	-	175,000	-	-	45,567	26.0	-	-	-	-	-	-	45,567	26.0	-	-	47,300	
Housing Rehabilitation	15,000	-	-	-	-	15,000	11,077	73.8	-	-	-	-	-	-	-	-	11,077	73.8	-	-	3,600	
Sites & Services	1,000	-	-	-	-	1,000	480	48.0	-	-	-	-	-	-	-	-	480	48.0	-	-	-	
Housing by Commercial Agencies	-	15,000	10,000	16,000	15,000	56,000	-	-	6,722	44.8	10,707	107.1	2,614	16.3	2,903	19.4	22,946	41.0	10,518	8,000	44,273	
Housing by Land Schemes	-	2,000	1,000	-	-	3,000	-	-	1,460	73.0	695	69.5	-	-	-	-	2,155	71.8	300	200	500	
Institutional Quarters & Staff Accommodation	-	-	26,300	30,700	5,000	62,000	-	-	-	-	14,827	56.4	19,196	62.5	5,870	117.4	39,893	64.3	-	7,000	16,600	
Private Sector	-	40,000	94,000	64,000	105,000	303,000	-	-	54,727	136.8	42,548	45.3	123,482	192.9	119,097	113.4	339,854	112.2	15,900	5,800	61,700	
Private Developers	-	39,000	90,000	60,000	100,000	289,000	-	-	52,556	134.8	39,938	44.4	121,304	202.2	116,421	116.4	330,219	114.3	15,000	5,000	60,000	
Cooperative Societies	-	1,000	4,000	4,000	5,000	14,000	-	-	2,171	217.1	2,610	65.3	2,178	54.5	2,676	53.5	9,635	68.8	900	800	1,700	
Total	16,000	232,000	131,300	110,700	125,000	615,000	11,557	72.2	108,476	46.8	68,777	52.4	145,292	131.2	127,870	102.3	461,972	75.1	36,000	82,750	195,505	
																					81,218	
																					100,400	
																					287,473	

rest by the public sector. A major public sector housing programme under this category was the *Perumahan Awam Kos Rendah (PAKR)*. A total of 74 PAKR projects involving 28,541 units was implemented during the review period. Out of the total, 51 projects or 20,120 units were completed and the rest were at various stages of construction. Most of the projects were located in Sarawak with 37.2 per cent followed by Pahang, 14.7 per cent, Melaka, 12.5 per cent and Terengganu, 8.3 per cent.

12.25 In line with the objective of resettling all squatters into permanent houses by the year 2005, the implementation of *Program Perumahan Rakyat (PPR)* for rental was intensified. Under this programme, a total of 61,628 units was targeted to be built in Wilayah Persekutuan Kuala Lumpur and several other major towns. Out of this, a total of 26,447 units was completed and handed over to the respective local authorities for distribution and resettlement of squatter families while the remainder were at various stages of construction.

12.26 Continuous efforts were undertaken by the Government to increase the accessibility of the low-income group to own affordable and quality houses. Towards this end, the Government reviewed the Housing Loan Scheme under the Ministry of Housing and Local Government (MHLG) in 2001 increasing the maximum loan amount from RM7,500 to RM20,000. An additional allocation of RM40 million was provided for the revolving fund established under this scheme to finance 5,000 houses during the Plan period. The revised scheme enabled a larger number of the low-income group to own affordable houses as it was expanded to include the purchase of low-cost houses from developers. The coverage of the scheme was also extended to Sabah and Sarawak.

12.27 Housing provision for the hardcore poor in the rural areas continued to be implemented under the *Skim Pembangunan Kesejahteraan Rakyat*. During the review period, a total of 11,077 units or 73.5 per cent of the Plan target was completed. Of this total, 7,313 units were newly constructed and 3,764 units were rehabilitated benefiting 55,385 people.

12.28 The main legislation governing the housing industry, the Housing Developers (Control and Licensing) Act, 1966 was amended in 2002 to provide for better protection of both house buyers and developers as well as to ensure proper and healthy development of the housing industry. This Act was renamed the Housing Development (Control and Licensing) Act, 1966. With this amendment, the MHLG has greater jurisdiction over the monitoring of all private sector housing projects as well as those implemented by State Economic Development

Corporations (SEDCs) and cooperatives. In addition, the amendment gave emphasis to quality control, timely completion of housing projects and provided for the establishment of the Tribunal for Homebuyer Claims. The rules and regulations governing sale and purchase agreements and the operation of the Housing Development Account were also revised.

12.29 A total of 39,893 housing units was constructed under the Institutional Quarters and Staff Accommodation Programme to provide for better quality houses with adequate facilities for public sector employees and to contribute towards enhancing their productivity. These units were mainly for employees in the essential services such as police and armed forces, immigration, customs, teachers and those serving in rural areas as well as in areas that lacked suitable living accommodation.

12.30 In the medium- and high-cost housing category, the performance of the private sector was encouraging with a total of 242,579 units completed accounting for 143.5 per cent of the Plan target. The public sector including State Governments and SEDCs constructed 30,583 units or 45.9 per cent of the Plan target. Most of the public sector housing projects were under the Institutional Quarters and Staff Accommodation Programme.

12.31 Measures undertaken by the Government to increase disposable income, which included pay increases for the public sector employees as well as low interest rates, higher margin of finance and longer loan tenure by financial institutions contributed to the increase in demand for houses. Facilities to withdraw savings from the Employees Provident Fund to purchase second houses and the provision of a second loan to Government employees for such purchases also had a positive effect. In addition, the Government together with the Real Estate and Housing Developers Association Malaysia launched several home ownership campaigns and expositions during the review period to expedite the sale of houses and reduce unsold residential properties. Incentives offered for house buyers during these campaigns and expositions included exemptions from stamp duties.

Other Social Services

Services in the Local Authorities

12.32 The rapid pace of urbanisation in Malaysia led to an increase in the demand for urban services. To meet these demands, the local authorities continued

to provide various facilities and services such as business premises, public parks, recreational centres, drainage systems and solid waste management. The construction of socio-economic and recreational facilities enabled urban communities to have greater access to a better quality of life and living environment. In line with the Government's effort to provide wider coverage and better quality services to the urban population, six district councils were upgraded to municipal councils while the Melaka Municipal Council and Kota Setar Municipal Council were conferred city status.

12.33 Local authorities continued to give emphasis to implement landscape development activities under the beautification and cleanliness programmes. To meet the increasing demand for better recreational parks and open spaces, 20 new public parks were constructed and 179 existing parks upgraded in various local authorities throughout the country. In addition, under the nationwide tree planting campaign launched in 1997, about four million trees including the *kenanga*, *kayu manis*, *tanjung* and *cempaka* species were planted at public places to enhance the greenery and the quality of the living environment.

12.34 In addressing problems related to flood occurrences, particularly in major urban areas, several drainage and flood mitigation projects were implemented during the review period. These included the Stormwater Management and Road Tunnel (SMART) project, the upgrading of Batu and Jinjang ponds as well as related flood mitigation measures within Wilayah Persekutuan Kuala Lumpur. Other flood mitigation and drainage programmes included the deepening and widening of rivers in a number of states. These included Sungai Muda in Kedah, Sungai Perai in Pulau Pinang and Sungai Langat in Selangor.

12.35 To address the issue of solid waste management, measures were undertaken to improve the collection and disposal services of solid waste. Under the interim arrangement pending full implementation of the privatisation programme, the two appointed concessionaires for the central and southern region took over the collection and disposal services in 37 of the 145 local authorities including Wilayah Persekutuan Putrajaya while a new concessionaire was appointed to manage services in the northern region. Steps were also taken to provide modern disposal facilities such as the construction of a transfer station in Taman Beringin, Wilayah Persekutuan Kuala Lumpur, setting up a thermal treatment plant in Wilayah Persekutuan Labuan as well as acquisition of new waste collection vehicles and equipment to enhance the implementation of an integrated solid waste management system. In addition, 30 landfills throughout the country were upgraded in an effort to improve the solid waste management practices at these sites.

12.36 To encourage the public to make a conscious effort of reducing and recycling wastes, the National Recycling Campaign launched in 2001 was extended to 67 local authorities. During this campaign, more than 1,000 recycling bins were distributed and 65 recycling centres established mainly in schools, residential areas and shopping complexes.

Fire and Rescue Services

12.37 During the review period, efforts were taken to further improve and upgrade the capability and professionalism of personnel in fire prevention, protection and control as well as rescue operations. A total of 96 projects to build new fire stations, staff quarters, engineering workshops and other fire and rescue facilities was implemented. Of this, 58 new fire stations, 1,155 staff quarters and two training centres were completed. Efforts were also taken to equip fire-fighting and rescue personnel with special clothes and self-protective equipment to ensure their safety during rescue operations.

12.38 To cope with more challenging fire-fighting situations, particularly those involving high-rise buildings and structures, maritime, oil and gas, hazardous material incidents as well as forest fires, sophisticated and specialised vehicles equipped with fire-fighting, rescue and paramedical equipment were acquired. Special task forces such as Urban Search and Rescue, Hazardous Material Team (HAZMAT), Forest Fire-Fighting as well as Underwater Search, Rescue and Investigation units were established to act as an elite team to prepare for major incidents or disasters. These capabilities were further enhanced with the procurement of two new helicopters for the Air Fire-Fighting and Rescue Unit (Air Unit). The personnel in these units were trained to deal with eventualities such as surface and underwater rescue, forest fires, search and rescue operations, handling of hazardous materials, high-rise fires and rescue as well as fire investigation. In an effort to upgrade and enhance the skills and capabilities of personnel involved in fire and rescue services, 11,284 personnel underwent various types of training, particularly, in the area of fire safety, industrial emergency response and disaster management.

12.39 Seminars, conferences, dialogues and joint training programmes on fire-fighting and safety were conducted by the Fire and Rescue Department in collaboration with the private sector, government departments, schools, NGOs and relevant professional bodies. These activities were implemented under specific programmes such as Fire Prevention Campaign, *Bomba Bersama Masyarakat*, *Perkemahan Kadet Bomba* and *Kelab Kesedaran Keselamatan Kanak-kanak*.

These efforts resulted in a significant increase in general public awareness in fire safety as reflected in the number of volunteers in community service. At the end of the review period, a total of 193 volunteer fire brigades was established with 10,879 registered volunteer fire fighters.

Library Services

12.40 During the review period, efforts were undertaken to provide sufficient library infrastructure as well as increase up-to-date reading and information materials to the community. This was in line with the objective of inculcating and promoting reading habits among the general public and developing a well-informed and knowledgeable society. The number of public libraries increased from 610 in 2000 to 647 in 2003, at the state, district, town and village levels throughout the country. The number of mobile units providing library services in rural areas also increased from 107 in 2000 to 112 in 2003. In addition, the number of reading and information materials increased from 13.5 million in 2000 to 16.5 million in 2003.

12.41 As part of the *National Reading Campaign*, the National Library with the cooperation of the state libraries, schools and public communities intensified their activities to promote reading, especially, among youngsters and teenagers. Under the *Family Library Competition*, families were encouraged to set-up a reading corner at home as an initial effort to inculcate the good reading habits among the family members. The *My Favourite Reading Programme* aimed at encouraging people to read and share knowledge through reading and collecting popular reading materials among the Malaysian community was also carried out. Selected materials were recorded in the form of Multimedia CD and launched during the National Reading Campaign Day on 8 July 2002. The Government declared the month of July as the *Reading Month* to further inculcate and promote reading, particularly among youths and teenagers. As a result of these efforts, the number of library users increased from 4.0 million in 2000 to 5.5 million in 2003.

12.42 Efforts to improve access to information and knowledge through library information networks continued to be taken by the National Library and state libraries with emphasis on the development of IT-based libraries. The *Portal Raja Kita* was one of the digital initiatives developed under the Demonstration Application Grant Scheme. Digitalisation projects were undertaken to include selected materials of the National Library's publications, rare books and

Malay manuscripts. Other content development was initiated with the creation of *Warisan Budaya* and *Sejarah Malaysia*. Other projects included *Bibliografi Perdana Menteri*, which was provided online.

Sports Development

12.43 During the review period, the Government continued to develop and promote sports programmes at the national and state levels to promote a healthy lifestyle as well as contribute towards the development of social skills, character and teamwork. In line with the National Sports Policy and the Sports Development Act, 1997, the Ministry of Youth and Sports undertook concerted efforts to ensure the effective coordination and management of sports activities by the public and private sectors. In this regard, the governance structure and management of 78 sports associations at the national level were reviewed and improved to ensure a more professional approach towards sports development.

12.44 Efforts were undertaken to promote mass and high performance sports aimed at encouraging an active and sporting lifestyle among Malaysians. Sports programmes and recreational activities including traditional sports were organised at the state and district levels. To attract larger participation among youths, new sports and recreational programmes such as extreme sports, mountain climbing, skate boarding, motorised paragliding and motor sports were also organised attracting 441,000 participants. In addition, awareness campaigns on the benefits of maintaining a healthy lifestyle as well as fitness education programmes were also organised in schools and youth associations to encourage greater participation.

12.45 During the review period, efforts at identifying potential athletes among students to participate and compete at international level were continued. In line with this, 2,900 students identified as potential athletes were trained in specific sports with the cooperation of the Ministry of Education, the National Sports Council (NSC) and the respective states sports councils. To support the initiative, sports facilities in primary and secondary schools were upgraded and expanded while specialised training programmes at institutions of higher learning were carried out to enable promising athletes to continue training while pursuing their education at tertiary level. At the secondary school level, students showing potential for competing in high performance sports were given priority to continue their studies at the Malaysian Sports Schools in Bandar Penawar, Johor and Bukit Jalil, Wilayah Persekutuan Kuala Lumpur. A total of 976 students from these schools participated in national and international sporting events.

12.46 In an effort to overcome the lack of trained coaches and to improve the standard of local coaches, the NSC and the National Coachship Board implemented the National Coachship Certification Scheme for every game. Under this scheme, every coach is required to attend specific games courses and sports science courses to enable them to obtain full coachship certificates. The sports science courses including sports psychology, exercise physiology, nutrition, sports medicine and training methodology were conducted by the NSC while specific sports courses were organised by the respective associations with the assistance of the NSC. In addition, about 500 experienced former athletes were also trained to become coaches for younger athletes.

12.47 To prepare Malaysian athletes for international competition and build a pool of young talent with the potential of becoming champions, the NSC with the cooperation of sports associations, undertook various athlete development programmes. Among others, the Commonwealth Games Athletes Preparation Programme, the Southeast Asian (SEA) Games Athletes Preparation Programme, the Special Talent Programme and the National Young Athletes Development Programme continued to be undertaken. These long-term training programmes improved the performance of the national contingent with Malaysia emerging as the champion for the first time at the XXI SEA Games in 2001.

12.48 During the review period, Malaysia continued to host international sporting events such as the Power Boat, Le Tour de Langkawi and the Formula One Grand Prix, which were held annually. These events attracted the participation of high profile teams and professionals in their respective fields. The establishment of world class sports facilities enhanced Malaysia's capability and capacity to host other international competitive sporting events which included the XXI SEA Games in 2001, World Amateur Team Golf in 2002, XXI Asian Boxing Championship in 2002 and XV World Tenpin Bowling Championship in 2003. These efforts provided an impetus to the development of sports and contributed towards the growth of the tourism industry.

Information and Broadcasting

12.49 During the review period, information and broadcasting services were upgraded in line with the development of information technology to provide quality transmission and greater access to the population. Wider coverage of information and broadcasting services was achieved through continuous upgrading and replacement of broadcasting equipment and technology including the use of

modern digital equipments and systems. In addition, the availability of Malaysia East Asia Satellite (MEASAT) facilities and the establishment of more private radio and television (TV) stations provided consumers with better quality transmission as well as a wider selection of programmes including entertainment, culture, sports, education and information. To prepare for the digital era in broadcasting, a comprehensive study on the Digitalisation of *Radio Televisyen Malaysia* (RTM) was initiated in 2002. Among others, the study aimed at identifying the technical and non-technical requirements as well as the possible approach towards the implementation of terrestrial transmission.

12.50 The coverage of radio and TV transmission was improved and upgraded through the replacement of ageing transmitters with advanced equipment. In Peninsular Malaysia, TV coverage improved from 95.0 per cent in 2000 to 96.5 per cent in 2003, and for Sabah and Sarawak from 87.0 per cent to 88.2 per cent. Radio coverage in Peninsular Malaysia improved from 95.0 per cent in 2000 to 96.5 per cent in 2003, and for Sabah and Sarawak from 87.0 per cent to 88.7 per cent. The quality of radio and TV transmission, especially in the rural and remote areas of Sabah and Sarawak was improved with the acquisition of new equipment and the construction of additional transmitter stations. In Peninsular Malaysia, 30 new TV transmitters and 65 new frequency modulation (FM) radio transmitters were installed, while four new TV transmitters and 38 new FM radio transmitters were installed in Sabah and Sarawak.

12.51 Various measures were undertaken to facilitate an orderly development of the information and broadcasting sector and to ensure compliance to Malaysian standards and norms. Radio and TV programmes were continuously reviewed to ensure dissemination of values and principles consistent with the culture and beliefs of the population. Efforts at creating a well-informed society were undertaken through the dissemination of accurate information on government policies and strategies as well as providing timely explanations about development and issues affecting the country. In this regard, broadcasting time for radio was increased during the review period. Of the 30 radio networks, nine were on 24-hour transmission. Radio broadcasting was made more focused and listener-friendly with the availability of 12 private radio stations catering for specific target audiences such as youths and highway users. Programmes covering science and technology, ICT, business, finance, sports and culture were also given emphasis in an effort to provide entertainment, information and education to the listeners. In order to meet challenges in the broadcasting industry and to further improve effectiveness and efficiency in the delivery of broadcasting services, RTM was corporatised in 2003, which led to the establishment of *Radio Televisyen Malaysia Berhad*.

12.52 The national news agency, *Berita Nasional Malaysia* (BERNAMA), undertook efforts to project Malaysia's image and counter negative reporting by the foreign media through the provision of regular analysis of news and articles on the actual situation in the country to 40 nations. In addition, BERNAMA strengthened its ties with the Middle East and Central Asia media news agencies through bilateral agreements and news exchange programmes. During the review period, BERNAMA also managed the International Media Centre as well as being the official news agency host for numerous international events such as the XXI SEA Games in 2001, Non-Alignment Movement Conference, Organisation of Islamic Countries Summit and XXII SEA Games in 2003.

12.53 With rapid development in the broadcasting and film industry, the *Lembaga Pembangunan Industri Filem Malaysia* was established to further facilitate the development and promotion of the local film industry. Its establishment as a one-stop agency provided an avenue for the private sector to be greatly involved in the production of quality films for local and international markets.

Culture

12.54 The implementation of cultural programmes contributed towards strengthening national identity, promoting national integration and unity as well as maintaining racial harmony among Malaysians. As an effort to create a society rich in culture, the *Tunas Budaya* programme was introduced in primary and secondary schools to nurture the interest of the young. This programme, which involved the learning of music, traditional dances and drawing was implemented in 191 primary and 80 secondary schools. Programmes were also undertaken at the national and state levels to encourage participation of youths in various arts and cultural activities, which included dance festivals, cultural camps, art exhibitions and performances. The hosting of international cultural events promoted the development of the performing arts and provided opportunities for talented Malaysians to get international recognition. In addition, the completion of a new campus for the National Arts Academy in Wilayah Persekutuan Kuala Lumpur in 2003 provided an avenue to further these efforts as well as nurture talents, particularly among youths.

12.55 The availability of world class facilities such as the *Istana Budaya* and the *Petroleum Nasional Berhad* (PETRONAS) Philharmonic Hall enabled Malaysia to host national as well as international arts and cultural events. In this regard, 47 locally produced plays and musicals as well as internationally renowned musicals were staged at the *Istana Budaya* while 123 performances were held

at the PETRONAS Philharmonic Hall, which attracted local and foreign audiences. The organisation and presentation of such events, which was undertaken with the private sector helped to promote the development of performing arts in the country as well as provide exposure and serve as a source of inspiration for talented Malaysians to strive for international recognition.

12.56 The National Art Gallery continued to provide a conducive environment for the nurturing of visual arts. During the review period, 95 art exhibitions were held which covered the different areas of visual arts, media and themes. Other activities such as workshops, dialogues, guided tours and distribution of publications were also undertaken. In addition, the National Art Gallery also collaborated with private galleries to promote and exhibit works of art of local artists as well as foreign artists. These activities which involved artists, cultural and art enthusiasts as well as students provided opportunities for Malaysians to appreciate art.

12.57 Efforts were continued to preserve and conserve the historical and cultural heritage of the country as well as enhance and inculcate greater awareness among the public of Malaysia's history and heritage. In this regard, 43 monuments and 15 historical sites were preserved and upgraded. As an effort to further preserve historical heritage, the site of the original home of the first Prime Minister, *Rumah Merdeka* in Alor Star, Kedah was acquired to be developed as part of *Memorial Tunku Abdul Rahman*. In addition, the setting-up of the National Automobile Museum at its temporary site in Kompleks Sepang International Circuit provided the venue to showcase Malaysia's achievement in the automotive industry. Exhibits for this Museum included vehicles used by dignitaries for specific historical events, locally produced automobiles and engine components as well as mechanical equipment and petroleum products, which reflected the technologies used in the development of the automotive industry.

Community Development

12.58 To ensure effective implementation of social development programmes, the NSP was launched in 2003. The policy provided the framework for the planning and implementation of social development programmes involving the public and private sectors together with the NGOs. The objective of the policy is to ensure that every individual, family and community regardless of ethnic group, religion, culture and location is able to participate and contribute towards the development of the nation as well as enjoy a self-sustaining quality of life. To ensure the successful implementation of the strategies under this policy, an inter-agency and multi-sectoral National Social Council was established.

12.59 Community development programmes were implemented in the urban and rural areas to foster harmonious living and nurture the spirit of caring among the various communities. In this regard, community development programmes and activities that promoted interaction and cooperation among groups in the society as well as sharing of responsibilities continued to be undertaken through the *Rukun Tetangga* committees set up in urban and semi-urban areas throughout the country. During the review period, 551 committees were established bringing the total to 2,473 committees. These committees helped to foster community participation as well as reduce the incidences of crimes in urban and semi-urban areas. Programmes such as neighbourhood watch, *Jiran Wanita*, *Jiran Muda*, *gotong-royong* and sports activities were continued to promote national unity, mutual respect and neighbourliness among the communities. A Mega Unity Programme was launched during the Unity Week in May 2003 to help bring communities together. To further promote national integration between Peninsular Malaysia, Sabah and Sarawak, several activities involving 731 participants were undertaken.

12.60 To ensure effective implementation of these activities, the concept of *Rukun Tetangga* was changed from neighbourhood watch to community outreach. The scope of *Rukun Tetangga* programme was expanded to include social outreach efforts that focused on specific target groups such as the disabled, single mothers and rehabilitated drug addicts. Under the new scope, emphasis was given to capacity building, which enabled the community to manage their daily activities towards becoming a self-reliant society. Efforts were undertaken to encourage community empowerment through the involvement of more professionals, corporate citizens, government officers and pensioners as well as those willing to take active leadership in community development programmes.

12.61 Efforts to instil patriotism and love for the country as well as inculcate positive values, mutual respect and tolerance at an early age were continued through the establishment of national unity pre-school classes. A total of 1,296 new pre-school classes was set up, benefiting about 35,570 children in the 5-6 age cohort from urban and semi-urban areas. To further promote and strengthen inter-racial understanding among school children, additional co-curricular activities were encouraged in the primary and secondary schools. The *Kamu. Aku. Seiring* campaign was launched to re-internalise the spirit of *Rukunegara* to ensure continued harmony in the country at all levels of society.

12.62 In the rural areas, community development programmes were undertaken with the objective of uplifting the socio-economic status of the rural population, including the *Orang Asli* community. The new rural development strategy, *Gerakan Daya Wawasan (GDW)*, gave emphasis to human development and empowerment

of community leaders and the rural population. In line with the strategy, efforts were directed at enhancing the capability and capacity of the rural populace to be involved in the decision-making process to improve and upgrade their standards of living and quality of life. In addition, training programmes were intensified to provide them with the necessary skills to undertake agro-based business ventures as well as participate actively in trade and services.

12.63 With regard to the *Orang Asli* community, basic social amenities continued to be provided to further improve their quality of life. To inculcate awareness on the importance of education, the Women Motivator Programme or *Penggerak Wanita* was introduced. During the period, 113 *Orang Asli* women were trained to carry out educational training which benefited 1,380 children.

Family Development

12.64 Rapid economic development and the changing structure of and inter-relationships within the family posed challenges for individuals and families. Recognising the need to strengthen families towards the realisation of a caring society, efforts were undertaken to ensure that they were resilient, ethical, healthy, knowledgeable and harmonious. Towards this end, research into the inter-relationships and dynamics of the family unit as well as the changing family structure were undertaken. In view of the increasing number of nuclear and double-income families and the challenges faced in the workplace as well as at home, an awareness campaign entitled *Family First: Bring Your Heart Home* was launched at the national and state levels. Among others, the campaign emphasised the importance of family well-being and the need to uphold the sanctity of marriage and the family institution through seminars, workshops and the media. Paternity leave for civil servants was also increased from three to seven days. In addition, a smart start package containing comprehensive reference material pertaining to premarital preparation, communication in the family, health and parenting was developed for distribution to newlyweds and those planning to get married.

12.65 To assist families in coping with the challenges and demands of daily living as well as to improve family life, the Government approved the establishment of 29 *Kompleks KASIH Keluarga*, of which one was completed. Services provided through these complexes include clinical services such as family planning, menopause and andropause, family counselling and training in various aspects of parenting. In order to increase awareness on reproductive health among the

middle-aged population, the *Nur Sejahtera: Sihat dan Segak* programme was implemented. This programme, which included the implementation of health screening campaigns, lectures as well as dialogues, was implemented nationwide. In addition, the *KASIH* Package, which is a modular training package based on the family life cycle, continued to be used for the training of master trainers from various government agencies, NGOs as well as the private sector. A total of 323 trainers participated in these programmes.

12.66 Recognising the importance of training in the handling of social problems and undertaking social work, the establishment of the Social Institute of Malaysia in 2001 and the implementation of various training programmes enhanced the professionalism of those involved in social work. The Institute provided training in areas such as family development, psychology, social work and counselling for volunteers and members of NGOs as well as retraining and in-service training for social workers. During the review period, 49 training programmes were conducted, benefiting 2,289 social workers, volunteers and NGO members.

12.67 As a result of smaller family size and the increasing number of older persons as well as other social factors affecting family structure, emphasis was given to developing community support system for the care of older persons. This new initiative encouraged the community to work together to provide service and care for the elderly, particularly during the absence of family members. Under this programme, seven day-care centres for older persons were established throughout the country.

12.68 To further enforce the Child Care Centre Act, 1984, appropriate training for child-minders was carried out to ensure that children left in the care of child-minders received quality care. Existing homes established for children in need of protection and rehabilitation were upgraded and equipped with more up-to-date facilities including educational and recreational facilities. A total of 22 new homes was built to enable these children to have better access to and develop in a normal environment. In addition, the Child Act 2001 was introduced in line with the Convention on The Rights of the Child aimed at ensuring that children are given due protection and assistance in all circumstances. The Act also provided for mandatory reporting of child abuse by medical practitioners, family members and child care providers. Special courts known as the Court for Children presided by a magistrate with two advisors were established to hear child-related cases. In addition, *The Say Yes For Children* campaign was launched in 2001 at national and state levels to create public awareness on the rights of children.

12.69 Identification of children with disabilities was carried out at pre-school and primary school level to ensure that appropriate care, treatment and rehabilitation

programmes for these children are given at an early stage. Disabled children were given the assessment and rehabilitation required and support services were made available to parents to cope with the situation. In addition, the family and the community were encouraged to share their responsibilities in the care and rehabilitation of the disabled through the implementation of the community-based rehabilitation programme. The programmes conducted at the community-based centres encompassed physio and occupational therapy, non-formal education skills in daily living and social interaction, communication skills and vocational training. A total of 274 community-based rehabilitation centres was established providing rehabilitation to 6,229 disabled persons. In addition, six group homes for the disabled were also established with the objective of integrating them into the community.

12.70 Realising the need for a more comprehensive approach to the planning of programmes and facilities for the disabled, campaigns were organised to educate and increase awareness among parents on the need to develop a database of the disabled. As a result, a total of 122,000 disabled persons was registered with the Department of Social Welfare.

12.71 The community, private sector and NGOs continued to complement the efforts of the Government in the provision of social services to the family, children, elderly and the disabled. To support the work undertaken by NGOs in caring for the disadvantaged and to further improve the living conditions in institutions run by NGOs, the Government provided funds amounting to RM66.7 million for the upgrading and maintenance of these facilities. In addition, various welfare and social activities were undertaken by 22,495 members of the Premier Welfare Brigade.

Youth in Development

12.72 During the review period, the youth population comprising those in the 15-24 age group increased by 2.3 per cent per annum from 4.4 million in 2000 to 4.7 million in 2003. Of the total youth population in 2003, 52.1 per cent were employed and the balance comprised those who had just graduated from educational and training institutions, job applicants and students at secondary and tertiary levels. To equip youths with positive attitudes, knowledge and skills, greater attention was given to enhancing youth participation in various programmes.

12.73 Youth development programmes involving courses in leadership and skills training, entrepreneur development, healthy lifestyle, sports and culture as well as preventive and rehabilitative programmes were conducted to promote the active participation of youths in nation building. These courses covered training in management, social interaction and communication techniques, leadership and negotiation skills as well as team building. These efforts contributed towards inculcating positive values, discipline, confidence and good ethics among youths. A total of 624 courses including workshops was conducted at national and state levels for 27,646 youths.

12.74 Efforts were undertaken to strengthen the management of youth associations to ensure their effectiveness. These included the reactivation of dormant youth associations as well as the review and expansion of associations operating at the grass roots level. Through these efforts, a total of 1,236 youth associations was reviewed and strengthened during the period. Youth development programmes undertaken by these associations were also restructured to be more proactive and relevant to the needs of youths.

12.75 During the review period, the Government also implemented the *Program Pembangunan Jati Diri* aimed at instilling the spirit of patriotism among youths. This programme, which combined the elements of leadership training and recreation, provided opportunities for youths to be involved in healthy activities. A total of 36,093 youths participated in this programme.

12.76 Skills training programmes were also implemented to ensure that youths are able to contribute to the economic development of the country. During the review period, a total of 34,100 youths completed skilled and semi-skilled training at various public training institutions. The establishment of new training institutes and the expansion of existing facilities offered more opportunities and training places for youths to acquire skills. The completion of eight new national youth skills training institutes, which started their operations in 2003, offered an additional 7,240 training places.

12.77 Non-formal training courses and workshops in areas such as motor mechanics and fashion designing were also conducted during weekends and for short durations to enable youths to acquire these skills. During the review period, a total of 7,150 youths benefited from various non-formal training courses organised at the state and district levels. The implementation of these training programmes enabled youths to increase their marketability in the job market.

12.78 To complement Government's effort, the private sector also provided opportunities for youths to acquire new skills. The training offered ranged from basic to advanced skills including production technology as well as information technology. During the review period, 26,100 youths were trained in private skills training institutes.

12.79 Entrepreneurial development programmes for youths focused on encouraging self-employment as well as promoting entrepreneurship among youths. Under the Youth Economic Trust Fund, soft loans were provided by the Government to encourage youths to set up their own businesses. A total of 1,492 youths obtained loans from this fund. Among the projects undertaken were those related to tourism, construction and ICT. Under the vendor and franchise scheme, the Computer Entrepreneur Programme was implemented with the objective of establishing small-scale youth entrepreneurs in computer-related businesses. A total of 80 entrepreneurs was created under this programme.

12.80 The development of healthy lifestyle among youths continued to be an important agenda with the implementation of various sports, recreational and community-based programmes at national, state and district levels. A total of 920,185 youths participated in these programmes. The implementation of the *Rakan Muda* programme which focused on physical, spiritual, social and intellectual development was continued with the objective of instilling positive values and right attitudes. The planning of these programmes and activities were done in consultation with youths to ensure that their expectations and needs were taken into consideration. The construction of 19 *Pusat Rakan Muda* at the state and district levels facilitated the implementation of these activities.

12.81 To address cases of social problems that were on the increase, social and character building programmes aimed at creating a dynamic group of young leaders with spiritual, physical and mental strength were carried out. During the period, 225,540 youths participated in these programmes. To inculcate the culture of volunteerism among youths, the *Khemah Kerja Sukarelawan Belia* and *Konvensyen Kesukarelaan Belia* programmes involving 788 youths were conducted throughout the country.

Women and Development

12.82 During the review period, through the continuous efforts of the Government in providing an enabling environment, women continued to make significant

contributions towards national development. Among others, the removal of various legal and institutional constraints that inhibited the participation of women further facilitated the involvement of women in the development process. In this context, Article 8(2) of the Federal Constitution was amended in 2001. The Immigration Rules were also amended to allow foreign men married to Malaysian women to renew their social visit passes every six months. In addition, with effect from 2002, widows of civil servants were allowed to continue receiving pensions after remarriage.

12.83 The female labour force participation rate increased from 44.8 per cent in 2000 to 45.7 per cent in 2002. The share of female participation in various sectors of the economy also recorded an improvement from 34.7 per cent to 34.8 per cent during the same period, as shown in *Table 12-3*.

TABLE 12-3				
EMPLOYMENT DISTRIBUTION BY SECTOR AND GENDER, 2000 AND 2002 (%)				
Sector	2000		2002	
	Female	Male	Female	Male
Agriculture, Forestry, Livestock & Fishing	26.5	73.5	27.8	72.2
Mining & Quarrying	12.9	87.1	9.2	90.8
Manufacturing	41.3	58.7	41.3	58.7
Construction	6.1	93.9	7.2	92.8
Electricity, Gas & Water	10.6	89.4	11.8	88.2
Transport, Storage & Communications	12.8	87.2	13.8	86.2
Wholesale & Retail Trade, Hotel & Restaurants	40.0	60.0	38.1	61.9
Finance, Insurance, Real Estate & Business Services	41.2	58.8	43.7	56.3
Other Services	45.8	54.2	46.6	53.4
Total	34.7	65.3	34.8	65.2

12.84 In terms of employment distribution by occupation, improvements were also recorded with more women moving into higher-paying occupations. The proportion of women who were legislators, senior officials and managers increased from 5.0 per cent in 2000 to 5.3 per cent in 2002, as shown in *Table 12-4*. In addition, in the services and sales category, the proportion increased from 13.3 per cent to 17.1 per cent during the same period.

<p>TABLE 12-4</p> <p>EMPLOYMENT DISTRIBUTION BY OCCUPATION</p> <p>AND GENDER, 2000 AND 2002</p> <p>(%)</p>				
<i>Occupation Category</i>	<i>2000</i>		<i>2002</i>	
	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>
Legislators, Senior Officials & Managers	5.0	8.1	5.3	9.8
Professionals	7.3	5.3	6.1	4.6
Technicians & Associate Professionals	14.1	11.0	12.9	12.3
Clerical Workers	18.3	5.6	17.3	4.9
Services & Sales Workers	13.3	12.8	17.1	11.8
Skilled Agricultural & Fishery Workers	9.5	16.4	10.8	14.5
Craft & Related Trade Workers	4.6	11.6	5.6	15.9
Plant & Machine Operators & Assemblers	15.5	16.0	12.5	15.5
Elementary Occupations	12.4	13.2	12.4	10.7
Total	100.0	100.0	100.0	100.0

12.85 Various schemes were implemented to encourage more women to become entrepreneurs and to upgrade their skills. The Special Assistance Scheme for Women Entrepreneurs was reviewed and expanded to be more flexible and provide for easier access to the various facilities offered by the Government. Under this scheme, assistance was provided for technology acquisition or upgrading, relocation of businesses, equipment purchase and training. Companies that qualified to obtain assistance under this scheme had a minimum of 51 per cent equity being held by women. In instances where women did not hold the majority equity, the largest single shareholder had to be a woman or where the Managing

Director or the Chief Executive Officer was a woman, she had to own a minimum equity share of 10 per cent. These companies were involved in the manufacturing and services sectors. A total of 21 companies benefited from this scheme and successfully obtained approval for the purchase of high technology equipment. In addition, soft loans were also provided to assist companies/enterprises owned and operated by women in modernising and automating their operations. In this regard, both existing as well as start-up companies were eligible for project, fixed assets and working capital financing. A total of 58 companies was successful in obtaining soft loans through this programme.

12.86 In an effort to further assist women in becoming entrepreneurs various training courses were implemented. These included courses in business management, marketing, sales, packaging and labelling. In addition, for women interested in the manufacturing sector, courses in good manufacturing practices and business networking were conducted. To supplement the income of women, weaving and handicraft workshops were established and training was provided to assist women in setting up small businesses. A total of 362,139 women, including single mothers, benefited from these programmes. In addition, a specific programme was launched to provide training and guidance to new women entrepreneurs under the Micro-Credit Scheme of *Bank Simpanan Nasional* (BSN). A total of 1,500 women benefited from this training programme.

12.87 In view of the increasing number of single mothers and to ensure their ability to care for their families, specific skills training programmes were implemented to provide them with alternative income-generating opportunities. These included courses in entrepreneurship, ICT, tailoring, weaving, handicraft production and food processing. In addition, smart partnerships were also instituted with the private sector. Facilities for acquiring loans were made available to assist single mothers in starting businesses. In further ensuring that single mothers and their families experienced a reasonable standard of living, the Government accorded priority to allocation of housing under the various low-cost housing programmes.

12.88 Various efforts were undertaken to bridge the digital divide between different groups. In this regard, focus was given to specific target groups, including women. Besides ensuring the provision of the necessary infrastructure, ICT training programmes that included aspects such as introduction to computer facilities, using the electronic mail and Internet surfing were implemented. Women in the rural areas were provided with basic ICT training under the *InfoDesa* programme.

12.89 In an effort to introduce gender awareness in all aspects of development, including policy, planning and budgeting, a pilot project to introduce the gender perspective in the national budget process was introduced in five ministries. In addition, to ensure the systematic collection and compilation of gender disaggregated data to facilitate analysis, create awareness and formulate appropriate and effective follow-up action on gender issues, a prototype of a gender disaggregated information system was set up.

12.90 Recognising the importance of ensuring the well-being of women and in an effort to raise awareness on domestic violence, a campaign entitled *Women Against Violence (WAVE)* was organised with the cooperation of government agencies, NGOs as well as the media. Various activities, including the dissemination of information brochures, talks and seminars were organised to ensure efficient handling and management of issues relating to domestic violence. In addition, training workshops were conducted for volunteers to assist in implementing programmes to eliminate domestic violence. To enhance the capacity of women, especially women leaders, in understanding their rights, responsibilities and obligations in areas such as health, education and living skills, a training programme, *Nur Bestari*, was introduced. A total of 275 women leaders participated in this programme.

12.91 Consistent with the goals of the National Policy on Women, various efforts were undertaken to improve and strengthen the national machinery for the advancement of women as well as to ensure greater collaboration and coordination in the implementation of activities for women and families. Towards this end, following the establishment of the Ministry of Women and Family Development, the role of the National Advisory Council on the Integration of Women in Development was reviewed. Consistent with its role as an advisory body to the Ministry, the council renamed the National Advisory Council on Women. In addition, the National Council for Women and Family Development was established to provide a forum for the exchange of ideas and information on issues pertaining to women and family development. A similar council was established at the state level as well as in each parliamentary constituency to provide the link with the grass roots. Various mechanisms were instituted for the implementation of programmes at the state level including the establishment of the Department of Women's Development and *Rumah Nur* all states.

12.92 NGOs continued to complement the efforts of the Government in further enhancing the status of women. Courses in fields such as legal literacy, entrepreneurial development, skills upgrading, gender awareness and ICT were

implemented by 158 NGOs, benefiting a total of 102,435 women. NGOs also implemented various programmes to raise awareness and educate the public on various issues such as sexual harassment, domestic violence and women's rights.

III. PROSPECTS, 2004-2005

12.93 Social development programmes aimed at improving the quality of life of the people will continue to be implemented during the remaining Plan period. In this regard, emphasis will be given to improving the quality and delivery of social services. For the health sector, to ensure the creation of a healthy society, emphasis will be given to further improving the health status of the people. In the housing sector, the Government will continue to provide adequate and affordable housing for all Malaysians with emphasis given to the low-income group and public sector employees. For the other social services sector, focus will continue to be given towards inculcating positive values, fostering good neighbourliness and harmonious living as well as nurturing the spirit of caring among the various communities.

Health

12.94 In the remaining Plan period, health sector development will continue to focus on further improving the health status of the population. Towards this end, emphasis will be given to expanding indicators to measure health status, research as well as ensuring the preparedness of the delivery system in handling various crises. Existing policies and programmes will continue to be reviewed and refined to address new challenges facing the health sector.

12.95 Current indicators being used for the formulation of health policies and planning will be reviewed as health is no longer considered the mere absence of disease and infirmity, but a broader definition of being in a state of complete physical, mental and social well-being. New indicators to measure the health status of the population will be introduced to include other variables such as socio-economic development index, population health summary measures, specific health problems and the coverage of health interventions.

12.96 *Health promotion and disease prevention* will continue to be accorded priority as this will contribute towards reduced expenditures in curative and rehabilitative care. The healthy lifestyle campaign will continue to be implemented

in a more holistic manner with the adoption of the 'settings approach'. This approach aims to establish more effective intersectoral linkages between the health sector and other sectors as well as the community to solve health problems closer to their source. The healthy lifestyle theme for 2004 will focus on the workplace while that for 2005 will be on health facilities. In addition, studies on the impact of past campaigns, especially in terms of assessing behavioural changes and health outcomes, will be undertaken. The wellness programme will continue to be implemented to create a knowledgeable society that will be motivated to accept health and wellness as a valuable asset. Towards this end, the establishment of more Health Promotion Resource Centres will provide a supportive environment for people to develop personal good habits and healthy lifestyle practices in line with the wellness paradigm.

12.97 The immunisation programme will be continued with a view to increase its coverage, especially in the rural areas. Based on the epidemiological pattern, emphasis will also be given to expanding the scope of this programme. Specific education and awareness programmes for youths will continue to be implemented. These will include the implementation of the *CERAH* programme to inculcate among youths the importance of practising a healthy lifestyle without tobacco, *dadah* and alcohol. In addition, to assist parents and youths in understanding and handling adolescent behaviour, information and educational material on adolescent health will be developed and disseminated. Adolescent health services, including counselling, will also be made available at the primary care level. In addition, the mental health programme will be expanded to include promotive, preventive, treatment and psychosocial rehabilitation activities.

12.98 In view of the emergence of new diseases, including zoonotic diseases, as well as the re-emergence of infectious diseases and the increasing trend of non-communicable diseases, a more effective surveillance system including surveillance of risk factors and related contributory factors will be established. To ensure prompt implementation of prevention strategies, an online health information reporting system of diseases involving the public and private sectors will be developed. In addition, collaboration and networking will be enhanced between agencies such as the Departments of Agriculture and Veterinary Services. The second phase of the filariasis elimination programme, which involves mass drug administration, will begin in Sabah and will eventually be expanded to cover other states.

12.99 Under the nutrition and food safety programme, a national nutrition policy will be formulated to maintain the nutritional well-being of the population. The objectives of the policy will be to ensure household food security, access

to safe and quality food regardless of location as well as ascertain that food is nutritious for the optimal growth, development and health of the family. To ensure food safety, the harmonisation of national food safety regulatory standards with Codex is critical and will be enhanced to ensure the import and export of safe food. In this regard, emphasis will be given to capacity building in related areas such as inspection and certification, scientific research and enforcement of regulatory standards.

12.100 A national medicine policy will be formulated to promote access to and the rational use of safe, effective and affordable drugs of high quality to improve health. Among others, this policy will ensure the quality, safety and efficacy of drugs and the establishment of an efficient and integrated drug management and supply network. To monitor the standards of marketed pharmaceutical and traditional products and to counter the availability of counterfeit and adulterated products, enforcement activities as well as the capacity and capability of analysis and testing will be upgraded and further strengthened. To educate and assist the public in making informed decisions, drug information kiosks will be set up at strategic locations to provide information on all registered pharmaceutical products.

12.101 To further improve the standard of *medical care services*, centres of excellence will continue to be developed to nurture an environment that promotes high quality as well as allows for the training of competent professionals. The Serdang and Sungei Buloh Hospitals, when completed in 2004, will be the centres of excellence for respiratory medicine, cardiothoracic surgery and cardiology as well as plastic surgery, orthopaedics, otorhinolaryngology, emergency and trauma, sports medicine and dermatology. In addition, specialties such as forensic medicine and bone marrow transplant services as well as diagnostic and support services such as pathology services and perinatal diagnostic services, will be provided on a regional basis.

12.102 In order to improve the quality and speed of diagnosis as well as to assist in overall patient management, the Kota Bahru, Kota Kinabalu, Melaka and Seremban Hospitals will be equipped with magnetic resonance imaging. In addition, all hospitals will be equipped with haemodialysis units to cope with the increasing need for dialysis treatment. To enhance the capacity for crisis and disaster response including in facing biological and chemical hazards, the trauma and emergency medical services will be improved through the upgrading of emergency departments and the provision of appropriate and essential equipment. In addition, the setting-up of ambulance service control centres and online dispatch services in all districts will allow for immediate medical action.

12.103 With the advent of rapid advancement in medical technology and to ensure that safe and cost-effective medical technologies are available in both the public and private sectors, health technology assessment will continue to be undertaken and made more stringent. Emphasis will be given to the formulation of and adherence to clinical practice guidelines. Towards this end, legislation to regulate the rational use of medical devices will be introduced.

12.104 Priorities of *medical research* will be reviewed to ensure that research results will be translated into relevant health policies and programmes. While emphasis will be given to applied research, basic research will also be undertaken and will focus on discovery research for the benefit of the population. New areas of research will include natural products, vaccine development and stem cell research while research in areas such as infectious diseases, cancer, diabetes and nutrition, herbal medicine, allergy and immunology as well as environmental health will be strengthened. In this regard, the National Institute of Natural Products and Vaccinology will be established to focus on vaccine development and transforming natural products into commercialised products including pharmaceuticals and dietary supplements. The use of biotechnology and molecular biology in medical research will be further strengthened to improve the diagnosis, prognosis and management of infectious diseases. To optimise the economic benefits of research, the commercialisation and patenting of research products will be continued, while emphasis will also be given to the protection of biotechnology raw materials and products to prevent loss of intellectual property rights. In health systems research, priority will be given to undertaking studies pertaining to ageing populations, health outcomes and quality of care.

12.105 In view of the increasing usage of and potential in traditional and complementary medicine (T/CM), a new division will be established in the Ministry of Health to facilitate the concerted and synergistic development of T/CM quality and standards of services. Guidelines on clinical and toxicology evaluation, standards and claims for herbal medicinal products, including intellectual property rights management, will be developed and used as the basis for herbal research and development. Extensive systematic research including clinical trials on four natural products will be continued and will be ready for commercialisation. To minimise risk and to ensure safety against the practice of T/CM and the usage of these products, the necessary legislation will be formulated.

12.106 To address the shortage of health manpower, greater efforts will be undertaken to increase the intake of students for health professional training, both locally and abroad. Existing training institutions will be upgraded and

expanded to increase the number of available training places. The completion of three new training institutions in Kota Kinabalu in Sabah, Kuching in Sarawak and Sungei Buloh in Selangor will provide 5,000 training places for allied health personnel. In addition, the existing outsourcing programme will be continued. To continuously improve the competency and quality of service, more opportunities will be created for health professionals to undertake post-graduate studies. In addition, training programmes at the post-graduate, degree, diploma and certificate levels for T/CM will be introduced in public institutions. The requirement for compulsory services for newly graduated dentists and pharmacists in the public sector will also assist in increasing the number of personnel in these two disciplines.

12.107 Efforts will continue to be undertaken to increase the use of ICT in the delivery of health care through the implementation of THIS and Telehealth. The various levels of THIS, that is total, intermediate and basic, will be implemented at the Ampang, Lahad Datu and Kepala Batas Hospitals. Under the Telehealth project, emphasis will be given to the implementation of the Lifetime Health Plan, which focuses on providing a personalised proactive and prospective health plan to achieve a continuum of care to keep the individual at the highest possible state of health.

12.108 In view of the fact that sufficient facilities are available in both the public and private sectors for the implementation of medical care services, efforts will be undertaken to ensure efficient and optimal utilisation of these services. Among the strategies that will be continued are the outsourcing of medical services, collaboration with private medical institutions in the training of medical and allied health professionals, provision of services in public hospitals by private practitioners as well as the leasing of public facilities to private practitioners. In addition, the phased implementation of the Private Healthcare Facilities and Services Act, 1998 will further ensure the development of a more integrated, efficient and effective health sector.

12.109 The availability of a sophisticated and efficient health care delivery system and the measures to improve health services during the remaining Plan period will further strengthen Malaysia's position as an emerging health tourism destination. The availability of alternative therapies and the attractive natural environment will also contribute to health tourism. At the same time, the Government will continue to ensure that Malaysians have equitable access to health care services.

12.110 In an effort to provide systematic information on the levels and trends in financial resources available in the health sector, the National Health Accounts will be compiled. With this, all expenditure flows in the country's health sector on an annual basis will be made available and will contribute towards monitoring trends within the health sector as well as evaluate the impact of major health policies and programmes.

12.111 In the light of the various issues and challenges facing the development of the health sector in Malaysia, such as changing pattern of diseases, rapid technological advancement and the growth of the private sector, the role and functions of the Ministry of Health will be reviewed and redefined. Emphasis will be given to policy formulation, research, regulation and standard setting, monitoring and evaluation as well as ensuring the provision of some public goods, such as the implementation of public health programmes in disease prevention and control, health promotion and health education.

Housing

12.112 During the remaining Plan period, housing programmes will continue to focus on providing greater accessibility to affordable and quality houses, particularly to the low-income group. The public and private sectors will be encouraged to build more low-cost and low medium-cost houses where there is adequate demand and accessibility to social amenities, in accordance with structural and local plans. An effective coordination and monitoring mechanism will be instituted at the state level to ensure that approval for housing development projects by local authorities are according to the approved plans.

12.113 The development of low-cost housing programmes will be expedited to ensure that those who are eligible will be provided houses either for rent or sale. During the remaining Plan period, the National Housing Department will undertake the construction of about 47,300 units of low-cost houses under the PPR for rental and PAKR programmes. In addition, *Syarikat Perumahan Negara Berhad (SPNB)* will build at least 150,000 units of medium-cost and affordable houses within the next five-year period, between 2003 and 2007. This includes the rehabilitation of 32,460 units in abandoned housing projects throughout the country that have been identified by the MHLG.

12.114 In an effort to provide better quality houses and comfortable accommodation, SPNB will construct institutional quarters for the armed forces

and low-cost houses for the low-income group. A portion of the cost of the low-cost houses will be subsidised through a special fund set up by the Government. A special hire-purchase and buy-back scheme will be made available for public sector employees, especially ex-police and ex-armed forces personnel. Under this scheme, the Government through SPNB, will purchase suitable completed unsold apartments at a discount of at least 20 per cent and rent it out to eligible applicants who, after three years will have an option of buying the property. This facility will also be extended to widows of public sector employees and single mothers who do not own houses.

12.115 The Government will continue to provide necessary assistance including expansion of infrastructure as well as the introduction of appropriate incentives and subsidies to selected target groups to enable a bigger proportion of the Malaysian population to have access to affordable housing. Under the Home Ownership for the People Project announced in the Package of New Strategies in 2003, the Government will provide subsidies on housing loans at an interest rate of 3.0 per cent or zero interest rate upon deposit of 10 per cent of the purchase price for the first year. This incentive will be given to house buyers for houses costing below RM100,000 and for loans obtained from BSN. For loans obtained from other financial institutions, a cash payment of RM600 will be credited to their accounts. For new buyers of completed houses and first-time owners of houses costing between RM100,000 to RM180,000, a tax relief on interest payment of RM5,000, RM3,000 and RM2,000 will be allowed for the year of assessment 2003, 2004 and 2005, respectively.

12.116 With increased urbanisation, a greater proportion of the urban population will be housed in high-rise flats and apartments due to scarcity of land for housing development. The Government will undertake a programme to upgrade the exterior and improve the facilities of the public low-cost flats to ensure that the buildings and common facilities as well as other public amenities provided are well maintained, clean and safe. In addition, the low-cost flat owners will be encouraged to jointly appoint maintenance companies to undertake maintenance works in a proper and systematic manner.

12.117 In line with the housing policy to provide adequate, affordable and quality houses, research and development (R&D) efforts will continue to be undertaken with greater focus on housing design and technology as well as the use of alternative building materials. Several undertakings are being planned such as studies on achieving affordable quality housing for the people, promoting the implementation of industrialised building system, especially in housing

construction and amending the Uniform Building By-Laws, 1984. This is in line with the effort to expedite the adoption of modular co-ordination measurements in housing design and production of standardised building components. In addition, a study on the further development of the housing sector will be carried out with the objective of formulating a comprehensive national housing policy. The main objective of the proposed policy will be to create a well-functioning housing sector that is efficient and responsive to the needs of the people, particularly the low-income group and less advantaged such as single mothers and the disabled while giving attention to the environment.

Other Social Services

Services in the Local Authorities

12.118 During the remaining Plan period, the role of local authorities will continue to focus on improving the quality of life of urban communities by providing quality urban services, efficient management and appropriate socio-economic programmes and projects. A study will be carried out to review the role and function of local authorities with the objective of increasing their efficiency and reducing disparities among them. This will include the review of the existing laws such as the Local Government Act (Act 171), 1976 and the relevant by-laws as well as the financial capability of the local authorities. The outcome of the study will include the formulation of a set of new strategies and approaches taking into account the latest development in the local authorities and the experience of developed nations. Measures will also be taken to improve the financial capability of the local authorities by reviewing their assessment value and rates as well as creating a broader tax base. Local authorities will be encouraged to vary their method of collection and provide incentives such as discounts or bonuses to residents who pay their bills early. This is in line with the objective of making local authorities a self-financing entity, thus reducing their dependence on Federal Government financing. The Master Plan for the development of new villages is being finalised and will be considered for implementation. In addition, a similar study for traditional villages will also be undertaken during the remaining Plan period.

12.119 Measures will continue to be taken to strengthen the capacity and management capability of local authorities by increasing the number of personnel, expanding the application of ICT and reviewing related legislation. The Smart Local Government Governance Agenda programme, which is aimed at increasing

the quality of services using ICT will be expedited with the introduction of two components, namely, e-Local Government and e-Local Agenda. All local authorities will be encouraged to participate in this programme and relevant assistance will be provided.

12.120 Under the integrated solid waste disposal system, transfer stations, sanitary landfills and thermal treatment plants will be built and public awareness programmes on the importance of reducing, reusing and recycling of waste or 3R activities will be intensified in collaboration with the private sector and the NGOs. To ensure proper management of solid waste, action plans identified under the Study on National Strategic Plan for Solid Waste Management will be evaluated for adoption and implementation.

12.121 Efforts will be intensified to reduce urban problems such as traffic congestion, flash floods, pollution and poor sanitation in an effort to improve the quality of life of the urban population. In this regard, various programmes such as the upgrading and expansion of radial roads as well as construction of access roads to housing estates will be undertaken. In addition, efforts will be intensified to better manage river basins, catchment areas and drainage systems, particularly to reduce flood occurrences. Towards this end, on-going drainage and flood mitigation projects in major urban areas prone to flash floods will be expedited. Alternative ways will be sought to resolve flash floods and related problems.

12.122 Local authorities will be encouraged to implement community-based projects through smart partnerships with residents and NGOs to create awareness among the public on the need to manage and maintain a conducive living environment. In addition, the Local Agenda 21 pilot programme, which was implemented in four local authorities will be promoted and extended to all municipal councils with greater participation and cooperation from the public.

Fire and Rescue Services

12.123 Efforts to further improve and upgrade the capability and professionalism in fire prevention, protection and control as well as rescue work will be continued. In this regard, additional allocation will be provided mainly for the construction of new fire stations and the provision of new facilities in strategic locations, upgrading of existing infrastructure, procurement of more specialised equipment, training of multi-skilled personnel and intensification of research and development.

12.124 The application of multimedia and telecommunication systems for fire and rescue services will be intensified. Under this approach, up-to-date infrastructure facilities will be provided and data information management will be through interactive communications system. In addition, a R&D Centre for fire safety and fire engineering activities such as testing of fire resistance on construction materials, assembling of fire fighting equipment and special clothing for fire and rescue operations will be established.

Library Services

12.125 Various programmes to inculcate and promote reading habits among the public, especially through the National Reading Campaign will continue to be implemented with emphasis given to youths and teenagers. The main objective of the programme under this campaign is to inculcate reading habits as a life style and to enhance awareness on the importance of acquiring knowledge. To support these efforts, more libraries, especially in rural areas, will be built while additional multimedia mobile libraries will be acquired.

12.126 The *Sistem Perpustakaan Digital Nasional (Sistem PERDANA)*, which is a collaborative effort among libraries aimed at creating a critical mass of digitally held documents in words, still and moving images, sound and a combination of these will be enhanced and made available online. A blue print, which will outline the strategic recommendations for the implementation of *Sistem PERDANA* Phase II, will be developed and implemented in the remaining Plan period. This will facilitate users such as researchers and the general public to access information from a wide spectrum of databases. Efforts will also be taken to increase and enrich the local digitalisation content through library consortium and collaboration with relevant Government agencies, NGOs and the private sector. In line with the objective of promoting the National Library as the national reference and resource centre, efforts will be accelerated to increase the collection and acquisition of books, journals and other materials in various subjects, particularly in emerging sciences and technology.

Sports Development

12.127 Efforts will continue to be undertaken to develop sports programmes and activities with a view to creating a healthy, active and disciplined society.

The organisation and management of sports associations will be continuously reviewed and upgraded to enhance their capability in improving the quality and standard of sports in the country.

12.128 Various sports programmes and recreational activities will continue to be organised at the district, state and national levels. In addition to implementing existing programmes, traditional sports as well as new programmes including extreme sports will be continued to attract greater participation, especially among youths. To further educate the public on the importance of health, more awareness campaigns as well as fitness education programmes will be continuously organised. The Government will also ensure the availability of adequate facilities for the implementation of mass sports programme.

12.129 To establish the foundation for participating in high performance sports, a more systematic approach for the identification and preparation of athletes at the primary and secondary school levels will continue to be adopted. The scope of mini sports events and the number of physical education teachers at primary level will be increased, and the school curriculum will be further improved with the inclusion of athletics and gymnastics. The Commonwealth Games Athletes Preparation Programme and the SEA Games Athletes Preparation Programme will be continued to prepare Malaysian athletes for the SEA Games in 2005 and 2007, the Commonwealth Games and Asian Games in 2006 as well as the Olympics in 2008.

12.130 Continued emphasis will be given to overcome the shortage of local qualified coaches through the implementation of more training programmes at the certificate, diploma and degree levels. In addition, opportunities will be provided for local coaches to undertake training with foreign coaches to gain knowledge, skills and experience as their development forms an important part of the sports agenda.

12.131 The successful bidding of Malaysia to host the Far East and South Pacific Games For The Disabled in 2006 will further contribute towards the development of sports among the disabled. Specialised training among athletes will be intensified to ensure successful participation of the national contingent. The game will involve the participation of 48 countries with 5,000 athletes and sports officials as well as 10,000 volunteers.

Information and Broadcasting

12.132 During the remaining Plan period, the Government will continue to upgrade and expand radio and TV coverage to provide quality transmission to the population, especially in rural as well as remote areas of Sabah and Sarawak. Broadcasting infrastructure will be improved with the acquisition of new equipment and the construction of additional transmitter stations. A pilot digital TV transmission project in the Klang Valley will be implemented to prepare for the digitalisation of radio and TV. The digital TV terrestrial transmission together with the existing digital satellite transmission will further contribute towards the development of an information-rich society.

12.133 BERNAMA will continue its role to promote Malaysia in the international circles through its cooperation with international news agencies such as the Organisation of Asia Pacific News Agencies, Smart News Network International and South-south Information Gateway. Efforts will also be undertaken to channel news online to TV stations in ASEAN countries.

12.134 With the rapid development in ICT, the establishment of private TV stations, satellites and cable systems, efforts will be undertaken to improve the quality of locally produced films and documentaries to ensure their marketability. In this regard, appropriate training programmes in multiple areas of film making including script writing, directing, special effects, sound and cinematography will be continued through collaboration with the private sector.

Culture

12.135 In line with the objective of creating a united society, the implementation of cultural programmes that contribute towards enhancing national unity, promoting national integration as well as maintaining racial harmony will be continued during the remaining Plan period. Programmes that focus on arts and cultural development, conservation and preservation of cultural heritage will be promoted at the state and district levels through the organisation of exhibitions and performances. These programmes will help to counter the spread of the negative elements of foreign culture.

12.136 Various efforts will be undertaken to strengthen cultural understanding among Malaysians. Greater emphasis will be given to encouraging the participation

of youths and the various communities in arts and cultural activities, which include traditional and modern dance, drama, and music. To facilitate the implementation of these activities, the necessary physical facilities and support will be provided at the district and state levels. Art exhibitions and cultural performances will continue to be organised to increase understanding and appreciation of the nation's rich as well as diverse cultural heritage, especially among the young.

12.137 The preservation and conservation of historical places, monuments and artifacts will be continued to inculcate greater awareness among the public of Malaysia's history and national heritage. In this regard, measures will continue to be undertaken to control the outflow of antiquities and historical heritage of national importance. The upgrading and development of the *Rumah Merdeka*, as part of the *Memorial Tunku Abdul Rahman* will be completed during the remaining Plan period. This Memorial will collect, preserve, exhibit and disseminate information on the collections on the first Prime Minister. In addition, the construction of the Malay World Ethnology Museum and *Muzium Alam Semula Jadi* in Putrajaya will also help to disseminate knowledge and information on Malay culture and heritage.

Community Development

12.138 To facilitate the implementation of the NSP, a Plan of Action will be formulated to include all levels of government, NGOs and the private sector. Service centres will also be established at the grass roots level to ensure effective delivery of services to the community. In this regard, three new *Kompleks Penyayang* will be set up to provide a one-stop centre for welfare services and assistance. A data base system will be developed at the service centres to provide necessary information to the community regarding services and facilities to accommodate their needs. The implementation of the NSP will enable early intervention by the appropriate agencies and organisations to address social development issues.

12.139 Community development programmes with the objective of inculcating positive values, fostering neighbourliness and harmonious living among the various communities as well as inculcating the spirit of self-reliance will continue to be implemented in the urban and rural areas. The implementation of these programmes will ensure that society is resilient to withstand negative influences

that may affect social harmony and tolerance. To facilitate this initiative, family support systems will be further strengthened. In this regard, the present *Teledera* line will be upgraded to a fully-automated call centre to enhance professionalism and will cover additional services such as counselling, referral and information services. In line with the extended scope of *Rukun Tetangga*, more *Rukun Tetangga* committees will be established in the urban and semi-urban areas especially in high-risk residential areas. Additional programmes will be implemented to further enhance national integration between Peninsular Malaysia, Sabah and Sarawak. To inculcate mutual respect among the young and to ensure that they are imbued with positive values, pre-school classes will continue to be established for children in the urban and semi-urban areas. The use of ICT and the teaching of English under the *Tabika 21* project will be expanded in stages to cover other national unity pre-school classes.

12.140 In the rural areas, community development programmes in line with the GDW will be further strengthened to create a knowledgeable and self-reliant rural population. Village development programmes under the *Desa Sepadu* approach, which emphasises on an integrated and combined efforts between the public and private sectors as well as the NGOs involved in rural community development, will be implemented. Courses related to skills training including computer literacy will continue to be undertaken to expose the rural community to new knowledge and skills as well as enable them to improve their capabilities. In addition, basic amenities will continue to be provided to improve the quality of life of the Orang Asli community through various education, health, housing and infrastructure projects to ensure their participation in the national development process.

Family Development

12.141 Recognising that the family forms a fundamental unit towards the development of a progressive and caring society, emphasis will continue to be given to strengthening the family unit during the remaining Plan period. To understand the inter-relationships and dynamics of the family unit and changes in the family structure, the Fourth Population and Family Life Survey will be conducted. In addition, research in the area of parental responsibilities and parenting skills will also be undertaken. Findings from these studies will be used in the formulation of policies and programmes to further strengthen the family unit. Family development programmes will continue to be implemented to help

families cope with the challenges and demands arising from rapid development. In this regard, the *Family First* programme will continue to be implemented to promote family togetherness. To ensure the provision of the necessary support services for families in a centralised location, more *Kompleks KASIH Keluarga* will be built throughout the country.

12.142 Efforts will continue to be undertaken to ensure that new urban centres are properly planned and provided with adequate facilities for the elderly and disabled persons to ensure a more comfortable, friendly and healthy living environment. During the remaining Plan period, programmes for children will continue to focus on the provision of proper care and protection in order to contribute to their healthy and wholesome development. The establishment of additional child activity centres, homes for children and child protection teams will be continued while existing ones will be further upgraded and equipped with more up-to-date facilities. Towards this end, the twenty-year National Plan of Action For Children will be finalised. The Child Care Centre Act, 1984, will also be reviewed to ensure affordability and accessibility to quality child-care. In addition, children in institutions will be provided with vocational training to enhance their employability.

12.143 In line with the caring society concept, the family will continue to be encouraged to take care of the elderly. In this regard, the community and NGOs will also be encouraged to provide support and cooperation especially to families that do not have the means to provide care for the elderly. Extensive campaigns to increase awareness on the need to register the disabled will be continued. Efforts to integrate the disabled into society and enable them to lead a normal life will be further intensified. Towards this end, a People With Disabilities Act will be formulated in line with the principle of an inclusive, barrier-free and rights-based approach. The Centre for Industrial Training and Rehabilitation For People With Disabilities will be reorganised into a centre of excellence for industrial training, rehabilitation, including medical rehabilitation, business development and research and development on people with disabilities. Existing community-based rehabilitation centres will be further strengthened to include vocational training to facilitate the involvement of people with disabilities in productive activities. Opportunities for business operations for people with disabilities in Sheltered Workshops will be further expanded. In line with the productive welfare approach, efforts will be made to equip people with disabilities with the relevant entrepreneurship skills to enable them to be self-reliant.

Youth in Development

12.144 To meet the challenges of rapid urbanisation and the advancement of ICT, youth development programmes will focus on moulding a generation of youths who are educated, united, tolerant, competitive, ethical and technologically progressive. Greater emphasis will be given to strengthening the family institution and the role of parents in inculcating high moral and spiritual values among youths.

12.145 Emphasis will be given to equipping youths with the necessary skills towards developing them with the right attitudes, knowledge and skills to ensure that they are able to contribute effectively to nation building. In this regard, leadership and skills training programmes will be intensified to meet the demands of a knowledge based-economy. Entrepreneurial development programmes for youths will be enhanced towards creating a commercial and industrial youth community. The construction of the main campus of the *Institut Keusahawanan Belia Negara* in Ipoh, Perak and three branch campuses at the northern, southern and eastern region will provide additional training places for youths in entrepreneurial development. This will increase the employability of youths in the related sectors of the economy.

12.146 Recognising the important role of youths in nation building, the National Service Programme aimed at instilling good values such as patriotism, tolerance, discipline, responsibility and unity among youths will be implemented in 2004. This programme will help deter students from indulging in unhealthy activities. The Government will also conduct a voluntary pre-National Service Programme in schools through the *Rakan Muda* and other unity programmes including *Kem Padu Anak Malaysia*.

12.147 To increase community participation in building a healthy lifestyle among youths, the private sector, voluntary associations and community organisations such as mosque committees as well as village development and security committees will be encouraged to implement the *Rakan Muda* healthy lifestyle programme. The private sector will also be encouraged to participate in the *Rakan Muda* programme by providing the facilities and infrastructure for recreation and sports. This will widen the opportunity for youths to participate in organised activities as well as achieve the objective of the *Rakan Muda* programme.

12.148 The Government will continue to give emphasis on preventive and rehabilitative programmes to combat social ills among youths such as loafing, substance abuse, indiscipline and crime. Voluntary and religious associations, community organisations such as resident's associations, village development and security committees as well as the private sector will also be encouraged to play their role towards enhancing values development among youths. Programmes aimed at strengthening the family institution equipped with good parenting skills will be accorded priority. In addition, the inculcation of good ethics with positive and high moral values will be further emphasised in the training curriculum for youths at the various youth training centres.

Women and Development

12.149 During the remaining Plan period, consistent with Malaysian values, cultural norms and religious beliefs, efforts will be continued to further enhance the status and position of women so as to enable their equal participation in national development. Towards this end, steps will continue to be taken to provide women with the necessary skills and knowledge to cope with the twin responsibilities of family and career.

12.150 Realising that the participation of women in the labour market is relatively low and the need to mobilise this available pool of resource to enhance the nation's output, efforts will be undertaken to encourage women to enter the labour market. In this regard, the private sector will be further encouraged to introduce the necessary support facilities such as child care centres, housing and transportation for their women employees. To enable women to integrate career with household duties, the Employment Act, 1955 will be amended to include new and flexible working arrangements such as teleworking, part-time work and job sharing.

12.151 More educational and training opportunities will be provided to enable women to meet the demands of the knowledge-based economy and improve their upward mobility in the labour market. In line with the demands and needs of the industry, employers will be encouraged to organise various training courses to enable women to acquire new and advanced skills. In tandem with the rapid changes in technology that requires constant upgrading of skills, women will be provided with increased opportunities for retraining. In addition, the completion

of 34 community colleges and eight industrial training institutes will provide additional training opportunities for women. Efforts will continue to be undertaken to improve and ensure women's access to ICT. Formal and non-formal training in areas such as computer literacy and ICT applications will continue to be implemented jointly by the Government and NGOs. In this regard, special emphasis will be given to rural women through the implementation of the *InfoDesa* programme.

12.152 The Special Assistance Scheme for Women Entrepreneurs will be continued to provide greater access to financing for women entrepreneurs as well as enhance the global competitiveness of companies and enterprises owned and operated by them. Efforts will continuously be undertaken to upgrade the technological capabilities as well as skills and expertise of companies and enterprises owned and operated by women. In addition, increased opportunities to cater for the skills and training needs of women entrepreneurs will be provided.

12.153 The importance of ensuring the well-being of women and their families will continue to be given emphasis. Training programmes related to preventing abuse and domestic violence, resolving conflicts, maintaining family harmony, understanding gender roles and expectations as well as counselling sessions will continue to be implemented. The implementation of the WAVE campaign will be intensified with greater cooperation and participation of the community. To ensure a standardised and coordinated approach in preventing and handling domestic violence, a training module will be designed for the use of relevant agencies as well as NGOs. In addition, the implementation of the *Nur Bestari* programme will be expanded to cover all states.

12.154 Efforts will be undertaken to make available information on programmes and services that are being provided for women by the Government and NGOs in an organised and systematic way. Towards this end, to ensure that women are aware and have the necessary information to assist them in handling various challenges and problems, one-stop information booklets on various specific topics such as beginning businesses, obtaining legal aid as well as a directory of shelter homes will be compiled and distributed.

12.155 Single mothers will continue to be assisted in caring for their families. In this regard, to ensure that there is greater coordination and integration in the planning of programmes and services, a survey will be conducted to obtain a profile of single mothers and their dependents. Steps will also be undertaken to

encourage employers to provide employment opportunities through flexi working arrangements, teleworking and job sharing. In addition, training programmes will continue to be implemented to encourage single mothers to participate in income-generating activities as well as increase their employability.

12.156 Laws to further improve the status of women will continue to be reviewed. Towards this end, a detailed study will be undertaken to ascertain the need to establish family courts. Legal literacy courses will continue to be implemented with the assistance of NGOs to increase the awareness and educate women of their rights under existing laws. To streamline the implementation of legal literacy courses, a standard training module will be drawn up.

12.157 Recognising the links and networks that NGOs have with the grass roots and their capabilities in organising and implementing programmes that complement Government efforts, measures will be undertaken to facilitate NGOs in carrying out their activities for the benefit of women. Among others, training will also be provided to volunteers to ensure a more professional approach towards handling issues pertaining to women. To ensure speedy approval of funds for implementation of programmes, standardised formats and criteria for evaluation will be devised. In addition, facilities will be provided for the online submission of applications and the dissemination of approvals.

12.158 The National Policy on Women and the Action Plan for the Advancement of Women will be reviewed to ensure that women are provided with the necessary skills and knowledge to enhance their participation in and contribution to the social and economic development of the country. Emphasis will be given to further improving and strengthening the national machinery for the advancement of women and ensuring greater coordination and collaboration in the implementation of activities for women.

IV. ALLOCATION

12.159 The revised allocation for social development programmes for the Eighth Plan period is RM25.4 billion, an increase of 62.7 per cent compared with the original allocation, as shown in *Table 12-5*. This revised allocation constitutes 15.9 per cent of the total development budget. The increased allocation for the housing sector will be for the provision of more comfortable accommodation for

TABLE 12-5

**DEVELOPMENT ALLOCATION FOR SOCIAL DEVELOPMENT
PROGRAMMES, 2001-2005**

(RM million)

<i>Programme</i>	<i>8 MP Allocation</i>		<i>Estimated Expenditure, 2001-2003</i>	<i>Balance, 2004-2005</i>
	<i>Original</i>	<i>Revised</i>		
Housing	4,223.0	6,610.7	5,043.4	1,567.3
Public Housing	4,018.0	6,243.8	4,677.4	1,566.4
Low-cost Housing	1,980.0	2,613.2	2,382.3	230.9
Sites & Service	20.0	2.6	2.5	0.1
Institutional Quarters & Staff Accommodation	2,018.0	3,628.0	2,292.6	1,335.4
Rural Housing	205.0	366.9	366.0	0.9
Rehabilitation of Dilapidated Houses	100.0	103.5	102.6	0.9
Regrouping of Traditional Villages & Rural Growth Centres	105.0	263.4	263.4	-
Health	5,500.0	9,500.0	4,873.7	4,626.3
Patient Care Services	4,226.5	7,703.5	3,522.4	4,181.1
New Hospitals	2,330.3	5,133.3	1,997.3	3,136.0
Upgrading & Renovation	1,896.2	2,570.2	1,525.1	1,045.1
Public Health Services	987.0	1,430.0	1,063.4	366.6
Urban Health	289.2	532.4	396.2	136.2
Rural Health	661.1	847.6	630.0	217.6
Environmental Health	36.7	50.0	37.2	12.8
Other Health Services	286.5	366.5	287.9	78.6
Training	266.5	336.5	280.4	56.1
Research and Development	20.0	30.0	7.5	22.5
Other Social Services	5,877.6	9,264.1	6,128.2	3,135.9
Local Authorities	3,480.3	5,654.7	3,614.5	2,040.2
Fire & Rescue Services	800.0	1,436.9	1,099.0	337.9
Sports	425.3	223.4	210.6	12.8
Culture	220.0	257.5	131.4	126.1
Library Services	100.0	118.0	73.1	44.9
Information & Broadcasting	254.0	450.0	153.9	296.1
Community & Family Development ¹	598.0	1,123.6	845.7	277.9
Total	15,600.6	25,374.8	16,045.3	9,329.5

Note: ¹ Includes allocation and expenditure for women and youths.

public sector employees, while a significant portion of the allocation in the health sector will be for the completion of new hospitals and strengthening the promotive and preventive health services.

V. CONCLUSION

12.160 The implementation of social development programmes in line with the National Social Policy will continue to emphasise the well-being of the population and ensure that everyone will have equitable access to basic amenities and a share in the benefits of national development. A Plan of Action will be formulated to ensure the effective implementation of the policy that involves all levels of government as well as the NGOs and the private sector. Recognising the role of the family in ensuring societal stability and in the creation of a caring society, efforts will continue to be taken to strengthen the family unit. At the same time, the inculcation of positive values and attitudes will be given priority, to instil the spirit of self-reliance and competitiveness, especially among the young.

Chapter 13

Sustainable Development

13

SUSTAINABLE DEVELOPMENT

I. INTRODUCTION

13.01 The integration of the economic, social and environmental dimensions of development was strengthened to promote sustainable development. The Government implemented measures to improve the quality of life; promote sustainable consumption and production; protect the environment; sustainably manage the natural resource base; and enhance human, institutional and infrastructure capacity. These measures also furthered Malaysia's implementation of Agenda 21, the United Nations Programme for Action for Sustainable Development.

13.02 During the remaining Plan period, the Government will continue efforts to efficiently achieve sustainable development and to mitigate the environmental impact of development activities. Emphasis will be placed on improving the quality of life, changing consumption and production patterns, protecting the environment and managing the natural resource base for economic and social development. These measures will also address Malaysia's commitments to various international agreements and United Nations' initiatives, including the Millennium Development Goals and the Plan of Implementation of the World Summit on Sustainable Development (WSSD).

II. PROGRESS, 2001-2003

13.03 During the review period, steps were taken to identify prudent, cost-effective and appropriate management approaches in addressing development issues in order to provide multiple benefits and to ensure that development was sustainable. Emphasis was placed on improving the quality of life and in addressing environmental and resource management issues in an integrated and holistic manner.

Addressing the Social and Economic Dimensions

Quality of Life

13.04 During the review period, the *quality of life* of all Malaysians further improved in almost all aspects as the Government continued to implement measures and programmes to increase income levels and improve the provision of and access to social services, as shown by several selected indicators of the quality of life in *Table 13-1*. The steady rise in income was accompanied by a corresponding decrease in the incidence of poverty as well as continued enhancement in health, education, transport and communications, working and family life as well as public safety. The Malaysian Quality of Life Index, a composite measurement based on 11 areas comprising 41 indicators, registered an upward trend, as shown in *Chart 13-1*.

13.05 The rise in real per capita income from RM8,126 in 2000 to RM8,234 in 2002 accompanied the reduction in the incidence of *poverty* from 7.5 per cent in 1999 to 5.1 per cent in 2002. This places Malaysia ahead of the Millennium Development Goal of halving by 2015 the proportion of the world's people whose income is less than one US dollar a day.

13.06 Considerable improvements were also made in the area of *working life* with reductions in the unemployment rate, number of industrial accidents as well as the number of work-days lost due to industrial actions. The decline in the industrial accident rate can be attributed to the effective enforcement of the Factories and Machinery Act, 1967 and the Occupational Safety and Health Act, 1994, as well as the provision of better education and awareness programmes to workers. The fewer work-days lost was mainly due to intensive conciliatory efforts taken through direct negotiations and interventions to resolve disputes.

13.07 *Health* promotion and disease prevention programmes continued to be accorded high priority. The programmes took into account the increasing affluence of society and its sedentary and stress-filled lifestyles and emphasised the promotion of a healthy lifestyle, better nutrition, immunisation, safe drinking water supply as well as food quality and safety. As part of the preventive and promotive health programme, the thematic lifestyle campaign focused on the practice of healthy behaviour and food safety. The coverage and scope of the childhood immunisation programme was further improved. The National Food Safety Policy and a Plan of Action were formulated to ensure the quality and safety of locally produced and imported food. The environmental health programme was also strengthened to ensure a safe and healthy environment.

TABLE 13-1

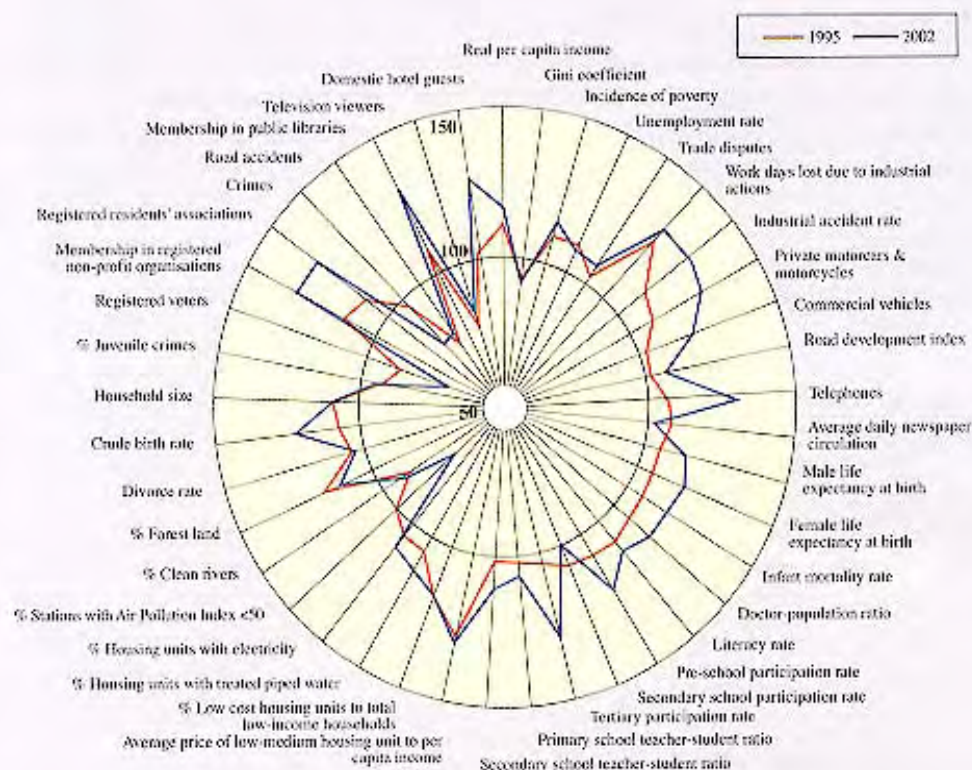
SELECTED QUALITY OF LIFE INDICATORS, 2000-2003

<i>Area</i>	<i>Indicator</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003^p</i>
Income & Distribution	Real Per Capita Income (RM)	8,126	8,030	8,234	
	Gini Coefficient	0.452	0.450	0.461	
	Incidence of Poverty (%)	5.5	5.3	5.1	
Working Life	Unemployment Rate (%)	3.1	3.6	3.5	3.5
	Trade Disputes (per 1,000 workers)	0.046	0.040	0.044	0.044
	Work Days Lost due to Industrial Actions ('000)	0.7	0.6	0.2	0.2
	Industrial Accident Rate (per 1,000 workers)	10.3	9.01	8.31	8.31
Transport & Communications	Private Motorcars & Motorcycles (per 1,000 population)	408.8	429.6	450.0	460.0
	Commercial Vehicles (per 1,000 population)	45.1	48.0	48.9	
	Road Development Index	0.75	0.75	0.75	0.76
	Telephones	483	520	583	624
	Fixed Line Telephones (per 1,000 population)	263	204	199	220
	Mobile Phones (per 1,000 population)	220	316	384	404
	Average Daily Newspaper Circulation (per 1,000 population)	142	145	151	
Health	Male Life Expectancy at Birth	70.2	70.3	70.4	70.5
	Female Life Expectancy at Birth	75.0	75.2	75.3	75.4
	Infant Mortality Rate (per 1,000 live births)	7.9	6.3	5.7	5.7
	Doctor-Population Ratio	1,504	1,490	1,395	
Education	Literacy Rate (%)	93.8	93.9	94.0	94.1
	Pre-School Participation Rate (%)	36.7	33.1	35.4	
	Secondary School Participation Rate (%)	80.1	80.2	79.5	
	Tertiary Participation Rate (%)	25.0	25.9	26.9	27.9
	Primary School Teacher-Student Ratio	19.0	18.4	18.6	18.3
	Secondary School Teacher-Student Ratio	17.6	17.3	16.8	16.8
Housing	Average Price of Low-medium Housing Unit to Per Capita Income	4.51	4.31	4.35	
	% Low Cost Housing Units to Total Low Income Households	58.0	58.9	55.4	
	Housing Units with Treated Piped Water (%)	88.9	90.0	90.5	
	Housing Units with Electricity (%)	95.1	95.5	95.7	
Environment	Stations with Air Pollution Index < 50 (%)	84.0	78.0	65.7	
	Clean Rivers (%)	28.3	50.0		
	Forest Land (%)	61.5	61.5	59.5	
Family Life	Divorce Rate (% of population aged 18-50)	0.13	0.14	0.13	
	Crude Birth Rate (per 1,000 population)	24.5	22.3	21.8	
	Household Size	4.6	4.6	4.6	
	Juvenile Crimes (% of population aged 10-18)	0.9	0.8	0.7	
Social Participation	Registered Voters (per 1,000 population aged 21 and above)	76.1	75.9	74.1	
	Membership in Registered Non-Profit Organizations	32,304	34,148	35,758	
	Registered Residents' Associations	1,607	1,738	1,818	
Public Safety	Crimes (per 1,000 population)	7.2	6.6	6.2	
	Road Accidents (per 1,000 vehicles)	23.7	23.5	23.3	
Culture & Leisure	Membership in Public Libraries (per 1,000 population aged 5 to 55)	152.3	139.2	149.4	
	Television Viewers (per 1,000 population)	869	853	901	
	Domestic Hotel Guests (per 1,000 population)	585	658	683	

Note: ^p Projected

CHART 13-1

MALAYSIAN QUALITY OF LIFE INDEX, 1995 AND 2002



13.08 The health programmes and initiatives considerably enhanced the quality of health, resulting in a rise in life expectancy at birth, improvements in the infant mortality rate and a better doctor-population ratio. Life expectancy at birth for males improved from 70.3 years in 2001 to 70.5 in 2003 and that for females from 75.2 years to 75.4. The infant mortality rate improved further from 6.3 per thousand live-births in 2001 to 5.7 in 2003.

13.09 *Education* also improved with increases in the literacy rate, participation rates at pre-school and tertiary levels and the teacher-student ratio. The literacy rate improved from 93.9 per cent in 2001 to 94.1 per cent in 2003. The participation rate in secondary schools registered a mixed performance while the tertiary level showed an improvement. These improvements were made possible with the

construction of additional classrooms, which improved the class-classroom ratio; implementation of educational support programmes such as scholarships, textbook-on-loans and financial assistance; and implementation of the centralised school system, which facilitated the provision of adequate teaching and learning facilities. The expansion of existing universities, the setting up of new universities and the provision of financial assistance through the National Higher Education Fund, enabled a larger number of qualified students from low-income families to gain access to higher education, and further increased student intake and enrolment in the public universities.

Sustainable Human Settlements

13.10 During the review period, the provision of urban and rural *services* was expanded to ensure that a greater proportion of the population had access to a better quality of life, enhanced facilities for economic and social activities, and an improved living environment. Steps were taken to improve management and planning by local authorities. In addition, the Healthy City Initiative, which emphasised capacity building and identified social, physical and mental health risks, assisted 25 local authorities in formulating plans to ensure healthy and comfortable communities.

13.11 *Housing* and other *social services* continued to be accorded priority. Measures were taken to increase accessibility to adequate, affordable and quality houses for all income groups. Priority was accorded to the development of low- and low medium-cost houses. The Government's Housing Loan Scheme was reviewed to enable the low-income group to own houses by increasing the amount of loan eligibility.

13.12 Based on the Population and Housing Census 2000, an estimated 77.2 per cent of occupied housing units had individual ownership, as shown in *Table 13-2*. A total of about 60 per cent of the houses constructed had brick outer walls, indicating comfortable and secure homes. In addition, an estimated 89 per cent of houses were supplied with treated piped water, about 95 per cent had electricity supply, about 61 per cent had flush toilets and an estimated 65 per cent were provided with garbage collection services.

13.13 Curative and preventive mitigation measures were also put in place to address the occurrence of *floods*, particularly in the Klang Valley, the urban areas of Pulau Pinang; and in Alor Setar, Kedah; Teluk Intan, Perak; Rawang and

Kajang in Selangor; Seremban, Negeri Sembilan and in Kota Tinggi, Johor. The preventive measures included the wider use of integrated planning, the preparation of a *Manual Baru Saliran Mesra Alam* to be used as a guide for better drainage and raising awareness on the importance of clean and clear flowing rivers. On the other hand, curative measures included the construction of dams, retention ponds and pumps, the deepening and widening of rivers as well as the upgrading of bunds on river banks to enhance the capacity of rivers to hold water. Work also started on the Stormwater Management and Road Tunnel project, which together with the Batu and Jinjang ponds, will address the flooding problem in central Kuala Lumpur.

13.14 In Peninsular Malaysia, the amount of *solid waste* generated per day increased from an estimated 15,541 tonnes in 2000 to 17,500 tonnes in 2003, averaging about 0.9 kilogramme per person per day. Consequently, the recycling of solid waste was emphasised, in particular of four major items, namely, plastic, paper, metal and glass. In this regard, the National Campaign on Recycling was launched in 2001, and has been extended to 67 local authorities. In collaboration with non-governmental organisations (NGOs), awareness raising campaigns on the reuse, recycling and reduction of wastes were further intensified. The Ministry of Housing and Local Government completed a study on the National Strategic Plan for Solid Waste Management, which outlines measures for a comprehensive approach towards solid waste management. In addition, the privatised solid waste management scheme was expanded with an additional nine local authorities being included for the interim collection of waste. A solid waste transfer station was built in Kuala Lumpur to enhance the implementation of an integrated waste management system.

13.15 In the *transport and communications* sector, there was an overall increase in the ownership of private and commercial vehicles and improvement in telecommunications services. Private motorcycles per thousand population increased from 230 in 2000 to 242 in 2002, while the number of motorcars increased from 178 in 2000 to 208 in 2002. The number of taxis and buses per thousand population remained stable at 2.4 and 2.1, respectively. The number of telephones per thousand population increased significantly from 483 in 2000 to 624 in 2003 and further facilitated communication.

13.16 The increase in the number of vehicles contributed to traffic congestion, particularly in highly urbanised areas such as Kuala Lumpur and the Klang Valley. To address the congestion, measures were taken to continuously improve the *transport system*, with an emphasis on making the system more integrated,

TABLE 13-2

KEY SUMMARY STATISTICS OF LIVING QUARTERS BY STATE, 2000¹

	Johor	Kedah	Kelantan	Malaka	Negeri Sembilan	Pahang	Perak	Perlis	Pulau Pinang	Sabah	Sarawak	Selangor	Terengganu	WP. Kuala Lumpur	WP. Labuan	Malaysia
Total living quarters	696,759	395,235	295,610	175,593	242,218	304,084	552,185	50,242	355,436	522,802	476,377	931,029	200,578	354,731	16,382	5,569,261
Average annual growth rate of housing units, 1991-2000 (%)																
House	4.3	2.6	1.3	5.0	3.9	3.1	1.9	1.4	6.2	4.6	3.6	8.1	2.5	3.9	4.9	4.9
Detached	87.4	95.5	94.8	83.8	91.0	90.2	92.4	96.6	59.7	87.9	90.2	76.2	93.5	44.5	84.7	83.3
Semi-detached	32.2	54.3	78.0	37.7	37.1	52.7	45.5	67.0	25.2	55.7	40.6	20.5	75.7	10.0	57.4	40.1
Terrace, row or link, townhouse	10.3	11.7	7.0	7.5	9.4	12.1	9.1	8.1	8.7	9.9	10.2	8.0	6.8	5.1	10.6	9.1
Longhouse (Sabah & Sarawak only)	45.0	29.6	9.9	38.6	44.5	25.4	37.9	21.5	25.8	20.4	23.1	46.6	10.9	29.3	16.7	32.6
Flat/apartment/condominium/shophouse	-	-	-	-	-	-	-	-	-	1.8	16.3	-	-	-	0.1	1.6
Flat/apartment/condominium	12.0	4.2	4.7	15.9	8.4	9.1	7.1	3.1	39.7	7.9	7.2	22.7	5.9	54.5	13.3	15.6
Shophouse	8.3	2.5	1.5	12.0	5.6	6.6	3.9	1.5	37.5	5.7	4.3	19.0	3.7	51.1	9.2	12.6
Average number of persons per occupied housing unit	3.6	1.7	3.2	3.8	2.8	2.5	3.3	1.5	2.2	2.2	3.0	3.7	2.2	3.4	4.0	3.0
Construction material of outer walls of housing units (%)																
Brick	4.6	4.6	5.0	4.5	4.4	4.6	4.4	4.4	4.5	5.3	4.9	4.6	5.1	4.3	5.0	4.7
Plank	71.7	56.5	25.3	68.3	67.9	48.9	61.6	49.3	76.0	24.9	41.1	80.9	27.3	86.3	44.1	59.5
Brick and plank	11.4	11.6	61.1	13.4	16.4	30.4	16.0	20.5	6.7	65.6	48.5	8.1	57.1	7.3	48.6	24.7
Others/Unknown	15.5	31.0	12.4	17.3	15.2	18.4	21.0	29.5	16.6	5.1	7.9	9.5	15.0	5.8	5.7	14.1
Others/Unknown	1.5	0.9	1.1	1.1	0.5	2.4	1.4	0.7	0.7	4.4	2.5	1.5	0.6	0.6	1.6	1.6
Ownership of occupied housing units (%)																
Individual ownership	80.1	88.8	90.3	82.9	83.8	70.8	86.6	91.5	86.9	60.6	74.6	68.3	86.2	70.2	71.6	77.2
Government/Statutory body	4.8	3.4	3.6	5.3	6.1	7.5	4.9	5.0	4.4	5.7	6.0	3.0	5.4	15.5	15.5	5.5
Private	7.0	2.9	2.7	4.2	6.3	8.5	4.0	2.0	3.9	18.9	9.5	3.5	4.2	4.4	7.8	6.4
Others/Unknown	8.1	4.8	3.3	7.5	3.9	13.2	4.5	1.5	4.9	14.8	9.8	25.1	4.2	9.9	6.2	11.0
Occupied housing units with basic amenities (%)																
Treated piped water supply	98.4	93.0	57.8	99.4	97.9	91.7	95.8	97.5	99.0	61.0	69.2	99.1	89.2	99.7	93.2	88.9
Urban	99.2	99.1	70.2	99.8	99.1	97.8	98.7	99.6	99.6	88.9	97.7	99.3	95.3	99.7	94.6	97.4
Rural	96.9	88.8	51.4	98.6	96.4	87.0	91.6	96.3	96.4	36.8	43.9	97.9	83.2	0.0	87.8	74.7
Electricity Supply	99.1	99.1	98.2	99.7	99.2	96.4	98.2	99.3	99.7	77.6	79.7	99.2	98.9	99.8	91.8	95.1
Urban	99.5	99.8	99.5	99.9	99.6	99.6	99.6	99.6	99.8	99.8	94.0	99.4	99.6	99.8	92.2	98.5
Rural	98.2	98.6	97.5	99.3	98.6	94.0	96.1	99.2	99.2	67.1	66.9	97.9	98.2	0.0	90.4	89.5
Flush toilet facility	70.6	43.1	21.8	66.6	71.5	58.0	64.5	31.8	71.0	36.1	49.2	83.2	32.8	91.0	60.6	61.2
Urban	87.0	79.6	40.2	76.4	90.9	84.9	84.5	61.1	82.0	55.5	79.0	88.0	46.2	91.0	63.5	80.9
Rural	39.4	18.7	12.3	45.9	48.0	37.3	34.4	16.4	24.9	19.2	22.7	45.5	19.6	0.0	49.6	27.9
Garbage collection facility	70.9	49.3	29.8	62.9	68.3	55.1	66.1	33.8	88.3	32.8	54.9	84.7	54.2	97.1	79.5	64.6
Urban	89.3	88.0	58.4	74.9	93.3	88.4	88.3	66.5	94.7	54.9	91.0	91.0	78.7	97.1	79.0	86.7
Rural	35.9	23.3	15.0	37.5	38.1	29.5	32.6	16.5	61.4	13.6	22.8	35.2	30.1	0.0	81.6	27.1

Note: ¹ Data published in 2003

efficient and reliable. An Integrated Transport Information System (ITIS) was introduced in Kuala Lumpur to improve traffic management. A Common Ticketing System was also launched to enhance service through a common public transport fare payment system. Bus services were consolidated to alleviate congestion and improve services. The review period also saw an increase in the number of passengers using urban rail services, namely, the *KTM Komuter*, the *Sistem Transit Aliran Ringan*, the *Projek Usahasama Transit Ringan Automatik* and the KL Monorail. The rider ships for these services increased from 92 million in 2000 to 110 million in 2002.

13.17 *Public safety* improved during the review period as indicated by the reduction in the crime rate from 7.2 crimes per thousand population in 2000 to 6.2 in 2002 and the number of road accidents per thousand vehicles decreased slightly from 23.7 to 23.3 for the same period. The incidence of crimes declined with the implementation of various strategies that included crime prevention campaigns and through the expansion of the neighbourhood watch programme. To reduce the number of road accidents, stress management and lessons on responding to emergencies were included in the curriculum of learner drivers. In addition, measures were also undertaken to ensure the roadworthiness of vehicles.

13.18 Landscape development activities were intensified to provide additional *leisure and recreational* space and to beautify the environment. Local Authorities constructed 20 new public parks, while the 179 existing parks were upgraded. The National Landscaping Department completed landscaping master plans for six local authorities, namely, Johor Bahru, Kuantan, Labuan, Langkawi, Seremban and Shah Alam. The master plans provide guidelines and planning procedures to incorporate landscaping elements into local development plans. During the review period, a million trees were also distributed to all states for planting to enhance greenery.

Consumption and Production Patterns

13.19 Measures were also put in place to enhance sustainable *consumption and production*. Industries were encouraged to use natural resources more efficiently, reduce polluting emissions, adopt low emission technologies and improve product design. The transport system was made more efficient through integrated transport planning and the greater use of multi-modal systems. In construction, the application of the various building codes was closely monitored and the use of efficient

construction methods encouraged. The incorporation of renewable energy as the fifth fuel of the Fuel Diversification Policy was boosted with the adoption of a holistic approach in promoting the utilisation of renewable resources such as biomass, biogas, municipal waste, solar and mini-hydro. A Small Renewable Energy Programme was launched in 2001 to promote the usage of renewable energy. The Government also initiated action to evaluate the usage of solar, hydrogen and fuel cells. The Malaysian Industrial Energy Efficiency (EE) Improvement Programme in eight manufacturing subsectors was continued and fiscal incentives for EE-related activities were provided.

13.20 There was progress in the demand-side management of *water resources*, with the introduction of the dual and six litre-flushing system for new houses and buildings from June 2002 to replace the existing nine to 11-litre flushing system. A guidebook on improving the water supply system was also launched in December 2002. The first phase of the integrated river basin management study was also completed with the determination of a framework with four components, namely, catchment and management monitoring plan; river corridor development and management plan; water resources development and management plan; and a flood mitigation master plan. An integrated river basin management pilot project was launched in October 2002 in two river basins, Sungai Kedah and Sungai Selangor. In Sabah, the State Water Resource Council was formed to coordinate efforts and operationalise relevant laws.

13.21 Studies on *groundwater* resources of major water catchments in Johor, Kedah, Negeri Sembilan, Sabah, Sarawak and Selangor were launched in 2002. This was supplemented by the exploration of ground water sources, especially in surface water stress areas in the interior of Sabah, Sarawak and Peninsular Malaysia. A study to establish a sustainable groundwater resource and management plan for the Langat Basin was completed in 2002. In addition, a total of 217 samples was taken from 79 groundwater monitoring wells to assess water quality. Guidelines for the drilling of wells, groundwater abstraction and monitoring were also prepared for use by state water authorities.

13.22 State Mineral Enactments were gazetted in Kelantan and Selangor, while Sarawak applied parts of the model of the Minerals Development Act to its enactment. Kelantan, Perak and Sabah adopted the draft Quarry Rules aimed at improving quarry operations. A study on marine sand sources was completed in 2002 while an inventory of coal deposits was carried out in Sabah and Sarawak. In addition, geochemical surveys were carried out on the sources of industrial *minerals*.

13.23 In the area of *cleaner technology*, Standards and Industrial Research Institute of Malaysia (SIRIM) Berhad continued to promote the application of cleaner technology by industries in their production processes. Beside efforts to build capacity in cleaner production technology, SIRIM Berhad provided services in cleaner technology audits to 48 small and medium enterprises in the food, electroplating, textile and rubber products industries. In addition, 13 demonstration projects were conducted with selected industries. The Ministry of International Trade and Industry complemented these efforts by introducing incentives to encourage companies to adopt cleaner technology. This included, among others, the incentives for storage, treatment and disposal of toxic and hazardous wastes; waste recycling activities; utilisation of biomass; as well as incentives to companies that are waste generators and wish to establish facilities to store, treat and dispose of their wastes either on-site or off-site.

Environment and Natural Resources Dimension

Environmental Management

13.24 The adoption of the National Environment Policy in 2002 added impetus to efforts to address environmental issues in an integrated manner. In addition, the *institutional and legal framework* was strengthened. The Environmental Quality Act, 1974 (EQA) and several environmental regulations were amended in order to ensure stricter compliance of environmental standards. Sabah passed an Environment Protection Enactment, 2002 to better protect its environment and natural resources. Similarly, Sarawak adopted new guidelines and manuals on urban environmental management. In Peninsular Malaysia, the Department of Town and Country Planning (TCPD) introduced manuals on measures to facilitate the integration of environmental aspects into local development plans. In addition, the commissioning of the Environment Institute of Malaysia in 2001 enabled environmental training programmes to be better structured and to be provided on a regular basis.

13.25 *Air quality* remained at good to moderate levels in most parts of the country based on the readings obtained from 51 air-monitoring stations. However, the air quality in the Klang Valley was moderate most of the time and occasionally registered as unhealthy. In addition to local sources of air pollution, haze formation from transboundary sources, particularly during the south-westerly monsoon, contributed to the deterioration in air quality. In an effort to mitigate emissions from mobile sources, particularly from motorcycles, the Department of Environment

(DOE) enacted an Environmental Quality Control of Emissions from Motorcycles Regulation, 2003. The Area Watch and Sanction Inspection programme to check the exhaust emission from motor vehicles was strengthened by obtaining information on vehicles emitting excessive smoke from the Road Transport Department, and requiring that the vehicles be tested for their emissions at predetermined locations. In addition, taxi operators were encouraged to utilise natural gas instead of diesel. A total of 232,195 commercial vehicles was inspected for smoke emission and the compliance rate was about 90 per cent. To enable members of the public to have their vehicles tested to ensure compliance with the stipulated emission standards, the DOE appointed 50 private workshops to test exhaust emissions. At the international level, various fora such as, the Informal ASEAN Ministerial Meeting on the Environment, the ASEAN Working Group on Sub-Regional Fire Fighting Arrangements for Sumatra and Borneo and the ASEAN Agreement on Transboundary Haze Pollution, provided the avenue to promote regional cooperation in addressing the transboundary haze issue.

13.26 The DOE also initiated a Pollution Prevention and Water Quality Improvement programme to strengthen existing regulatory, preventive and remedial measures in an effort to improve *water quality* in rivers. Under the programme, 26 rivers were identified for initial action and studies were completed on four rivers, namely, Sungai Langat in Negeri Sembilan and Selangor as well as Sungai Segget, Sungai Skudai and Sungai Tebrau in Johor. Studies on Sungai Batang Rejang in Sarawak and Sungai Melaka in Melaka are ongoing. The monitoring of water quality was continued through a network of 955 water-quality monitoring stations in 120 rivers. In 2003, based on data from these monitoring stations, 60 of the rivers monitored were classified as clean, 47 slightly polluted and 13 polluted. Sewage was the main source of water pollution in terms of Biochemical Oxygen Demand, contributing 51 per cent, followed by manufacturing at 39 per cent, pig farming at 7.0 per cent and agriculture at 3.0 per cent.

13.27 To provide for a more efficient management system in the handling of *domestic wastewater*, the Ministry of Housing and Local Government embarked on a programme to refurbish existing sewage treatment plants and sewer networks and to build additional central sludge facilities. During the review period, a total of 396 treatment plants was refurbished and construction started on five new central sludge facilities.

13.28 Ambient *noise pollution* in major residential areas of the Klang Valley, namely, Ampang, Bangi, Cheras, Gombak, Kajang, Klang, Serdang, Setapak and Shah Alam, were monitored. The noise levels in these areas exceeded the World

Health Organisation's recommended values of 55 dB(A) during the day time and 45 dB(A) during night time. The DOE drafted three guidelines on noise pollution pertaining to noise labelling requirements and planning for noise pollution mitigation measures. In addition, noise barriers were built along several major roads to mitigate noise pollution, particularly to sensitive noise receivers such as residential areas and schools.

13.29 With regard to the disposal of *toxic and hazardous waste*, the privatised facility in Bukit Nanas, Negeri Sembilan received a total of 195,528 tonnes of toxic and hazardous waste for treatment and disposal from 1,979 companies during the review period. In an effort to promote industrial symbiosis, the DOE approved 45 premises for scheduled waste recovery and an additional seven companies to utilise waste from other industries as resources. A laboratory was set up in the Department of Chemistry to enhance the testing capacity to identify and quantify the occurrence of dioxin and furan.

13.30 As an integral part of the effort by Government towards achieving its environmental objectives, *environmental awareness* programmes were intensified during the review period. The DOE conducted nine different activities as well as produced and circulated various publications to enhance the level of environmental awareness among the public. Environmental awareness camps, inter-varsity environmental debates, environmental poetry and essay writing competitions were among the activities that were successfully implemented. In addition, the Malaysia Environmental Week, held annually in October as the premier environmental awareness event, further enhanced awareness through environmental-themed activities such as seminars, beach clean-ups, tree-planting campaigns and environment camps. Similar programmes were also carried out by the Ministry of Housing and Local Government through the implementation of Local Agenda 21 in 44 local authorities, covering 43 town councils and one district council, to create public awareness on the importance of sustainable development at the local level, in particular to improve urban services and the quality of life. Various educational materials were also produced by the Ministry of Education, in the form of posters, videos, bulletins, fact-sheets, and songs, which were distributed widely to schools and educational institutions throughout the country to raise awareness about environmental management and conservation. At the international level, Malaysia participated in various awareness programmes such as the Eco-Club Conference in Japan, the United Nations Environment Programme's Young Environmental Envoys Project and the implementation of the ASEAN Environmental Education Action Plan 2000-2005.

13.31 During the review period, the *non-governmental organisations* (NGOs) and the community-based organisations (CBOs) continued to be active in promoting sustainable development. In particular, the environmental NGOs came together to form the Malaysian Environmental NGOs (MENGOs) forum to work on issues of common interest. In July 2003, MENGOs had their first annual dialogue with government agencies to exchange views, generate greater understanding and promote mutual cooperation. The NGOs also undertook several projects including assisting in the drafting of management plans for Tasek Bera in Pahang, Malaysia's first Convention on Wetlands of International Importance Especially as Waterfowl Habitat (RAMSAR) site, the Endau-Rompin Park in Johor and the Perlis State Park as well as in other projects such as mangrove regeneration, organic farming and cultivation of herbal plants.

Natural Resources Management

13.32 During the review period, the management of *land resources* was enhanced with the completion of a pilot project by the TCPD for the wider application of Strategic Environmental Assessments (SEA) in Local Plans. A manual on the application of the SEA in development plans was produced to facilitate implementation. Efforts were also channelled towards the redevelopment of brown fields as a way to revitalise cities and communities as well as to optimise usage of idle and abandoned land. In 2002, studies to identify potential geohazard areas were initiated in the Klang Valley, Pahang, Pulau Pinang and Sarawak. In addition, geological integration and geotechnical studies were carried out in Kudat, Papar, Sandakan and Tawau in Sabah, to determine the suitability of sites for development.

13.33 As one of the 12 countries in the world identified as a “megadiversity” region, Malaysia continued to take measures to protect its rich natural heritage through a system of national and marine parks, wildlife reserves and sanctuaries and permanent reserved forests. The Government established the National Biodiversity-Biotechnology Council in December 2001 to coordinate efforts at the federal and state levels to improve the management of *biodiversity* and the conservation of natural habitats and resources. A study to assess the status of hill stations in Peninsular Malaysia and to recommend measures to manage them was completed in July 2002. The National Highlands Conservation and Management Strategy to promote the sustainable development of highland areas was completed in November 2002 and its implementation is being coordinated and monitored by the Cabinet Committee on the Coordination and Development on Highlands

and Islands. The Highlands Strategy contains 12 priority thrusts supported by 19 guidelines to ensure the proper management of highland areas. In line with efforts to enhance the protection of critical habitats, the Pantai Aceh Forest Reserve in Pulau Pinang was gazetted as the first national park under the National Parks Act, 1980. Perlis created the first forest state park covering an area of 5,075 hectares under the National Forestry Act, 1984, while Perak gazetted 117,500 hectares of the upper Belum area as a state park. Sabah enacted a State Biodiversity Enactment in 2000 and formed a State Biodiversity Council to streamline the management of biodiversity in the state, while Sarawak prepared a Wildlife Master Plan. In addition, the BioValley initiative was launched in 2003 as a platform to spur the growth of the biotechnology industry in Malaysia and to integrate biotechnology developments across the nation.

13.34 Recognising *wetlands* as unique and critical habitats, as well as their importance in stabilising water flows and in mitigating floods, three additional sites, namely, Tanjung Piai, Pulau Kukup and Sungai Pulai in Johor were designated as RAMSAR sites in 2003. These additions together with the RAMSAR site in Tasek Bera, Pahang, increased the total area of wetlands of international importance in Malaysia to 48,745 hectares.

13.35 At the end of 2002, Malaysia maintained 19.5 million hectares or 59.5 per cent of its land area under *forest* cover, of which 14.3 million hectares are permanent reserved forest. A total of 3.3 million hectares of the forest were classified as protected areas. In 2002, Malaysia successfully completed its obligations under the Intergovernmental Panel on Forests/Intergovernmental Forum on Forest Proposals for Action that were relevant to Malaysia. In addition, forest enforcement units were established in all state forestry departments to counter illegal logging and trade in forest products. Studies were carried out to document floral and faunal composition of forests to assist conservation and minimise loss of biodiversity. During the review period, various projects were implemented to better manage forests, including a project on sustainable forest management and conservation in Peninsular Malaysia; conservation and sustainable use of peat swamp forest and associated wetlands; the establishment of a forest management station in Belum, Perak; and implementation of the Malaysian Criteria and Indicators for Sustainable Forest Management. A satellite imaging map project was also launched in 2003 to facilitate enforcement and curb encroachment into forest reserves and water catchment areas as well as to detect landslides and illegal development in protected areas.

13.36 A National Oceanography Directorate was established under the Ministry of Science, Technology and Environment in November 2000 to spearhead and

coordinate oceanographic research and development (R&D) primarily and to contribute to better management of *coastal and marine resources*. A pilot integrated shoreline management plan for the northern coastline of Pahang was completed in February 2002. In addition, measures were taken to improve the awareness and knowledge of the public on the importance of the coastal and marine environment to among others enable them to contribute to the protection of the marine ecosystem.

13.37 Efforts to develop *sustainable development indicators* were continued to enable the Government to ascertain how well the environment and resources were managed to steer the nation onto the path of sustainable development. In particular, the collection of data in an integrated manner was emphasised to facilitate analysis on the sustainability of a sector or state. In 2001, the DOE launched a “Handbook of Environmental Audit Guidelines” to facilitate action by companies to determine the impact of their activities on the environment. The DOE also produced the “Environmental Reporting Guidelines for Malaysian Companies” in 2003 to promote self regulation in the private sector. The Department of Statistics, as the central depository for environment statistics in Malaysia, produced the third and fourth publication of the Compendium of Environment Statistics in 2001 and 2002, respectively. Furthermore, the Framework for the Development of Environment Statistics was also reviewed and revised in 2003.

International Environmental Initiatives

13.38 Malaysia continued to participate actively in several important international environmental conferences such as the WSSD as well as meetings of the Conference of Parties (COP) to the Convention on Biological Diversity, the RAMSAR Convention, the Convention on International Trade in Endangered Species, the United Nations Framework Convention on Climate Change (UNFCCC) and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. During the review period, Malaysia ratified the Montreal and Beijing Amendments to the Montreal Protocol, the Ban Amendment to the Basel Convention, the Kyoto Protocol to the UNFCCC and the ASEAN Agreement on Transboundary Haze Pollution. Among the actions that were taken to meet Malaysia’s commitments to these multilateral environmental agreements were the national phase-out programme for the Montreal Protocol and the implementation of a Global Environment Facility funded project to formulate a National Implementation Plan for the purposes of the Stockholm Convention on Persistent Organic Pollutants.

III. PROSPECTS, 2004-2005

13.39 During the remaining Plan period, sustainable development will remain a priority with emphasis placed on practical and sustained initiatives to address the most pressing challenges. The Government will continue to explore opportunities to identify and implement measures that are prudent and cost-effective, in order to move Malaysia towards a more sustainable and resilient development path. The private sector, NGOs and CBOs will have a critical role to play as partners, advocates and watchdogs in ensuring that the nation's environmental and natural resource goals are reached efficiently.

Addressing the Social and Economic Dimensions

Quality of Life

13.40 The Government will continue to ensure that all Malaysians enjoy the benefits of development through the provision of adequate and quality social services. As a result, the *quality of life* is expected to improve further during the remaining Plan period. Emphasis will continue to be given towards enhancing the efficiency and quality of all social services. The public as consumers and users of these improved services will be expected to contribute on the basis of the user-pay principle. This approach will enable the Government to provide additional facilities and services. Further improvements in the quality of life are expected to be achieved in the areas of income, health, education, transport and communications, working and family life as well as public safety.

13.41 *Poverty eradication* efforts will be targeted at addressing pockets of poverty in rural and urban areas as well as among the *Orang Asli* and Bumiputera minorities. The objective will be to reduce the incidence of poverty to 0.5 per cent by 2005.

13.42 *Health* sector development will continue to focus on further improving the health status of the population. The preparedness of the health delivery system in handling crisis will be improved. Health promotion and disease prevention will continue to be accorded priority. The remaining years of the Plan period will see further improvements in the quality of health of the population as the Government continues to promote health with the support of the community and improve access to health facilities in both the urban and rural areas. In 2004, the healthy lifestyle theme will focus on the workplace while that for 2005 will be on health

facilities. The wellness programme will be continued to create a society that accepts health and wellness as valuable assets.

13.43 *Environmental health* issues will continue to be given emphasis. A study will be undertaken on the health impact of buildings to assist in the formulation of indoor air quality guidelines. In addition, the assessment of drinking water quality will be refined to include additional bacteriological and chemical parameters.

13.44 *Education* and training programmes will be directed towards increasing accessibility, improving quality and reducing the performance gap between rural and urban areas. In particular, efforts will focus on improving the transition rate among school children, especially students from low-income families in the rural areas. Additional physical facilities will be provided to create a conducive learning environment for these children. Emphasis will also be given towards enhancing the quality of teaching and learning materials including through greater use of computer-aided teaching.

Sustainable Human Settlements

13.45 The quality of urban and rural life will be improved by providing quality *services*, efficient management and appropriate socio-economic programmes and projects. The role and function of local authorities will be reviewed to increase their efficiency. This will include the review of existing laws, by-laws as well as the financial capability of local authorities. The Smart Local Governance Agenda programme aimed at increasing the quality of services will be expedited using e-Local Government and e-Local Agenda. Efforts will also be stepped up to reduce traffic congestion, improve sanitation, upgrade and expand radial roads, construct access roads to housing estates and improve the maintenance of rivers to address flash floods.

13.46 In particular, *housing* will continue to be a priority aimed at improving the quality of life of all, especially the lower income groups. With easier loan facilities targeted for the low-income groups, a greater number of lower income households will be able to own their own homes. In 2005, the percentage of low-income housing units to total low-income households is expected to be 65 per cent with 93 per cent of households having piped water supply. The Government will also undertake a programme to upgrade and improve low-cost public housing to ensure that the buildings, common facilities and other public amenities are well maintained.

13.47 During the remaining Plan period, the National Recycling Programme will be extended to cover more local authorities as the country works towards a target of recycling 20 per cent of total *solid waste* by 2020. Promotional campaigns to raise awareness on recycling, reuse and reduction of waste will be continued in close cooperation with the private sector and NGOs. A commission on sanitation will be established to oversee and regulate the integrated management of solid waste and domestic wastewater and legislation on solid waste will be formulated with the aim of strengthening the legal framework. In addition, a plan to improve the management of landfills, including the need to close and redevelop landfills to meet health and environmental rules, is expected to be completed in 2004.

13.48 There will be greater focus on increasing efficiency, productivity, quality and reliability of *transport and communications*. Private motorcars and motorcycles are expected to increase to 490 per thousand population and the number of telephone lines, for both fixed and mobile, is also expected to increase substantially by the end of the Plan period. In addition, technological advances in the communications subsector will enable additional multimedia services to be provided as well as improve services and expand coverage.

13.49 The use of *public transport* will be promoted to reduce traffic congestion. Priority will be given to the implementation of the common ticketing system for the various modes of public transportation in the Klang Valley. Rail-based transportation will be introduced in other urban centres such as in Putrajaya as well as Johor Bahru, Johor and Georgetown, Pulau Pinang. Public transport systems in urban centres and major towns will continue to be restructured to improve the quality and management of services. The application of the ITIS will also be extended to other urban centres to facilitate the monitoring, tracking and real-time information of traffic flow and volume.

13.50 During the remaining Plan period, *landscaping* master plans will be formulated for another 24 local authorities. In addition, about two and half million trees will be planted and efforts will also be directed towards ensuring that the trees are properly maintained and managed.

Consumption and Production Patterns

13.51 The shift towards sustainable *consumption and production* will entail using a mix of appropriate regulatory, economic and voluntary instruments that will include identifying tools for changing consumer and producer behaviour,

applying the polluter pays principle, internalizing environmental costs, promoting the supply and demand for green products and services, adopting social responsibility codes and informing and educating consumers. In addition, measures will be put in place to ensure that products used or imported into the country meets the required standards and do not compromise the health and safety of the public. The production of oil will continue to be in line with the National Depletion Policy, which aims at prolonging the production life of crude oil reserves. Efforts will continue to be undertaken to encourage the use of renewable and environmental-friendly energy. In addition, R&D efforts will be directed towards the development of solar energy, fuel cell technology and hydrogen fuel. Energy efficiency in the industrial sector will be encouraged and measures will be taken to ensure the adequacy of financing for EE projects. SIRIM Berhad will continue to promote cleaner technology among the industries through various programmes such as commissioning cleaner technology audits, seminars and workshops, monitoring of factories, as well as distribution of articles on cleaner technology to the media.

13.52 The National Water Policy will be completed and tabled for consideration of the National Water Resources Council. Among others, the Policy will provide guidelines on *water resources* management and conservation at both the federal and state levels. The Government will also look into the need for a federal body to be responsible for the management of river basins. Sarawak will embark on a study to prepare a water catchment master plan to ensure a sustainable supply of water. Emphasis will also be given to groundwater research as an alternative source to surface water.

13.53 The State Mineral Enactment, which has been tabled to the State Assemblies of Melaka, Negeri Sembilan, Perak, Perlis, Pulau Pinang, Sabah and Terengganu, is expected to be gazetted in these states before the end of the Plan period. In addition, R&D efforts will emphasise measures to add value to local *minerals* and the rehabilitation of ex-mining land. Measures will also be carried out to survey and inventorise geological marine and coastal minerals and to review sand mining rules and regulations.

Environment and Natural Resources Dimension

Environmental Management

13.54 Emphasis will focus on ensuring that environmental considerations are incorporated into development planning to promote sustainability. Coordination

among agencies will be improved to enable an integrated approach in addressing environmental issues. The state governments and local authorities will be encouraged to mandate environmental impact assessment requirements for natural resources utilisation and development projects. In addition, the *institutional and legal framework* for environmental management will be continuously reviewed to ensure that they adequately address emerging issues.

13.55 During the remaining Plan period, concerted efforts will be directed towards improving the *air quality* through mitigation and control measures for local sources of emission. The EQA and its relevant regulations will be amended with a view towards introducing stricter emission standards. Measures will be taken to improve the quality of fuel by reducing the sulphur content in diesel and gasoline. The DOE will also introduce regulations to stipulate the allowable standards or levels of dioxin and furan, especially from thermal treatment plants. The airborne surveillance programme will be extended to cover black-smoke emission from factories. Strategies will be formulated to further expand the distribution network to increase the use of natural gas, particularly in the transport sector. Efforts will be intensified to foster closer cooperation with neighbouring countries in undertaking joint operations to control and mitigate air pollution caused by transboundary sources.

13.56 To mitigate the deterioration of *rivers, marine and ground water quality*, new approaches for river system management and rehabilitation will be introduced, including an integrated river-basin management system. The DOE will conduct studies on 20 rivers identified for water quality improvement. With regard to marine water quality, the frequency of airborne surveillance will be increased to monitor the illegal dumping of oil and waste by vessels.

13.57 In order to further reduce and improve the discharge of *waste water*, the Government will continue to upgrade existing sewage treatment plants and complete the construction of 10 new sewage treatment plants and three central sludge treatment facilities to supplement the plants to be constructed by the private sector. The DOE will undertake a review of the relevant regulations to better control the discharge of effluents from industries. Standards will also be established on the design of waste-water treatment plants to ensure that the plants comply with the minimum standards for treating prescribed effluents. In addressing water pollution originating from the agriculture sector, focus will be given to promoting sound cultivation practices. In this regard, the Ministry of Agriculture will introduce a farm accreditation system to encourage farmers to adopt good farming methods, particularly in the use of chemicals. The Pesticides Board and

related agencies will be strengthened and the relevant regulations will be reviewed to control the field application of pesticides as well as the proper disposal of pesticide containers.

13.58 Measures will be taken to improve the response from industries, particularly the small and medium enterprises, to use the *toxic waste* treatment facility at Bukit Nanas, Negeri Sembilan. Existing environmental protection measures, laws, regulations and guidelines will be reviewed to improve their effectiveness in controlling *toxic chemicals*. These will be complemented by the provision of appropriate incentives for the proper management of hazardous chemicals, promotion of cleaner technology processes, training of relevant personnel and instilling greater awareness among industry and the public. The DOE will also continue to monitor *noise pollution* by assessing noise exposure levels at premises that are regarded as sensitive noise receivers and identify appropriate measures to address it.

13.59 For the remaining Plan period, the Government will intensify its efforts to increase *environmental awareness* through various programmes and activities. These will include information dissemination and training to promote a deeper and better understanding of the concepts of environmentally-sound and sustainable development, and the development of a caring attitude towards nature and the environment. More activities will be implemented including the provision of awards and grants to schools to promote awareness about the environment. The private sector and NGOs will continue to be enlisted to support these awareness projects as well as to assist local authorities to implement the Local Agenda 21 programme.

13.60 The NGOs are expected to continue to play an active role in complementing and supplementing efforts by the Government in protecting the environment, managing natural resources and improving the quality of life. Frequent dialogues will be held with NGOs to improve understanding of Government efforts and appropriate joint activities will be undertaken to enhance collaboration and cooperation, and promote sustainable development.

Natural Resources Management

13.61 The Government will conduct a systematic inventory of the location, distribution and the level of contamination of existing brown fields. Guidelines will be formulated for the development of brown field areas to ensure optimal

land utilisation. Efforts will also be directed to study areas of potential geological hazards in highlands, limestone and swampy areas, with the intention of taking safeguard measures. In addition, the use of remote sensing technology will be intensified in assessing the current usage of land as compared to its potential capability.

13.62 A National Wetlands Policy will be formulated to protect and conserve *wetlands* and to improve their management. The Sibuti Wetlands National Park in Sarawak covering an area of 5,537 hectares, will be gazetted. In addition, the Lambir-Niah-Sibuti cluster of protected areas in Sarawak will be nominated for consideration as a United Nations Education, Social and Cultural Organization (UNESCO) World Heritage Site.

13.63 The Government will implement safeguards to protect Malaysia's *biological resources* and *biodiversity*. The Maliau Basin in Sabah will be nominated for consideration as a UNESCO World Heritage Site. In accordance with the precautionary approach, and to protect human, plant and animal health as well as that of the environment, the Government will introduce a Biosafety Bill to regulate the import, export and release into the environment of living modified organisms and their products as well to regulate their contained use. The Government will also consider the need for a regulation to control access to biological resources and benefit sharing in order to promote the equitable sharing of benefits derived from the use of biological resources as well as to regulate the process by which collectors may legally obtain biological samples. In addition, the Ministry of Health will consider enacting regulations under the Food Act, 1983 to regulate genetically modified foods. Internationally, Malaysia will demonstrate its support for biodiversity by hosting the seventh COP to the Convention on Biological Diversity and the first Meeting of the Parties to the Cartagena Protocol on Biosafety in 2004.

13.64 The Government will expand the operationalisation and implementation of the MC&I programme to promote sustainable *forest* management. Efforts will also be directed towards sustainably managing the inland forest in Malaysia and the sustainable use of peat swamp forest. The use of higher resolution imageries for sensitive forest areas will be intensified for the purpose of categorisation of such forest at a more detailed level. In addition, the use of the global positioning system, remote sensing technology, geographical information system and the forest canopy density system will be integrated to provide better information on the forest. The usage of these technologies will be transferred to state forestry departments for operational purposes once they are successfully tested.

13.65 An integrated coastal zone management policy will be prepared to ensure that *coastal and marine resources* are adequately protected and well managed. The implementation of the Integrated Shoreline Management Plan (ISMP) will be extended to all states to enhance conservation and restoration of coastal resources, including beaches and mangrove forests. Efforts will also be directed to incorporate the recommendations of the ISMP into local plans. To protect coral reefs and associated marine life, the Sibuti Coral Reefs National Park will be established in Sarawak.

13.66 The Government will continue to track the progress of the nation towards sustainable development, and in this regard, it will intensify efforts to establish a SDIs system. The coordination and cooperation in the collection of data will be improved and streamlined to ensure accurate and timely inputs into the SDIs system. The capacity to collect and analyse environmental statistics will be strengthened, including the use of new methodologies to chart the country's progress towards sustainable development.

International Environmental Initiatives

13.67 Malaysia will continue to cooperate with other countries and with regional and international organisations to address regional and global environmental concerns as well as to enhance the mutual supportiveness of trade, environment and development. It will also closely monitor developments at various environmental fora to safeguard its interests and to ensure that developing countries are not discriminated against. Domestically, appropriate steps will be taken to meet international commitments in line with Malaysia's development goals.

IV. CONCLUSION

13.68 During the review period, the Government continued to take steps to improve the quality of life; promote sustainable consumption and production patterns; protect the environment; manage the natural resource base; and enhance human, institutional and infrastructure capacity. During the remaining Plan period, efforts will be directed towards achieving sustainable development efficiently and to mitigate the environmental impacts of development activities.

Glossary of Acronyms

GLOSSARY OF ACRONYMS

3F	=	Fund for Food
3G	=	Third Generation System
8MP	=	Eighth Malaysia Plan
ACR	=	Allowable Cut Rate
ADSL	=	Asymmetric Digital Subscriber Line
ADTEC	=	Advance Technology Centre
AFTA	=	ASEAN Free Trade Area
AG	=	Accountant General
AIM	=	<i>Amanah Ikhtiar Malaysia</i>
AIZs	=	Aquaculture Industrial Zones
AMLA	=	Anti-Money Laundering Act, 2001
ASEAN	=	Association of South-East Asian Nations
ASG	=	<i>Amanah Saham Gemilang</i>
ASN3	=	<i>Amanah Saham Nasional 3</i>
ASP	=	Applications Service Provider
BAFIA	=	Banking and Financial Institutions Act
BALB	=	<i>Bekalan Air Luar Bandar</i> (Rural Water Supply Programme)
BCG	=	Bacille Calmette-Guerin
BCIC	=	Bumiputera Commercial and Industrial Community
BERNAMA	=	<i>Berita Nasional Malaysia</i>

BITMB	= <i>Bank Industri dan Teknologi Malaysia Berhad</i>
BNM	= <i>Bank Negara Malaysia</i> (Central Bank of Malaysia)
BOT	= Build-Operate-Transfer
bpd	= barrels per day
BPIMB	= <i>Bank Pembangunan dan Infrastruktur Malaysia Berhad</i>
BPM	= <i>Bank Pertanian Malaysia</i> (Agriculture Bank of Malaysia)
BSN	= <i>Bank Simpanan Nasional</i> (National Savings Bank)
CAD	= computer aided design
CADC	= Creative Application Development Centre
CBO	= Community-based Organisation
CCDP	= Community Communications Development Programme
CCPMD	= Consultative Committee on Product and Market Development
CCRIS	= Central Credit Reference Information System
CCS	= Consultative Committee on Service
cct-km	= circuit-kilometres
CDMA	= Code Division Multiple Access
CDRC	= Corporate Debt Restructuring Committee
CEO	= Chief Executive Officer
CERAH	= <i>Cegah Rokok, Alkohol dan Dadah</i>
CIAST	= Centre for Instructor and Advanced Skills Training

CIDB	=	Construction Industry Development Board Malaysia
CIPE	=	capital investment per employee
CMP	=	Capital Market Master Plan
CNC	=	computerised numerical control
COP	=	Conference of Parties
CPE	=	Continuing Professional Education
CPI	=	Consumer Price Index
CRDF	=	Commercialisation of Research and Development Fund
CTRM	=	Composite Technology Research Malaysia
DAGS	=	Demonstrator Applications Grant Scheme
dB(A)	=	Decibel A weighted being a unit of measurement of sound level obtained when using a sound level meter corrected to the A weighted scale using reference pressure of 20 micropascals
DCI	=	Development Composite Index
DFI	=	development financial institution
DOE	=	Department of Environment
EDI	=	electronic data interchange
EE	=	energy efficiency
EFB	=	Empty Fruit Bunch
EG	=	Electronic Government
EIA	=	Environmental Impact Assessment
ELX	=	Electronic Labour Exchange
EP	=	Electronic Procurement

EPF	=	Employees Provident Fund
EQA	=	Environmental Quality Act
ERDF	=	Entrepreneur Rehabilitation and Development Fund
E-Services	=	Electronic Services
FAMA	=	Federal Agricultural Marketing Authority
FDB	=	Fund for Domestic Brands
FDI	=	foreign direct investment
FELCRA	=	Federal Land Consolidation and Rehabilitation Authority
FELDA	=	Federal Land Development Authority
FIC	=	Foreign Investment Committee
FM	=	Frequency Modulation
FPX	=	Financial Process Exchange
FRIM	=	Forest Research Institute of Malaysia
FSMP	=	Financial Sector Master Plan
FTA	=	Free Trade Area
GAHP	=	Good Animal Husbandry Practices
GAP	=	Good Agriculture Practices
GDP	=	Gross Domestic Product
GDW	=	<i>Gerakan Daya Wawasan</i>
GIS	=	Geographical Information System
GMI	=	German-Malaysian Institute
GNP	=	Gross National Product

GOE	=	Generic Office Environment
GRT	=	gross registered tonnage
GSC	=	Government Service Centres
GSP	=	Global Supplier Programme
GWh	=	gigawatt-hour
HAZMAT	=	Hazardous Material Team
HiB	=	Haemophilus Influenza B
HIV/AIDS	=	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HRDF	=	Human Resources Development Fund
HRMIS	=	Human Resources Management Information System
IADP	=	Integrated Agricultural Development Project
IBFIM	=	Islamic Banking and Finance Institute Malaysia
IBS	=	Islamic Banking Scheme
IC	=	integrated circuit
ICT	=	information and communications technology
IFSB	=	Islamic Financial Services Board
IGS	=	Industry Research and Development Grant Scheme
IIFM	=	International Islamic Financial Market
ILP	=	Industrial Linkage Programme
IMATEC	=	INTAN Management and Technology Centre
IMP2	=	Second Industrial Master Plan

IMR	=	Institute for Medical Research
INTAN	=	National Institute of Public Administration
IOFC	=	International Offshore Financial Centre
IPO	=	Initial Public Offering
IPP	=	Independent Power Producer
IPR	=	intellectual property rights
IRPA	=	Intensification of Research in Priority Areas
ISMP	=	Integrated Shoreline Management Plan
ISP	=	Internet Service Provider
ISRWT	=	Inter-State Raw Water Transfer
ITAF	=	Industrial Technical Assistance Fund
ITIS	=	Integrated Transport Information System
ITS	=	Intelligent Transport System
ITTO	=	International Tropical Timber Organisation
IWRM	=	Integrated Water Resources Management
JE	=	Japanese Encephalitis
JPLH	=	<i>Jemaah Pemasaran Lada Hitam</i> (Pepper Marketing Board)
KBSM	=	<i>Kurikulum Bersepadu Sekolah Menengah</i>
KDI	=	Knowledge-Based Economy Development Index
KEMAS	=	<i>Jabatan Kemajuan Masyarakat</i>
KEMP	=	Knowledge-Based Economy Master Plan

KHTP	=	Kulim High Technology Park
KLCI	=	KLSE Composite Index
KLIA	=	Kuala Lumpur International Airport
KLSE	=	Kuala Lumpur Stock Exchange
KTMB	=	<i>Keretapi Tanah Melayu Berhad</i>
KUiTTHO	=	<i>Kolej Universiti Teknologi Tun Hussein Onn</i>
kV	=	kilovolt
kWh	=	kilowatt-hour
LFPR	=	Labour Force Participation Rate
AFX	=	Labuan International Financial Exchange
LITS	=	Low Intensity Tapping System
LKIM	=	<i>Lembaga Kemajuan Ikan Malaysia</i> (Fisheries Development Authority of Malaysia)
LNG	=	liquefied natural gas
LRT	=	Light Rail Transit
MARDI	=	Malaysian Agricultural Research and Development Institute
MAS	=	Malaysian Airline System Berhad
MATRADE	=	Malaysia External Trade Development Corporation
MATRIIX	=	Ministry of International Trade and Industry (MITI) and Agencies Trade and Industries Information Exchange Portal
MAVCAP	=	Malaysia Venture Capital Management Berhad

MCMC	= Malaysian Communications and Multimedia Commission
MCS	= Micro-Credit Scheme
MDC	= Multimedia Development Corporation
MDEX	= Malaysia Derivatives Exchange Berhad
MDV	= Malaysia Debt Ventures Berhad
MEASAT	= Malaysia East Asia Satellite
MENGO	= Malaysian Environmental Non-Governmental Organisation
MESDAQ	= Malaysian Exchange of Securities Dealing and Automated Quotation
MGS	= Malaysian Government Securities
MICE	= Meetings, Incentives, Conventions and Exhibitions
MIDA	= Malaysian Industrial Development Authority
MIEEIP	= Malaysian Industrial Energy Efficiency Improvement Programme
MIMOS	= Malaysian Institute of Microelectronics System Berhad
MISC	= Malaysia International Shipping Corporation
Mld	= million litres per day
MMBPP	= Malaysian-MIT Biotechnology Partnership Programme
MMR	= Mumps, Measles And Rubella
MMS	= Mobile Multimedia Services
mmscfd	= million standard cubic feet per day
MNC	= multinational corporation
MOSTE	= Ministry of Science, Technology and Environment

MPOB	=	Malaysian Palm Oil Board
MRB	=	Malaysian Rubber Board
MSC	=	Multimedia Super Corridor
MTCC	=	Malaysian Timber Certification Council
MW	=	megawatt
MyGfl	=	Malaysia Grid for Learning
MyREN	=	Malaysia Research and Education Network
NAP3	=	Third National Agriculture Policy
NEF 2	=	New Entrepreneurs Fund 2
NFPE	=	non-financial public enterprise
NGO	=	Non-Governmental Organisation
NGV	=	natural gas for vehicles
NISER	=	National ICT Security and Emergency Response Centre
NITC	=	National Information Technology Council
NOSS	=	National Occupational Skills Standards
NPL	=	non-performing loan
NSC	=	National Sports Council
NSP	=	National Social Policy
NTHRDC	=	National Tourism Human Resource Development Council
NTIF	=	New Technology Investment Fund
NVTC	=	National Vocational Training Council
OER	=	Oil Extraction Rate

OPP3	=	Third Outline Perspective Plan
OSS	=	Open Source Software
PAKR	=	<i>Perumahan Awam Kos Rendah</i>
PCN	=	Putrajaya Campus Network
PDS	=	private debt securities
PE	=	population equivalent
PETRONAS	=	<i>Petroliam Nasional Berhad</i> (National Oil Corporation)
PFPP	=	Permanent Food Production Park
PIKOM	=	<i>Persatuan Industri Komputer dan Multimedia Malaysia</i> (Association of the Computer and Multimedia Industry of Malaysia)
PKI	=	Public Key Infrastructure
PLWS	=	Productivity-Linked Wage System
PMS	=	Project Monitoring System
PNS	=	<i>Perbadanan Nasional Berhad</i>
PoP	=	internet point of presence
PPI	=	Producer Price Index
PPR	=	<i>Program Perumahan Rakyat</i>
PRISMA	=	<i>Pusat Kawalan Keselamatan Kerajaan</i> (Government Security Command Centre)
PROSPER	=	<i>Projek Usahawan Bumiputera Dalam Bidang Peruncitan</i>
PROTON	=	<i>Perusahaan Otomobil Nasional Berhad</i>
PSDC	=	Professional Services Development Corporation Sdn. Bhd.
PSMB	=	<i>Pembangunan Sumber Manusia Berhad</i>

PTP	=	Port of Tanjung Pelepas
PUAS	=	<i>Perbadanan Urus Air Selangor</i>
PUNB	=	<i>Perbadanan Usahawan Nasional Berhad</i>
R&D	=	research and development
RAMSAR	=	Convention on Wetlands of International Importance Especially as Waterfowl Habitat
RE	=	Renewable Energy
RISDA	=	Rubber Industry Smallholder Development Authority
RRIM	=	Rubber Research Institute of Malaysia
RTM	=	<i>Radio Televisyen Malaysia</i>
S&T	=	science and technology
SAFARI	=	<i>Sistem Pengautomasian Fail Pendaftaran Perniagaan</i>
SARS	=	Severe Acute Respiratory Syndrome
SC	=	Securities Commission
SCANS	=	Securities Clearing Automated Network Services
SCORE	=	System on Computerised Order Routing
SEDC	=	State Economic Development Corporation
SESB	=	Sabah Electricity Sdn. Bhd.
SESCo	=	Sarawak Electricity Supply Corporation
SIG	=	Special Interest Group
SILK	=	<i>Sistem Lingkaran Lebuhraya Kajang</i> (Kajang Outer Ring Road)
SIRIM	=	Standards and Industrial Research Institute of Malaysia
PERDANA	=	<i>Perpustakaan Digital Nasional</i>
SMART	=	Stormwater Management and Road Tunnel

SMEs	=	small and medium enterprises
SMIDEC	=	Small and Medium Industries Development Corporation
SMS	=	Short Messaging Services
SPKR	=	<i>Skim Pembangunan Kesejahteraan Rakyat</i>
SPM	=	<i>Sijil Pelajaran Malaysia</i>
SPRINT	=	<i>Sistem Penyuraian Trafik Kuala Lumpur Barat</i> (Western Kuala Lumpur Traffic Dispersal System)
SPS	=	Sanitary and Phytosanitary
SRC	=	Semi-Refined Carrageenan
SREP	=	Small Renewable Energy Programme
SSM	=	<i>Sistem Saraan Malaysia</i> (Malaysian Remuneration System)
SSO	=	Shared Services Outfit
STP	=	sewerage treatment plant
STS	=	Secondary Technical School
T/CM	=	Traditional and Complementary Medicine
TAF	=	Technology Acquisition Fund
TCPD	=	Town and Country Planning Department
TDA	=	Technology Depository Agency
TEUs	=	twenty-foot equivalent units
TFP	=	total factor productivity
THIS	=	Total Hospital Information System
TIF	=	Tourism Infrastructure Fund

TIGeR	= Technology-Industry-Government for e-Economic Revolution
TMB	= <i>Telekom Malaysia Berhad</i>
TNB	= <i>Tenaga Nasional Berhad</i>
UB	= Universal Broker
UKM	= <i>Universiti Kebangsaan Malaysia</i>
ULC	= unit labour cost
UNESCO	= United Nations Education, Social and Cultural Organisation
UNFCCC	= United Nations Framework Convention on Climate Change
USP	= Universal Service Provision
VoIP	= Voice over Internet Protocol
VSAT	= Very Small Aperture Terminal
WAVE	= Women Against Violence
WHO	= World Health Organisation
Wi-Fi	= Wireless Fidelity
WSSD	= World Summit on Sustainable Development
WTO	= World Trade Organisation
WTP	= water treatment plant



Datuk Wira Iskandar Dzakurnain bin Badarudin
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18 Februari 2003

Ketua-Ketua Setiausaha Kementerian Persekutuan/Pegawai Pengawal

Y.Bhg. Tan Sri/Dato'/Tuan/Puan,

**Kajian Separuh Penggal Rancangan Malaysia Kelapan,
2001-2005 (KSP-RMKe-8)**

Dengan segala hormatnya saya merujuk kepada perkara tersebut di atas dan memaklumkan bahawa Unit Perancang Ekonomi (UPE) akan menyediakan Kajian Separuh Penggal Rancangan Malaysia Kelapan (KSP-RMKe-8).

2. Sehubungan dengan ini, pihak Kementerian dan Jabatan diharap dapat mengemukakan laporan yang akan dijadikan input kepada perancangan program pembangunan sektor awam dan penswastan dalam KSP-RMKe-8. Secara umumnya, KSP-RMKe-8 bertujuan:

- i. menilai kemajuan pelaksanaan dasar pembangunan negara secara keseluruhan dalam tempoh separuh penggal pertama RMKe-8;
- ii. mengenalpasti keperluan perubahan dalam strategi pembangunan pada tahun-tahun hadapan supaya bersesuaian dengan perkembangan semasa;
- iii. menilai kemajuan pelaksanaan program dan projek pembangunan dari segi fizikal dan kewangan dalam tempoh separuh penggal pertama RMKe-8;

- iv. mengkaji prospek pelaksanaan program dan projek pembangunan RMKe-8 dalam tempoh separuh penggal kedua RMKe-8; dan
- v. menyusun semula keutamaan program dan projek pembangunan RMKe-8, berdasarkan keperluan dan keupayaan jentera pelaksanaan serta mengambil kira kedudukan ekonomi semasa dan akan datang.

3. Prestasi ekonomi Malaysia 2001 yang lemah akibat kelembapan ekonomi dunia serta insiden 11 September 2001 dijangka menjejaskan pencapaian matlamat pertumbuhan di bawah RMKe-8. Dengan itu, strategi Kerajaan dalam KSP-RMKe-8 akan memberi penekanan kepada usaha-usaha untuk merangsang dan menggiatkan aktiviti sektor swasta bagi menjana pertumbuhan pada tahap yang lebih tinggi dan meletakkan semula pembangunan ekonomi negara pada landasan yang telah dirancang di bawah RMKe-8 dan Rangka Rancangan Jangka Panjang Ketiga (RRJP3). Dasar fiskal sektor awam akan memberi tumpuan kepada usaha untuk mengurangkan defisit akaun Kerajaan ke arah akaun yang lebih berimbang. Langkah-langkah untuk meningkatkan hasil Kerajaan akan dipergiatkan agar usaha untuk mendorong aktiviti sektor awam dapat diteruskan di samping pelaksanaan program meningkatkan pembangunan sumber tenaga manusia, pembasmian kemiskinan serta program sosial yang lain.

4. Strategi pertumbuhan yang didorong oleh pengetahuan di bawah RMKe-8 akan terus diberi penekanan. Ini adalah penting agar potensi pertumbuhan dipertingkatkan, perubahan sektor pembuatan dan perkhidmatan dipercepatkan, sektor pertanian dipergiatkan serta kestabilan sosio-ekonomi diperkukuhkan lagi melalui pengagihan kekayaan dan pendapatan negara yang saksama.

5. Bagi menangani cabaran terutamanya daripada kesan globalisasi dan liberalisasi ekonomi dunia, Kerajaan telah mengambil langkah-langkah untuk meningkatkan daya saing di mana penekanan khusus adalah terhadap usaha meningkatkan produktiviti dan kecekapan menerusi pembangunan sumber tenaga

manusia, peningkatan aktiviti penyelidikan dan pembangunan (P&P) serta penggunaan teknologi terkini terutamanya teknologi maklumat dan komunikasi (ICT). Sehubungan itu Kerajaan akan:

1. meneruskan pengurusan ekonomi makro yang mantap dan memastikan dasar kewangan dan fiskal yang berhemat serta meningkatkan usaha membangunkan ekonomi berasaskan pengetahuan;
- ii. memperkukuhkan dan menyelaraskan strategi dan program pengagihan bagi memastikan penyertaan yang seimbang di kalangan dan antara kumpulan etnik dan kumpulan pendapatan serta wilayah. Tumpuan khusus juga akan diberi kepada golongan terpinggir di kalangan semua kumpulan etnik.
- iii. meningkatkan pertumbuhan produktiviti melalui pemantapan pengetahuan, kemahiran dan kepakaran pekerja serta mengukuhkan P&P serta sains dan teknologi;
- iv. meningkatkan daya saing dan daya tahan ekonomi dengan mempercepatkan peralihan sektor utama kepada proses pengeluaran yang lebih cekap dan aktiviti nilai ditambah yang lebih tinggi;
- v. memperluaskan penggunaan ICT dalam semua sektor ekonomi bagi mempercepatkan proses pertumbuhan;
- vi. memperkukuhkan asas sumber manusia bagi memastikan bekalan tenaga manusia yang mempunyai tahap pengetahuan, kemahiran teknikal dan kemahiran berfikir yang tinggi;

- vii. melaksanakan pendekatan menyeluruh dan bersepadu dalam menangani isu-isu sumber asli dan alam sekitar bagi mengekalkan pembangunan yang mampan;
- viii. meningkatkan lagi kualiti hidup melalui peningkatan akses kepada perkhidmatan sosial serta membangunkan aspek estetik dalam kehidupan; dan
- ix. mempergiatkan usaha bagi memupuk dan menyemai nilai-nilai positif dan sifat murni di kalangan rakyat menerusi sistem pendidikan, pertubuhan sosial dan agama serta media.

6. Selaras dengan dasar tersebut, setiap strategi yang dirangka perlu diterjemahkan kepada program/projek dan dilaksanakan secara berkesan. Di samping itu, Kerajaan juga akan mengkaji semula semua program/projek dengan tujuan menyusun semula keutamaan program/projek dalam tempoh separuh penggal kedua RMKe-8. Pada keseluruhannya, program/projek yang akan diberi keutamaan termasuk program/projek yang telah terikat kontrak, boleh mengukuhkan lagi kedudukan ekonomi negara, produktif dan boleh menyumbang kepada peningkatan eksport negara. Selain daripada itu, program/projek pendidikan dan latihan, kesihatan, pembasmian kemiskinan dan penyusunan semula masyarakat, pembangunan luar bandar, infrastruktur asas serta program/projek yang menyumbang kepada pembangunan sumber manusia dan sosial akan diberi keutamaan.

7. Program/projek baru tidak akan dipertimbangkan kecuali yang mempunyai hubungkait dengan program/projek yang telah diluluskan dan menggunakan saling peruntukan sedia ada. Program/projek yang mempunyai kandungan import yang tinggi, kurang produktif dan yang *non-tradable* hendaklah ditangguhkan sehingga ekonomi pulih pada tahap yang memberangsangkan.

8. Dalam penyediaan laporan prestasi fizikal dan kewangan bagi setiap program dan projek sedia ada, maklumat yang diperlukan hendaklah dimasukkan ke dalam **Sistem Pemantauan Projek II (SPP II)**. Semua Kementerian/Jabatan Persekutuan hendaklah mengemaskini maklumat program/projek termasuk peruntukan dan perbelanjaan RMKe-8 dalam **Borang Matlamat Fizikal dan Lain-lain serta Borang Pecahan Kos** sebagaimana terdapat dalam SPP II. Satu penilaian menyeluruh pencapaian fizikal dan kewangan hendaklah disediakan oleh Kementerian/Jabatan termasuk maklumat sebenar pencapaian fizikal dan kewangan bagi tempoh separuh penggal pertama RMKe-8 dan pencapaian fizikal dan kewangan yang dijangka bagi tempoh separuh penggal kedua RMKe-8. Ianya hendaklah disediakan dalam satu laporan yang berasingan dan dilampirkan di dalam **Borang Ringkasan Projek** dalam SPP II. Maklumat-maklumat tambahan yang lain hendaklah dilampirkan di dalam Borang Ringkasan Projek dalam SPP II.

9. Cadangan bagi program dan projek baru mestilah selaras dengan **Jadual Pertama Akta Kumpulan Wang Pembangunan 1966**. Bagi cadangan yang melibatkan pembiayaan melalui pinjaman daripada Kerajaan Persekutuan, khasnya bagi Badan-badan Berkanun, ianya hendaklah mengambil kira dasar/panduan yang telah ditetapkan oleh Kementerian Kewangan. Dalam membuat anggaran kos projek, perkiraan hendaklah diambil ke atas apa-apa kos sampingan yang dijangkakan. Kementerian/Jabatan hendaklah mengemukakan maklumat-maklumat yang diperlukan bagi setiap cadangan projek baru ke dalam SPP II untuk diteliti, dipertimbang dan seterusnya diperakukan oleh UPE.

10. Bagi melicinkan penyampaian laporan KSP-RMKe-8, setiap Kementerian Persekutuan hendaklah mengemukakan satu laporan yang telah diselaraskan dan disatukan dengan merangkumi laporan-laporan bagi semua Jabatan/Badan Berkanun/Syarikat Kerajaan di bawah portfolio masing-masing. Ini bermakna Kementerian hendaklah terlebih dahulu mengadakan perbincangan dengan agensi masing-masing bagi menentukan keperluan dan keutamaan program dan projek. Dengan demikian, Jabatan/Badan Berkanun/Syarikat Kerajaan di peringkat

Persekutuan hendaklah mengemukakan laporan kepada Kementerian masing-masing untuk disemak, dikaji, diperaku dan disatukan terlebih dahulu. Semua kementerian diberi tempoh selama **satu bulan** dari tarikh surat ini, untuk menyiapkan laporan dan maklumat berkenaan. Laporan dan maklumat yang lengkap hendaklah terus dimasukkan ke dalam SPP II. Dengan demikian, semua agensi pusat akan mendapat akses (capaian) kepada maklumat tersebut pada bila-bila masa selepas tarikh surat ini. Selepas tempoh satu bulan, maklumat dan laporan daripada semua kementerian/agensi sepatutnya telah siap dimasukkan ke dalam SPP II.

11. Setiap Kementerian/Jabatan hendaklah melantik seorang pegawai kanan masing-masing yang akan bertanggungjawab untuk berhubung dengan UPE bagi menyelaraskan kerja-kerja penyediaan KSP-RMKe-8. Nama pegawai tersebut hendaklah di sampaikan kepada UPE dalam tempoh satu bulan dari tarikh surat ini.

12. Sukacita sekiranya Y.Bhg. Tan Sri/Dato'/Tuan/Puan dapat memberikan kerjasama bagi menjayakan KSP-RMKe-8 ini. Di atas kerjasama tersebut, saya terlebih dahulu mengucapkan ribuan terima kasih.

Sekian.

“BERKHIDMAT UNTUK NEGARA”

Saya yang menurut perintah,



(Datuk Wira Iskandar Dzakurnain bin Badarudin)

s.k.

Ketua Setiausaha Negara

Ketua Setiausaha Perbendaharaan

Ketua Pengarah Unit Penyelarasan Pelaksanaan, Jabatan Perdana Menteri

Y.B. Setiausaha-Setiausaha Kerajaan Negeri

Pengarah Unit Perancang Ekonomi Negeri