



MALAYSIA

9



NINTH MALAYSIA PLAN 2006-2010

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DECLARATION

*O*UR 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;

*W*E, 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 nation is now at the mid-point of its journey towards becoming a developed country by 2020. Experience has shown us that the climb ahead is challenging and is set to become even more perilous and demanding. During the next 15-year phase to 2020, Malaysia will need to deal with great changes in the global environment, while improving and upgrading the country's domestic conditions. It is for this purpose that the Government presents the National Mission, a policy and implementation framework that outlines the country's priorities for the next 15 years, along with the Ninth Malaysia Plan.

The National Mission underscores the need to pursue programmes that enhance the nation's capability to compete globally, to strengthen national unity and to bring about a better distribution of income and wealth and higher quality of life among the people. The National Mission identifies five key thrusts which must be realised in order to achieve the country's goals and objectives.

The Ninth Malaysia Plan will chart the nation's development agenda for the first 5 years of the National Mission, aiming to translate its thrusts into programmes and results. In line with this, the Ninth Plan sets out to achieve a stronger and more value-added economy, while giving substantial focus to socio-economic issues and uplifting the quality of life for all. The development initiatives undertaken during the Plan period will also be guided by the universal principles of *Islam Hadhari*.

Quality infrastructure and necessary facilities will continue to be rolled out throughout the country for the benefit of the people. Nonetheless, strengthening human capital and bringing about a cultural and mindset change will be a key challenge during the Plan period. The most important factor in becoming a developed nation is the capability and character of the country's people. Malaysia will need to move away from the notion that it is a nation with 'first class infrastructure, but third class mentality'. We will need to adopt a holistic approach to human capital development, encompassing not only knowledge and skills, but also ethical values, progressive mindset and cultural awareness.

The Ninth Plan will seek to achieve growth with distribution. We have set ourselves the target of completely eliminating hardcore poverty and halving overall poverty to 2.8 per cent by 2010. In addition, the Government remains committed to reducing disparities of income, employment and asset ownership among the population through fair and appropriate measures.

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To reduce disparities between rural and urban areas as well as between less developed and more developed regions, the Government will increase the development allocation for development of rural areas and less developed regions. In this regard, the Government will emphasise transborder development including developing the Northern Corridor, encompassing areas in the states of Perlis, Kedah, northern Perak and Pulau Pinang; the Eastern Corridor encompassing areas in the states of Terengganu, Kelantan and Pahang; the Southern Corridor focusing on southern Johor; as well as the states of Sabah and Sarawak.

The quality of life of the people will continue to receive the utmost attention. At the same time, we must manage our resources wisely and sustainably, to ensure that we safeguard the interests of the nation and that of future generations. We will give particular attention to improving the implementation, coordination, monitoring and evaluation mechanism to ensure that the programmes are effective in attaining the targets that have been set. We will intensify efforts to eliminate opportunities for corruption, malpractices and abuse of power in the public and private sectors. Initiatives will also be introduced to further increase transparency as well as reduce wastage. Towards improving the public service delivery system, the Government will continue to reduce bureaucratic red tape and improve the services of front line agencies.

For us to achieve the objectives of the Ninth Plan and the National Mission, all parties in the country – the public sector, private sector, civil society and the people – must take ownership of the process and must fulfill their respective duties. The population must remain united and supportive of the initiatives of

the Government to build a more prosperous nation and to bring a better quality of life for all. To underscore the importance of collaboration and collective effort, we have chosen *Together Towards Excellence, Glory and Distinction* as the theme of the Ninth Plan.

The Ninth Plan was formulated after extensive consultations with all sections of society throughout the country. This Plan has taken into account the views expressed and the proposals made in a fair and balanced manner. I wish to place on record the deep appreciation of the Government for the cooperation and support given by all concerned. I hope such spirit of cooperation will continue to be strengthened in the years ahead.

I call upon all Malaysians to work with me in making the Ninth Plan and National Mission a success.



DATO' SERI ABDULLAH BIN HAJI AHMAD BADAWI
Prime Minister, Malaysia

Putrajaya
31st March 2006



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THE NATIONAL MISSION

I. INTRODUCTION

1. Malaysia has made significant strides in nation-building, in developing its economy and in improving the quality of life of its people. Since Independence, real gross domestic product (GDP) has grown by an average of 6.5 per cent per annum during 1957 to 2005, one of the highest growth rates achieved by sovereign nations of similar age and size. Within the same period, GDP per capita in current prices grew by 7.0 per cent per annum, which has translated into substantial improvements in the people's quality of life. Widespread advances were made in education, health, infrastructure and industry. A poor, mainly agrarian country has been transformed into a diversified and relatively prosperous nation. A divided people, with no recent history of self-government, has made way for a united nation, where national identity and national pride have been forged through self-determination and through triumph over great obstacles, guided by the principles of the *Rukunegara*.

2. The course of Malaysia's development was shaped by the vision, thinking and efforts of many of the country's great leaders and thinkers, as enshrined in the Constitution and as encapsulated in the three key national policy frameworks that are the New Economic Policy (NEP), 1971-1990, the National Development Policy (NDP), 1991-2000 and the National Vision Policy (NVP), 2001-2010. Each of these policy frameworks was based on a profound understanding of the needs and challenges of the time, as well as the responses required for the nation. Equally important, these frameworks captured the collective aspirations of the country. These aspirations culminated in the launch of Vision 2020 in 1991, outlining the aim of attaining developed nation status by the year 2020.

3. Malaysia is now at the mid-point in its journey towards 2020 and is just embarking upon the second 15-year phase. In many respects, the core NEP, NDP and NVP objectives of national unity, growth and social equity remain. However, the circumstances and environment in which the country operates have changed significantly. Malaysia is now an open trading economy participating

in an extremely competitive and fast-moving global marketplace. The opening up of China and India has changed the economic landscape dramatically for developed and developing countries alike. Information and communications technology (ICT) has changed the speed and spread of transactions. Labour- and capital-intensive modes of development have given way to productivity- and knowledge-based growth.

4. Similarly, the face of Malaysian society has changed. The population has become increasingly urbanised and educated while the middle income group has expanded. Yet, there are still considerable income and wealth inequalities due to persistent disparities in inter- and intra-ethnic distribution as well as differences between rural and urban incomes and between less developed and more developed regions. By many accounts, racial polarisation is felt in schools, in the workplace, in residential areas and by society in general.

5. The creation of a truly developed Malaysian society must be premised not only on a resilient and competitive economy, but also on the basis of equity and inclusion for all groups. While economic growth and dynamism must be vigorously pursued, gross disparities in economic opportunities and livelihoods must not be allowed to persist and to jeopardise the very foundations of national development.

6. At the same time, there is a need to strengthen the overall mindset, culture, values and social institutions to be more in step with the country's economic development. There is a danger of the country possessing first-class infrastructure but third-class mentality. In order to pursue further growth and development, Malaysia will need to fortify its moral and ethical foundations while enhancing its mindset and attitudes towards excellence and performance.

7. Amidst these challenges and imperatives, the country remains steadfast in its determination towards becoming a strong, developed and united nation. In this regard, a new policy and implementation framework - the National Mission - has been drawn up, outlining the approach to be taken to achieve the country's vision and objectives in the next 15 years. In summary, the National Mission is a framework aimed at obtaining greater impact and performance from the country's development efforts towards achieving Vision 2020. The framework acknowledges that to attain developed nation status, formed in its own mould and confident in its own capabilities, Malaysia must pursue policies and programmes which enhance its capacity to compete globally; which improve national integration and reduce tendencies towards racial polarisation; and which bring about a better distribution of income and wealth through meaningful participation of all groups in the competitive and productive growth process.

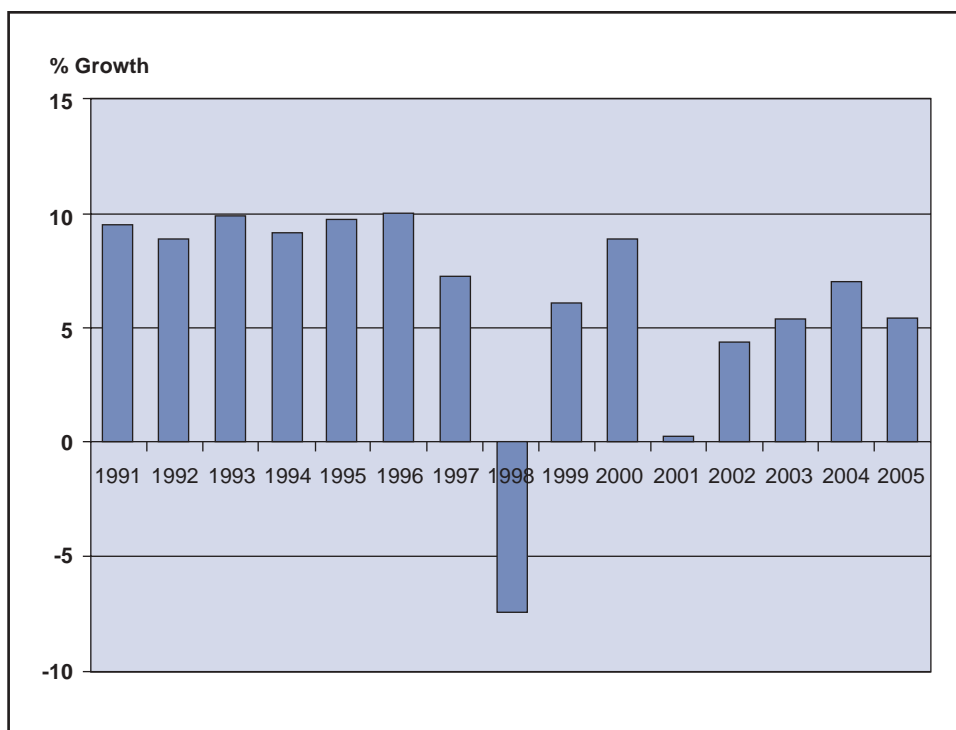
II. TOWARDS 2020: THE FIRST FIFTEEN YEARS, 1991-2005

The Economy

8. The Malaysian economy grew at an average rate of 6.2 per cent per annum during the 1991-2005 period, as shown in *Chart 1*. This strong rate of growth was achieved despite the challenges faced from events such as the 1997-98 Asian financial crisis, the September 11 incident in 2001, wars in Afghanistan and Iraq, outbreaks of Severe Acute Respiratory Syndrome (SARS) and avian flu as well as increases in world oil prices.

CHART 1

REAL GDP GROWTH, 1991-2005



Source: Department of Statistics

9. Economic fundamentals remained strong. Growth was achieved with inflation averaging a low 2.9 per cent per annum and similarly low unemployment averaging 3.1 per cent over the period. The current account of the balance of payments and the consolidated public sector account registered twin surpluses by the end of the period. The level of savings and external reserves rebounded to healthy levels after the Asian financial crisis.

10. GDP per capita in current prices grew at an average of 7.1 per cent per annum to RM18,489 or US\$4,904 in 2005. When adjusted for Malaysia's cost of living, the PPP¹-adjusted GDP per capita in 2005 doubled to US\$10,318. Compared to the Organisation for Economic Co-operation and Development (OECD) countries, Malaysia's PPP-adjusted GDP per capita is above Mexico's and below Poland's, as shown in *Table 1*.

TABLE 1
**COMPARISON OF MALAYSIA'S PPP-ADJUSTED
GDP PER CAPITA WITH SELECTED OECD ECONOMIES**

| Country | US\$ | | Average Annual Growth Rate |
|--------------------------|--------------|-------------------|----------------------------|
| | 1990 | 2005 ^e | 1991-2005 |
| United States of America | 22,921 | 41,762 | 4.1 |
| Japan | 18,789 | 31,386 | 3.5 |
| Korea, Republic of | 8,504 | 21,383 | 6.3 |
| Hungary | 8,949 | 16,628 | 4.2 |
| Poland | 5,827 | 13,364 | 5.7 |
| Malaysia | 5,284 | 10,318 | 4.6 |
| Mexico | 6,098 | 9,991 | 3.3 |
| Turkey | 4,476 | 8,137 | 4.1 |

Source: National Accounts OECD, OECD Paris 2005 and EIU database

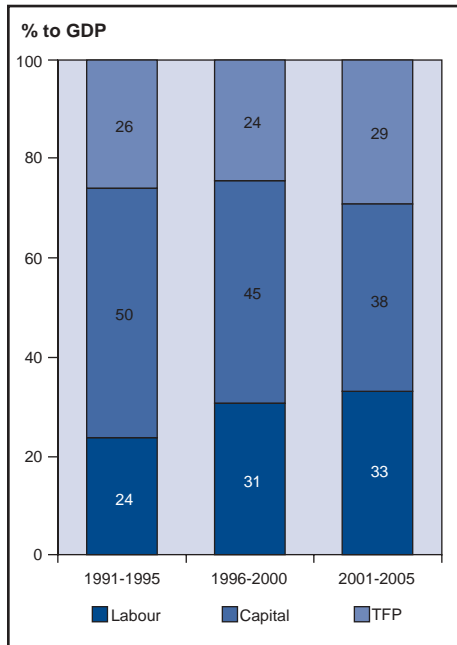
Notes: ^e Refers to estimates.

11. The economy evolved from capital-led growth in 1991 to growth based more evenly on capital, labour and total factor productivity (TFP²) in 2005, as shown in *Chart 2*. Malaysia's economic structure continued to develop from manufacturing to services, as shown in *Chart 3*. Growth of knowledge-based service industries was expanded with the establishment of the Multimedia Super Corridor in 1996, followed by other initiatives such as the National Biotechnology Policy launched in 2005.

¹ The Purchasing Power Parity (PPP) is one of the indicators used to compare the standard of living between countries. It is useful because comparing the gross domestic product in a common currency does not accurately depict differences in material wealth. PPP takes into account both the differences in wages and the differences in cost of living.

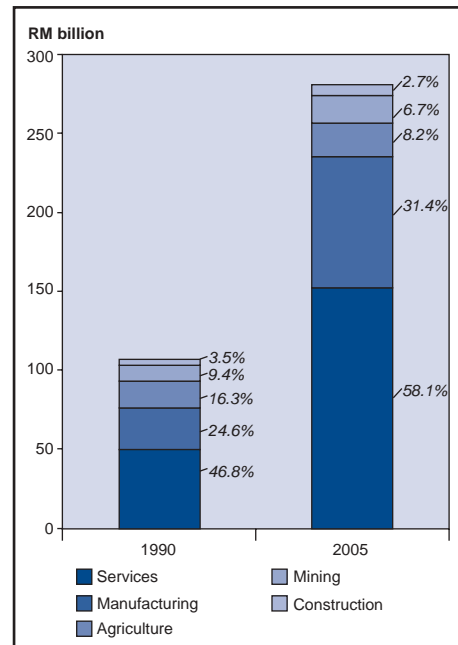
² Total Factor Productivity (TFP) is estimated using the Cobb-Douglas production function by subtracting from total growth, the portion which is accounted for by increases in labour and capital. TFP refers to the additional output generated as a result of the introduction of new technology or upgrading of technology; innovation; superior management techniques; gains from specialisation; improvements in efficiency, know-how, workers' education, skills and experience; and advancement in ICT.

CHART 2
COMPOSITION OF FACTORS OF PRODUCTION, 1991-2005



Source: Economic Planning Unit

CHART 3
STRUCTURE OF THE ECONOMY, 1990-2005
(% to GDP)



Source: Department of Statistics

Human Capital: Education, Innovation and Values

12. Overall, the national education participation rate improved with significant increases made at the pre-school and tertiary levels, as shown in *Table 2*. The average class size and teacher-student ratios improved for primary and secondary schools. In addition, various measures were taken to review the curriculum, to increase the teaching and utilisation of ICT in schools and to enhance teaching skills. Nevertheless, much scope remained for raising the quality of primary and secondary schools, especially national schools, as well as for reducing disparities between schools in urban and rural areas.

13. To meet the increased demand for skilled human resource, a total of 597,384 skilled workers was produced by training institutions and 4.8 million training places for skills upgrading were provided by *Pembangunan Sumber Manusia Berhad* during the 1991-2005 period. Opportunities for skill enhancement and lifelong learning were also expanded through the establishment of community colleges and open universities. However, tertiary and training institutions still needed to become more aligned with industry, in order to better meet the needs of employers.

TABLE 2
ACCESS TO EDUCATION AND CLASS SIZE, 1990-2005

| | 1990 | 2005 | Average OECD Countries (2003) |
|---|--------|--------|-------------------------------|
| Participation Rate (%) | | | |
| Pre-school (4-6 years old) | 33.1 | 60.0 | |
| Primary | 93.2 | 96.0 | |
| Secondary | 68.0 | 85.0 | |
| Tertiary ¹ (17-23 years old) | 16.9 | 29.9 | |
| Average Class Size (Student) | | | |
| Primary | 33.2 | 31.0 | 21.6 |
| Secondary | 33.6 | 32.5 | 23.9 ² |
| Teacher-Student Ratio | | | |
| Primary | 1:20.4 | 1:17.2 | 1:16.5 |
| Secondary | 1:18.9 | 1:16.3 | 1:13.6 |

Source: Ministry of Education and Ministry of Higher Education

Notes: ¹ Refers to degree, diploma, *Sijil Tinggi Persekolahan Malaysia*, matriculation, A-level and post-*Sijil Pelajaran Malaysia* certificate.

² Refers to lower secondary.

14. In line with the shift towards growth based on knowledge and innovation, the national gross expenditure on research and development (GERD) expanded at an average rate of 9.4 per cent per annum from RM1.1 billion in 1990 to RM4.3 billion in 2005. The ratio of GERD³ to GDP improved from 0.4 per cent in 1990 to 0.9 per cent in 2005. The number of researchers per 10,000 population increased from seven in 1990 to 25 in 2005, a good improvement but still a distance from the OECD average of 61. The rate of research and development (R&D) commercialisation was low, while the number of patents granted⁴ to Malaysian residents remained small, from 20 in 1990 to 37 in 2005.

15. The usage of ICT improved with the increased penetration rate for personal computers from 1.2 per cent in 1990 to 21.8 per cent in 2005. However, penetration rates for Internet dial-up and broadband were still relatively low at 13.9 per cent and 1.9 per cent in 2005, respectively, partly due to limited coverage.

³ The OECD average is 2.24 per cent of GDP (2003).

⁴ The OECD average is 1,575 patents per year.

16. *Islam Hadhari* was introduced in 2004 as a comprehensive and universal development framework for the nation. The framework was formulated as an approach that enjoins progress and advancement as an imperative for the people, while being firmly rooted in the universal values and injunctions of Islam. *Islam Hadhari* outlined 10 principles to empower the people to face global challenges, while ensuring that its approach and implementation are acceptable to all groups in the country.

BOX 1

ISLAM HADHARI

In order to achieve a balance between physical and spiritual development, the Government launched a comprehensive and universal development framework called *Islam Hadhari* (Civilisational Islam) in 2004. This framework emphasises development, consistent with the tenets of Islam with focus on enhancing the quality of life through the mastery of knowledge and the development of the individual and the nation; the implementation of a dynamic economic, trading and financial system; and the promotion of integrated and balanced development that creates knowledgeable and pious people who hold to noble values and are honest, trustworthy, and are prepared to take on global challenges.

Islam Hadhari is not a new religion. It is not a new teaching nor is it a new mazhab (denomination). *Islam Hadhari* is an effort to bring the people back to basics and back to the fundamentals, as prescribed in the Quran and the Hadith that form the foundation of Islamic civilisation.

Islam Hadhari outlines ten principles as follows:

- Faith in and piety towards Allah;
- A just and trustworthy government;
- Free and liberated people;
- A rigorous pursuit and mastery of knowledge;
- Balanced and comprehensive economic development;
- A good quality of life for the people;
- Protection of the rights of minority groups and women;
- Cultural and moral integrity;
- Safeguarding of the environment; and
- Strong defence capabilities.

It is in accordance with these principles that policies and strategies will be formulated and reviewed to represent the best interests of society. Observance of these principles will improve the governance for the people and ensure a high commitment to public accountability. *Islam Hadhari* also emphasises the sovereignty of the country through self-defence capabilities but holds a firm stance against aggression and terrorism.

17. In terms of values, the pace and magnitude of development required continued improvements in society's capacity to cope with the prevailing changes and pressures. Social problems that occurred included the breakdown of the

family unit, drug abuse and domestic violence. The lack of social values such as civic consciousness, courtesy, road ethics as well as attitudes towards corruption continued to be of concern. However, the level of political awareness appeared to have increased as indicated, among others, by the increased participation in the election process. In the 1990 election, 69.3 per cent of registered voters voted. In 2004, the percentage rose to 74 per cent and 75 per cent for the parliamentary and state elections, respectively.

Socio-Economic Equity

18. Poverty⁵ in Malaysia declined substantially during the 1991-2004 period. There was a marked reduction in the incidence from 22.8 per cent in 1990 to 5.7 per cent in 2004.

19. However, the share of income of the bottom 40 per cent declined from 14.5 per cent in 1990 to 13.5 per cent in 2004 while the share of the top 20 per cent increased slightly from 50 per cent in 1990 to 51.2 per cent in 2004. Correspondingly, the national Gini coefficient⁶ worsened from 0.442 in 1990 to 0.462 in 2004.

20. The higher growth of urban income resulted in the widening of the rural-urban income ratio from 1:1.70 in 1990 to 1:2.11 in 2004. Rural poverty remained high, especially in Sabah, Terengganu and Kelantan.

21. On the other hand, inter-ethnic income disparities improved slightly during the 1991-2004 period. The mean income ratio of Bumiputera to Chinese changed from 1:1.74 in 1990 to 1:1.64 in 2004 whereas the ratio of mean income of Bumiputera to Indian narrowed slightly from 1:1.29 in 1990 to 1:1.27 in 2004, as shown in *Chart 4*. Employment at all levels showed increasing ethnic diversity, contributing to a lessening identification of race with occupation, but there remained much room for improvement at professional and managerial levels. Equity ownership of the corporate sector by ethnic group in 2004 was 18.9 per cent for Bumiputera, 39.0 per cent for Chinese and 1.2 per cent for Indians.

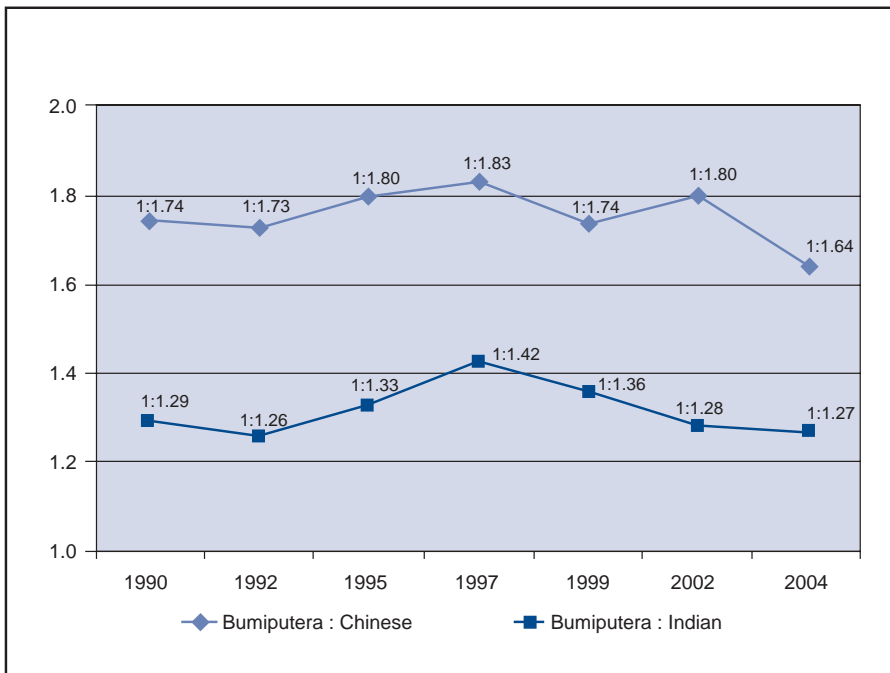
Quality of Life

22. The Malaysian quality of life, as measured by the Malaysian Quality of Life Index (MQLI), improved during the 1990-2004 period, increasing by 10.9 points, as shown in *Chart 5*. Except for public safety and the environment, all

⁵ Poverty incidence figures are based on Poverty Line Income derived from new methodology.

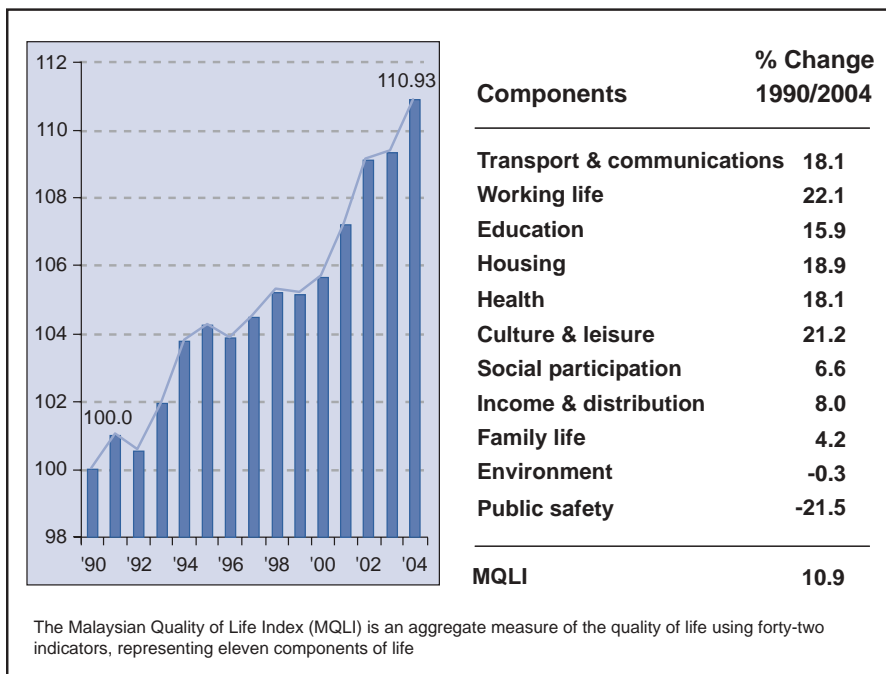
⁶ The Gini coefficient is a measure of income concentration. The value of the Gini coefficient ranges from 0 to 1, where 0 denotes complete equality of income share and 1 represents total inequality.

CHART 4
INTER-ETHNIC INCOME RATIOS, 1990-2004



Source: Economic Planning Unit

CHART 5
MALAYSIAN QUALITY OF LIFE INDEX, 1990-2004



The Malaysian Quality of Life Index (MQLI) is an aggregate measure of the quality of life using forty-two indicators, representing eleven components of life

Source: Economic Planning Unit

components of the MQLI made good progress. The improvement in quality of life is also reflected in the achievement of all of the Millennium Development Goals⁷ ahead of the target date of 2015, except for HIV/AIDS.

23. Infant and child mortality rates showed a significant decline due to improvements in the national healthcare system, better education and greater reproductive health services. Life expectancy increased for both male and female, as shown in *Table 3*.

TABLE 3
SELECTED HEALTH INDICATORS, 1990-2005

| <i>Indicator</i> | <i>1990</i> | <i>2000</i> | <i>2005</i> |
|---|-------------|-------------|-------------|
| Life Expectancy at Birth (in years) | | | |
| Male | 68.9 | 70.0 | 70.6 |
| Female | 73.5 | 75.1 | 76.4 |
| Infant Mortality Rate (per 1,000 live births) | 13.0 | 6.6 | 5.8 |
| Toddler Mortality Rate (per 1,000 toddler population) | 0.9 | 0.6 | 0.5 |
| Maternal Mortality Rate (per 1,000 live births) | 0.2 | 0.3 | 0.3 |

Source: Ministry of Health

24. Access to adequate, affordable and quality housing improved, as indicated by the increase in the household to house ratio from 1:1.14 in 1991 to 1:1.18 in 2005. The number of houses rose from 4.1 million in 1991 to 6.4 million in 2005.

25. National water supply coverage increased from 80 per cent of the total population in 1990 to 95 per cent in 2005. Urban coverage remained high while rural coverage rose significantly from 67 per cent in 1990 to 92 per cent in 2005. Measures were undertaken to reduce the proportion of non-revenue water from 43 per cent in 1990 to 38 per cent in 2005. However, there is room to improve water delivery efficiency further.

26. National electricity coverage expanded from 80 per cent in 1990 to 93 per cent in 2005. Rural electricity coverage rose significantly from 67 per cent in 1990 to 92 per cent in 2005. Although the situation has improved greatly,

⁷ The Millennium Development Goals, as agreed at the United Nations General Assembly, are to eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, malaria and other diseases; ensure environmental sustainability and develop a global partnership by 2015.

especially for Sabah and Sarawak, coverage in these states needs to improve further. As for telecommunications, market liberalisation of the industry since the 1990s has led to more competitive pricing and consumer choice, which in turn increased the cellular phone penetration significantly from 0.7 per 100 population in 1990 to 74.1 in 2005.

27. To ease traffic congestion, a multi-modal public transport system was implemented in the Klang Valley, which included the construction of the light rail transit (LRT) system, rail commuter service, monorail and feeder bus system. The highway and road network also grew from 53,985 kilometres in 1990 to 77,673 kilometres in 2005, which facilitated the establishment of new growth areas as well as reduced travel time and costs. To handle the increase in air passenger traffic, upgrading of airports was undertaken and new airports were built, the largest being the KL International Airport (KLIA) as the main gateway to the country. In addition, access by air to remote areas was improved.

28. The National Environment Policy provided an impetus to efforts to address environmental issues in an integrated manner. Among others, these efforts resulted in air quality remaining at good to moderate levels in most parts of the country and a decline in the number of polluted rivers. As a megadiverse country, Malaysia continued to take measures to protect its rich natural heritage. Over half of the country's land area remains forested and there is a comprehensive network of national and marine parks, wildlife reserves and sanctuaries as well as permanent forest reserves in place.

29. The Royal Malaysian Police (PDRM) continued to perform commendably, producing a crime-solving rate that is high by Interpol standards. Despite the PDRM's efforts, property-related crimes increased from 3.3 cases per thousand population in 1990 to 5.3 in 2004. Meanwhile, violent crimes rose from 0.5 cases per thousand population in 1990 to 0.9 in 2004. Recognising the increased expectations of the public over safety, more effort is needed to reduce the overall crime rate and thus provide a greater sense of security to the people. The Royal Commission to Enhance the Operations and Management of the PDRM was established in 2004 to identify ways to improve and augment the police force. The majority of the Royal Commission's recommendations are currently being implemented in stages. In addition, the community has an important role in improving public safety through continuous cooperation with the police.

Institutional Strength

30. The concept of a more proactive and customer-focused public sector began to take root during the period. The thrust of the changes was to improve the efficiency and effectiveness of the public sector to provide quality services.

Various programmes were undertaken including quality management, implementation of the Client's Charter, efficient counter services, productivity and performance measurement, wider use of ICT, responsive public complaints management, and the inculcation of positive values and work ethics. The resulting improvements in productivity and customer satisfaction are promising, and efforts to further improve the public service delivery system will be intensified.

31. The focus on good governance in the public and private sectors increased in the period, to enhance transparency and efficiency and make Malaysia more competitive and attractive to investors. The National Integrity Plan (PIN) was launched in 2004 to galvanize efforts towards the creation of a Malaysian society with a high level of integrity. Laws and regulations were reviewed to increase efficiency and good governance in the corporate sector, including a review of the corporate governance framework for financial institutions, and the introduction of the Malaysian Code of Business Ethics or *Rukuniaga Malaysia*.

32. The establishment of the Human Rights Commission of Malaysia (SUHAKAM) under the Human Rights Commission of Malaysia Act 1999 provided an institutional mechanism for the promotion of human rights. Between 2000 and 2005, SUHAKAM looked into 2,917 complaints related to issues of violation of rights and abuse of power⁸.

III. THE NEXT PHASE: THE NATIONAL MISSION, 2006-2020

33. The path towards 2020 will be fraught with challenges and difficulties as the local and global socio-economic landscapes continue to evolve. The next fifteen years will require tremendous national resolve and endeavour to achieve the set goals and objectives. As such, and in order to obtain the highest level of performance and the maximum impact from the country's national development efforts, the National Mission identifies five key thrusts for Malaysia:

First: To move the economy up the value chain

To be successful within the increasingly competitive global marketplace, Malaysia must move out from its 'middle development' stage towards a human capital-driven economy by:

- increasing the productivity, competitiveness and value add of established activities in the agriculture, manufacturing and services sectors

⁸ Out of 1,342 cases in 2005, 246 complaints were resolved, no further action was taken on 354 as there was no clear case of human rights violations while 742 are pending investigations.

- generating new sources of wealth in technology- and knowledge-intensive sectors such as ICT, biotechnology and skills-based services
- enhancing job creation and upgrading employment opportunities, particularly in high-technology and knowledge-intensive activities
- giving a lead role to the private sector and increasing private sector investment by providing an enabling environment for doing business, enhancing small and medium enterprise development, increasing public-private partnerships as well as attracting targeted high-quality foreign direct investment
- inculcating a culture of high performance and excellence in both the public and private sectors including in government-linked companies
- expanding the market for Malaysian products and services

The economy is projected to grow at an average rate of 6.0 per cent per annum for the period 2006-2010 and 6.5 per cent in the 2011-2020 period. TFP is expected to exceed capital and labour to become the main factor of production, growing to 41 per cent of GDP by 2020. The economy is projected to become even stronger in the services sector, with at least 5.0 per cent GDP contribution from technology-intensive subsectors.

Second: To raise the capacity for knowledge and innovation and nurture 'first class mentality'

Knowledge, innovation and values - in sum, the quality of the nation's human capital - will be the key determinants of Malaysia's future success as a knowledge-based economy. The country must raise the capacity of its people by:

- promoting *Islam Hadhari* as a comprehensive and universal development framework for the nation
- undertaking comprehensive improvement of the education system, from pre-school to tertiary level, from the aspects of curriculum and teaching to school facilities, with a special focus on raising the standard of schools in the rural areas
- enhancing national schools to become the people's *school of choice*
- producing universities of international standing and ensuring that tertiary institutions meet the needs of employers
- creating more avenues for skills development, training and lifelong learning for the labour force at all levels and for all ages, including in ICT

- providing an environment and innovation system, which encourages top-quality R&D and its commercialisation
- refining and implementing programmes, which encourage the development of a strong moral and ethical culture as encapsulated in the PIN
- empowering youth and women to participate fully in national growth and development

By 2020, the country targets to improve the appeal of national schools to the public. The extent of achievement will be indicated by the increase in the enrolment of Chinese and Indian students in national primary schools. The proportion of Chinese population in the age cohort of 6-11 years attending national schools is expected to expand from 6 per cent in 2005 to 12 per cent by 2010 while that of the Indians from 43.2 per cent to 60 per cent. All children will attain a minimum of 11 years of schooling. It is also targeted for at least two universities to achieve international repute and standing. For R&D, the ratio of GERD to GDP is projected to double, while the number of researchers per 10,000 labour force is expected to increase to 65. The number of patents and commercialised R&D is expected to rise significantly from the low base in 2005. In terms of access to technology, the penetration rate of personal computers is expected to grow from 21.8 per 100 population to 60, while broadband subscription is projected to expand from 1.9 per 100 population to 20. In terms of social values, it is targeted that attitudes related to civic consciousness and corruption will be improved by 2020, as reflected by national opinion surveys.

Third: To address persistent socio-economic inequalities constructively and productively

To strike at the heart of inequality, efforts must be focused on reaching the right target groups and by providing sufficient opportunities for advancement and capacity-building. These efforts include:

- eradicating hardcore poverty by 2010 as well as reducing overall poverty
- reducing disparities between the rural and urban population and among states and regions via sustainable income-generating avenues and by improving access to basic needs such as housing, education, healthcare, utilities and transportation
- developing less developed regions through regional growth centres
- bridging the digital divide
- addressing inter- and intra-ethnic disparities, particularly by raising incomes through the enhancement of skills and capabilities

- promoting equal opportunities in employment towards reducing disparities in occupation and income as well as enhancing integration among ethnic groups
- creating a new generation of competitive Bumiputera entrepreneurs and enterprises
- reviewing past restructuring policies and programmes to evaluate their effectiveness and impact, and to focus future policies and programmes on merit and need

Poverty is expected to be eradicated by 2020. The income share of middle income households is expected to increase to 40 per cent while the income share of the bottom 40 per cent will be targeted to be at least 20 per cent of the national income. These targets will drive towards reducing income inequality and accordingly, reduce the national Gini coefficient to 0.35 by 2020. Disparities among all ethnic groups will be narrowed, resulting in relative income parity in the longer term. The employment structure and hierarchy in the economy is expected to reflect the full and fair participation of all groups in the population. The mean income ratio of Bumiputera to Chinese is expected to improve from 1:1.64 in 2004 to 1:1.35 in 2020 while the ratio of the mean income of Bumiputera to Indian is expected to reach parity by 2020. In addition, the gap between rural and urban incomes is expected to reduce from 1:2.11 in 2004 to 1:1.70 by 2020. Bumiputera share of corporate equity is targeted to steadily increase and reach at least 30 per cent by 2020 while the Indian share of corporate equity is targeted to attain 3.0 per cent by 2020. In addition, steps will be taken to raise Bumiputera asset ownership in residential and commercial property, as well as in intellectual property.

Fourth: To improve the standard and sustainability of quality of life

The quality of life of the population will not be sustainable without a concerted effort to manage resources more wisely, especially in an environment of rising energy prices. The quality of life is also intrinsically linked to fulfilling basic needs as well as to maintaining peace, security and harmony. Addressing these manifold issues entails:

- ensuring better protection of the environment and more efficient usage of natural resources
- enhancing energy sufficiency and efficiency, including diversifying sources of energy
- increasing the efficiency of water services delivery
- providing better public transportation to relieve congestion and reduce fuel usage

- improving access to and quality of healthcare and affordable housing
- ensuring public safety and security
- enhancing the development and promotion of Malaysian culture, arts and heritage

The MQLI is expected to improve significantly in the period 2006-2020 with positive changes shown in the dimensions of environment and public safety. Usage of energy and water per capita is expected to become more efficient by 2020.

Fifth: To strengthen the institutional and implementation capacity

Achievement of the National Mission is contingent upon a well-functioning administrative and implementation machinery in the country. This machinery must be enhanced by:

- improving public service delivery by strengthening governance, streamlining administrative processes and measuring performance
- improving usage and cost-efficiency of public sector funds by upholding financial prudence as well as by improving the monitoring of implementation
- addressing actual and perceived corruption in both the public and private sectors
- enhancing corporate governance and delivery of private sector services by improving the legal and regulatory frameworks
- strengthening the role of Parliament, media and civil society

By 2020 key performance indicators would have been established and tracked across government departments to enable objective measurement of the efficiency and effectiveness of public services, particularly those of frontline agencies. The government machinery will be strengthened to emphasise greater enforcement and monitoring of impact. Actual and perceived corruption in both the public and private sectors will be reduced. Although difficult to measure, there will be a felt improvement in the role of Parliament, media and civil society as indicated by a greater capacity for open and constructive discourse on national development.

IV. CONCLUSION

34. The Ninth Malaysia Plan is the first of three five-year blueprints for the National Mission, encapsulating policy directions and programmes, which are aimed at delivering the Mission's philosophy and thrusts. The National Mission will drive the design and prioritisation of programmes, plans and budgets from the year 2006 onwards. With consistent and determined effort in the implementation and delivery of the National Mission, the nation will be well placed to achieve its aspirations and join the ranks of developed nations by the year 2020.

THE NINTH MALAYSIA PLAN: THE FIRST STEP IN THE NATIONAL MISSION

1

I. INTRODUCTION

1.01 The nation is embarking upon a new phase of development towards realising its aspiration of becoming a developed nation by 2020. This next 15-year phase will be guided by the National Mission, a policy and implementation framework aimed at obtaining greater performance and impact from the country's collective developmental initiatives. The Ninth Malaysia Plan represents the first five-year blueprint of the National Mission, outlining the policies and key programmes aimed at fulfilling the Mission's thrusts and objectives for the 2006-2010 period.

1.02 Economic growth, competitiveness and dynamism will be pursued together with equal opportunity, social equity and inclusion. The quality of human capital will be upgraded as it is a key determinant in the achievement of the Plan's goals and objectives. The quality of life of all Malaysians will be enhanced further. The national implementation machinery will be streamlined and strengthened. In all, these efforts will ensure that the overriding objective of the nation, that is national unity and integration, will be strengthened.

1.03 In light of the National Mission and the recognition of the importance of a joint national effort to ensure its achievement, the theme of the Ninth Plan is set as *Together Towards Excellence, Glory and Distinction*. All Malaysians have a stake in the nation building process – the private sector as the engine of growth, the public sector as facilitator and regulator, and civil society and others as partners in development. The quest to attain developed nation status can only be realised through the sustained commitment and contribution of each and every citizen.

1.04 The Ninth Plan period is expected to be challenging and requires greater resolve to ensure its success. External shocks such as rising high oil prices, global economic imbalances, outbreak of infectious diseases and large-scale natural disasters dictate the need for vigilance and resilience. At the same

time, domestic challenges including enhancing fiscal management; developing new sources of growth, wealth and income; strengthening education and training; and reducing socio-economic disparities require urgent and focused attention. The Eighth Malaysia Plan achieved relative success in spite of the many challenges, as shown in *Box 1-1*.

II. SUMMARY OF THE NINTH MALAYSIA PLAN, 2006-2010

1.05 Given the changing domestic and global economic landscape, initiatives to enhance national competitiveness and resilience will continue to be given high priority. At the same time, efforts to close inter- and intra-ethnic socio-economic disparities will be intensified, with measures that focus more accurately on target groups. All development initiatives during the Ninth Plan period will be guided by the universal principles of *Islam Hadhari*.

1.06 Overall macroeconomic management during the Plan period will focus on sustaining growth and strengthening the economy's capacity to cushion against downside risks and shocks. The Government will ensure that price pressures remain manageable; that an appropriate monetary policy is in effect; that the Federal Government operating expenditure is managed in a prudent and cost-effective manner; that a gradual reduction in the Federal Government deficit is observed without retarding overall growth; and that a strong balance of payments and external reserves position is maintained at all times.

1.07 The Ninth Plan is organised according to the thrusts of the National Mission. The following are the key highlights and programmes of the Ninth Plan under each of the five thrusts:

THRUST 1: TO MOVE THE ECONOMY UP THE VALUE CHAIN

1.08 The Ninth Plan period will see changes in the structure and improved performance of the economy with every economic sector achieving higher value added and total factor productivity. New growth areas will gain in strength. Private sector investment will surpass the public sector in spearheading economic growth. The economy will become more centred on human capital, particularly with increasing competition from globalisation and progressive market liberalisation.

Increasing the Value Added of Manufacturing, Services and Agriculture

Manufacturing

1.09 Application of high technology and production of higher value added products will be given emphasis. Measures will be undertaken to migrate the

BOX 1-1**BRIEF OVERVIEW OF THE EIGHTH MALAYSIA PLAN,
2001-2005**

At the onset of the Eighth Plan, global economic growth slowed due to a decelerating United States of America economy and dampened global electronics demand, exacerbated by the attacks of September 11, 2001. Overall economic performance remained sluggish until the second half of 2003, weighed down by the invasion of Iraq and the regional outbreak of Severe Acute Respiratory Syndrome. Global growth thereafter was relatively firm despite escalation in crude oil prices from the second half of 2004.

The Malaysian economy managed to sustain growth during the Eighth Plan period due to stronger macroeconomic fundamentals and increased resilience following the lessons learnt from the Asian financial crisis. Achievements include:

- 4.5 per cent per annum real gross domestic product (GDP) growth, slightly above the revised target rate;
- increase in GNP per capita in current prices of 5.7 per cent per annum to RM17,687 in 2005;
- broad-based growth, with nearly all sectors equalling or surpassing their revised growth targets;
- strong exports, resulting in a 61.4 per cent growth of the trade surplus, and the doubling of the balance of payments surplus and the volume of international reserves;
- low inflation, averaging 1.8 per cent for the entire Eighth Plan period;
- low unemployment of 3.5 per cent by the end of 2005;
- greater progression to higher value added activities in key economic sectors; and
- improvement of the business environment including increased supply of skilled labour, higher physical infrastructure capacity and better investment incentives.

The steady economic growth enabled the achievement of several socio-economic objectives:

- overall poverty declined from 8.5 per cent (1999) to 5.7 per cent (2004);
- hardcore poverty declined from 1.9 per cent (1999) to 1.2 per cent (2004);
- mean household income increased 5.6 per cent per annum on average, exceeding real GDP growth;
- inter-ethnic income disparities narrowed;
- all the Millennium Development Goals were achieved ahead of the 2015 target with the exception of the reversal of HIV/AIDS;
- provision of housing, medical services and basic amenities improved significantly; and
- rural-urban income disparity, however, continued to widen.

electrical and electronics (E&E) industry towards high-technology and higher value added activities. The development of higher value added manufacturing subsectors such as the petrochemical, maritime, aerospace, heavy machinery and defence industries will be promoted. In addition, homegrown village industries such as handicraft, *batik* and *songket*, will continue to be modernised and brought up to international standards. The Government will facilitate the development of existing and new industrial clusters such as the E&E clusters in Pulau Pinang and Kulim High Technology Park, Kedah and petrochemical clusters in the Eastern Corridor states of Terengganu and Pahang, as well as industrial and SME parks in all states.

Services

1.10 All services subsectors will be further developed and promoted. Tourism efforts will focus on enhancing Malaysia's attractiveness as a destination for natural and eco-tourism; for culture, entertainment and the arts; for meetings, incentives, conventions and exhibitions (MICE); for international sporting events; as well as for shopping and recreational activities. In education, measures will be intensified to promote Malaysia as a regional centre of excellence for tertiary education. In health services, Malaysia will be promoted as a regional health tourism centre. In financial services, efforts will focus on strengthening Malaysia's position as an international centre for Islamic banking and finance. In addition, new services subsectors such as aviation maintenance, repair and overhaul (MRO); shared services and outsourcing; transport and logistics; and business and professional services will be upscaled. To expand the services sector beyond its current concentration in the Klang Valley, the South Johor Economic Region will be developed into a vibrant regional services hub, leveraging on its prime location and natural advantages.

Agriculture

1.11 During the Ninth Plan period, the agriculture sector will be revitalised to emerge as the third pillar of economic growth. The *New Agriculture* programme will be undertaken, which will include greater orientation towards more modern and commercial scale production; the production of high value added primary and agro-based products; wider application of information and communications technology (ICT) as an enabler and biotechnology for wealth creation; use of better marketing approaches emphasising product standards and farm accreditation; and the introduction of a higher level of professionalism. Established subsectors such as oil palm and rubber will be encouraged to increase diversification into high value added downstream products. Industries with high potential such as aquaculture, deep sea fishing, seaweed, herbs, ornamental fish and floriculture will be developed and commercialised on a large scale. Efforts will also be intensified to develop Malaysia into a global centre for *halal* products.

1.12 Greater private sector participation will be promoted. In addition, research and development (R&D) activities will be intensified, access to financing will be further improved and new production zones will be designated for agricultural production. During the Ninth Plan period, the Northern Development Corridor, which comprises areas in the states of Perlis, Kedah, Seberang Perai in Pulau Pinang and Northern Perak; Eastern Corridor comprising Kelantan, Terengganu and Pahang; and Sabah and Sarawak, will be developed into modern commercial scale agriculture and agro-based regions.

Generating New Sources of Wealth in Technology- and Knowledge-Intensive Sectors

1.13 Economic activities within the field of ICT will be developed and further strengthened, building upon Malaysia's strengths. Malaysia will continue to position itself as a preferred destination for shared services and outsourcing. In terms of new activities, the Government will develop the local digital content industry as well as bioinformatics. To support the growth of the ICT industry as well as bolster general economic efficiency, measures will be taken to increase access to and utilisation of ICT services and facilities, including enhancing e-Government and encouraging the usage of e-commerce among businesses and consumers.

1.14 The Ninth Plan period will see intensification of efforts towards developing the biotechnology industry, in line with the National Biotechnology Policy launched in 2005. Development of the industry will encompass action on many fronts including improving the regulatory framework for biotechnology investments; enhancing access to funding; improving the rate of R&D commercialisation; increasing the number of skilled biotechnology workers and researchers; as well as attracting quality foreign partners for R&D, technology licensing and product development. Malaysia will focus on its areas of competitive advantage, including in optimising its rich biodiversity, leveraging on its multi-ethnic traditional and complementary medicine, and becoming a world leader in resource-based industries such as biofuel and biodiesel.

Enhancing Job Creation

1.15 The promotion and development of new economic subsectors in manufacturing, services and agriculture will be undertaken with job creation as a priority. Training and retraining programmes will be emphasised for both employers and employees to increase the mobility and adaptability of the nation's workforce towards knowledge-intensive and higher value added activities. Employers will be encouraged to redesign and improve selected job functions and work conditions to attract local workers, including women, retirees and

disabled persons. In addition, laws and regulations relating to human resource will be reviewed and streamlined to enhance the efficiency and productivity of the labour force.

Giving a Lead Role to the Private Sector in Economic Development

Enhancing the Development of Small and Medium Enterprises

1.16 Development of small and medium enterprises (SMEs) will be a key priority during the Ninth Plan period. Access to financing and incentives will be improved, including through the recently established SME Bank while measures will also be taken to enhance the availability of venture capital financing for SME start-ups. Greater inter-firm linkages among SMEs, as well as with large domestic companies and multinational corporation will be promoted. In addition, programmes will be expanded to help boost the entrepreneurial and technical capability of SMEs including through the application of ICT and e-commerce.

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Increasing Public-Private Sector Partnerships

1.17 Public and private sector partnership will be further strengthened towards nation building during the Plan period. The public and private sector will increase collaboration, particularly in the areas of R&D, human capital development and the fulfilment of socio-economic objectives, particularly with respect to poverty eradication, and equity and employment restructuring. New regional growth centres (RGCs) and growth corridors will be developed together by the Government and the private sector to promote investment, create jobs and encourage rapid development in the areas concerned. The streamlining of the privatization programme will also contribute towards further strengthening private sector participation in the economy. Emphasis will be given to Government-initiated projects based on national priority. The selection of concessionaires will be made through an open bidding process. The Ninth Plan will also see the introduction of the private finance initiative under the privatization programme, which will offer more opportunities for private sector participation in the development of infrastructure and utilities.

Improving the Business Environment

1.18 The efficiency of the public service delivery system is important to enhance the business environment. Improvements to the public sector delivery system will be made through the removal of unnecessary bureaucracy, reform of district and local authority administrations, review of the investment-related regulatory framework and greater use of ICT in day-to-day operations. These measures will be implemented with a view to reduce the cost of doing business while

providing adequate protection to the parties involved. As such, more disclosure-based regulatory measures and self-regulation, where possible, will be implemented.

Inculcating Excellence and a High Performance Culture

Government-Linked Companies Transformation

1.19 The government-linked companies (GLCs) transformation programme initiated in May 2004 was aimed at infusing a culture of high performance and excellence in all GLCs. In the Ninth Plan, the implementation of the GLCs transformation programme will be intensified to further enhance shareholder value, including through the additional roll-out of key performance indicators (KPIs), and the introduction of performance-based compensation, operational improvements and cost reduction initiatives. The initial operational and financial results from the transformation programme is expected to be seen in the first half of the Ninth Plan period.

Enhancing Corporate Governance

1.20 The Government will continue to promote strong stewardship and corporate governance in the private sector. Corporate law reform programmes initiated by the Government will continue to be implemented. Private sector industry associations will be encouraged to implement programmes to promote ethical business practices and corporate social responsibility among its members. The improvement of corporate leadership including in GLCs will be given priority to ensure high standards of management, effective decision-making and proper risk management.

Expanding the Market for Malaysian Products and Services

Promoting Outward Investments

1.21 Private sector companies and GLCs will be encouraged to venture abroad to secure business and investment opportunities. This move will increase access to new markets, create demand for domestically produced intermediate goods and components, provide a hedge against domestic economic slowdown and help to create Malaysian multinational corporations in the longer term.

Responding Competitively to International Trade Commitments

1.22 Malaysia's commitments under the World Trade Organisation, the Association of Southeast Asian Nations (ASEAN) Free Trade Area,

ASEAN-Free Trade Agreements (FTAs) and other bilateral FTAs will expand opportunities for trade and investments. However, competition will also intensify, particularly in sectors where market access was agreed. In this respect, the Government will increase efforts to prepare the local private sector for progressive liberalisation and increasing competition.

THRUST 2: TO RAISE THE CAPACITY FOR KNOWLEDGE AND INNOVATION AND NURTURE ‘FIRST CLASS MENTALITY’

1.23 In the Ninth Plan period, efforts will be intensified to develop the country’s human capital in order to drive the transformation to a knowledge-based economy. Programmes and projects will be undertaken to deliver the National Mission’s priorities of improving the education system, increasing innovation and ensuring holistic human capital development.

Improving the Access to and Quality of the Education System at All Levels

Curriculum and Teaching

1.24 During the Ninth Plan period, the implementation of the National Pre-school Curriculum will be accelerated to ensure standardisation and quality. At the school level, the curriculum and co-curricular activities will be reviewed to ensure that it provides a strong foundation for the development of core competencies and is relevant to changing needs. The teacher training curriculum will also be reviewed which among others, will improve subject content, enhance pedagogical skills and enable greater application of ICT in education.

1.25 At the tertiary level, to better respond to market requirements and reduce skills mismatch, collaboration between industry and institutions of higher education will be improved. New courses will be introduced in line with the changing requirements of the labour market. To improve employability of local graduates, a requirement for internship and industrial attachment programmes will be strengthened. Appropriate improvements to the curriculum will also be made.

1.26 Training programmes will be redesigned in line with changing industry requirements. The National Dual Training System will be improved through closer consultations with stakeholders including industry associations, and the National Advisory Council on Education and Training will be established to guide policies and strategies related to education and industrial training.

Infrastructure and Facilities

1.27 Access to pre-school education will be expanded with the provision of more pre-school classes, particularly in rural areas. With respect to primary and secondary education, better facilities will be provided in rural areas as well as in Sabah and Sarawak. More classrooms will also be built to ensure the achievement of universal primary education. In addition, the capacity for university education and advanced skills training will be expanded.

Making National Schools the *School of Choice*

1.28 To make national schools the *school of choice*, the quality of teaching in national schools will be improved with 100 per cent and 25 per cent of teachers in secondary and primary schools, respectively, having first degree qualifications by 2010. More in-service training opportunities will also be provided for teachers. In an effort to produce knowledge workers of the future who are adept at using technology and ICT, efforts will be taken to make all national schools 'smart' through the *Program Pembestarian Sekolah*. Education opportunities for children with special needs and learning disabilities will also be increased in national schools. To reduce the performance gap between rural and urban areas, various initiatives will be undertaken, including the provision of better educational facilities and basic amenities. The quality of teaching will be improved through the deployment of more experienced teachers to schools in the rural areas. In addition, educational support programmes will continue to be provided to assist students from low-income households.

Producing Tertiary Institutions of International Standing

1.29 Efforts will be taken to enhance the quality of tertiary education to become of international standing. For this purpose, local institutions of higher education will be benchmarked against international standards and a rating system will be introduced. The institutions will also be required to conform to the standards for quality assurance procedures set out in the Malaysian Qualifications Framework (MQF). To support the implementation of the MQF and to establish a unified quality assurance system, the Malaysian Qualifications Agency will be set up in 2006. The quality of the academic personnel will be improved through more staff development programmes. In addition, the number of academic staff with doctorate qualification in public universities will be increased to achieve the target of 60 per cent of total academic staff by 2010. In order to increase the quality and global outlook of universities and their academic staff, international engagements with renowned international institutions will be pursued, including through research collaborations.

Nurturing Top Quality Research and Development, and Scientific and Innovation Capability

Strengthening Policy Commitment

1.30 During the Plan period, the Government will place emphasis on human resource capacity building and on strengthening the National Innovation System. A National Innovation Council will be established to provide leadership in the formulation of policies and key strategies to stimulate a culture of innovation in the country.

Enhancing Research and Development Capabilities

1.31 The Ninth Plan targets national R&D expenditure of 1.5 per cent of gross domestic product by 2010. To reap the value of this investment, research and innovation capability will be strengthened. To help build a critical mass of researchers in priority areas, various initiatives will be undertaken. More researchers, scientists and engineers (RSEs) will be developed to meet the target of 50 RSEs per 10,000 labour force in 2010. A National Brain Gain Programme will be launched, initially focusing on science and technology human capital. Centres of excellence in emerging technology areas will be set up and the R&D capacity of universities and research institutions will be increased. In addition, the private sector including GLCs, will be encouraged to provide more scholarships, grants and endowment funds for research in priority and strategic areas including in developing innovative products for commercialisation.

Promoting Technopreneurship and Technology-based Enterprises

1.32 The Technology Incubator Programme will be enhanced to develop a sustainable pool of indigenous technopreneurs and technology-based companies. It will be integrated into the broader strategy of enhancing utilisation of new knowledge and technology produced by universities and research institutions. As financing is a key enabling factor, measures will be undertaken to improve funding mechanisms and access to funding. To further encourage innovation, technology transfer and commercialisation, the existing intellectual property (IP) framework will be strengthened to enhance IP support facilities and to shorten the IP approval process. The technopreneurship development programme will also be utilised as part of the effort to nurture a Bumiputera Science and Technology Community.

Empowering Women and Youth

1.33 Towards the further advancement of women, more education and training opportunities will be made available to women to increase their employability.

To promote greater participation of women in business, their access to financing will be improved. Measures will also be undertaken to increase the provision of childcare facilities and promote flexible working arrangements to facilitate the greater participation of women in the labour force. The Government will continue to focus on reducing the incidence of poverty, especially among female-headed households. In terms of gender justice, all existing laws and regulations that could potentially discriminate against women will be reviewed. In addition, the Government in collaboration with the private sector and non-governmental organisations (NGOs) will continue to take appropriate measures to address violence against women.

1.34 Youth programmes will focus on vulnerable groups, which include those dropping out of the education system and the unemployed. Access to education and skills training will be improved while other programmes that seek to build leadership, self-confidence and good values such as the *Rakan Muda* and National Service programme will be strengthened.

Fostering a Society with Strong Values

Nurturing High Performance

1.35 Developing a high performance culture requires measuring and exacting performance in all spheres. In line with this, more performance-based elements will be incorporated into diverse areas such as R&D grants, entrepreneur development programmes and public sector employment. A performance-based approach will also be made a key aspect in monitoring Ninth Plan projects, which includes the measurement and tracking of KPIs.

Instilling a Progressive Outlook and Moral and Ethical Values

1.36 A progressive outlook as well as strong morals, ethics and values will be a key component in developing human capital. Programmes under the National Integrity Plan (PIN) will be implemented more widely to cover more segments of society. In addition, the promotion of *Islam Hadhari* as a foundation for a progressive developmental outlook will be intensified. Within the schooling system, the j-QAF programme for Muslim students will be expanded to all primary schools. Moral education will be provided for all students. The *Sivik dan Kewarganegaraan* subject will be improved and expanded to all students in Years 4 to 6 and all levels of secondary education. At the community level, programmes that promote volunteerism will be promoted, and NGOs and religious institutions will also be encouraged to play an important role in promoting positive values.

THRUST 3: TO ADDRESS PERSISTENT SOCIO-ECONOMIC INEQUALITIES CONSTRUCTIVELY AND PRODUCTIVELY

1.37 The Ninth Plan period will see renewed emphasis in addressing socio-economic imbalances. Allowing inequalities to persist can negatively impact growth, threaten national unity and affect societal stability. However, the approach towards addressing socio-economic imbalances will focus on capacity building and raising competitiveness, and will be refined to take into account the lessons learnt from past implementation as well as pressures from global competition and liberalisation.

1.38 Hardcore poverty eradication and overall poverty reduction will be key priorities. Reducing inter- and intra-ethnic inequalities will also be important and will be addressed through efforts to narrow the rural-urban and regional gaps as well as disparities in employment, income and wealth. Special groups such as the elderly, disabled, single mothers and orphans will continue to receive support and attention. In addition, past policies and programmes will be reviewed to evaluate their effectiveness and improve their future impact.

Eradicating Poverty

1.39 The Ninth Plan is targeting to halve the incidence of overall poverty to 2.8 per cent and to completely eliminate the incidence of hardcore poverty by 2010. To reach these objectives, programmes targeted at specific impoverished groups will be pursued including pockets of urban and rural poor, Bumiputera minorities in Sabah and Sarawak and the Orang Asli. Existing programmes and projects under the *Skim Pembangunan Kesejahteraan Rakyat*, the Integrated Development Programme for Urban Communities, *Amanah Ikhtiar Malaysia* and various capacity-building programmes will be enhanced to ensure its effectiveness in lifting households out of poverty. Specific programmes will be implemented to address poverty among Bumiputera minorities in Sabah and Sarawak as well as tackle the high incidence of poverty among the Orang Asli community. Although the overall emphasis of the anti-poverty policies and programmes will be to promote self-help and enhance income generation among poor households, groups such as the elderly, disabled and destitute who are unable to participate in gainful economic activities will continue to receive direct financial assistance.

1.40 The delivery and monitoring of poverty eradication programmes will be enhanced to ensure more successful attainment of objectives. Coordination between the implementing government agencies will be improved. Towards this end, a national poverty database will be established to improve the quality of data and information on poor and hardcore poor households in the country. The national poverty database will integrate both the rural and urban poverty

registry and use a common definition of poverty. This database, supplemented by data collected from various government agencies and NGOs, will be used by all implementing agencies as the main data source of their target groups. In addition, poverty mapping will be developed in selected urban and rural areas to assist in designing better anti-poverty programmes.

Reducing Income Disparity

1.41 In view of widening income inequalities, a more conscious effort will be undertaken towards reducing income disparity. Efforts to improve income distribution will focus on reducing income disparity between Bumiputera and non-Bumiputera ethnic groups, between rural and urban areas and increasing income of those in the bottom 40 per cent income bracket. The Ninth Plan aims to narrow the income gap between Bumiputera and Chinese from 1:1.64 in 2004 to 1:1.50 in 2010 and between Bumiputera and Indians from 1:1.27 in 2004 to 1:1.15 in 2010. In relation to the rural-urban gap, the aim is to reduce the rural-urban income ratio from 1:2.11 in 2004 to 1:2.0 in 2010. The programmes to reduce income disparity will cover a wide spectrum¹.

Reducing Regional Disparity

1.42 To reduce disparities between rural and urban areas as well as between less developed and more developed regions, the Government will increase the allocation for rural development and for comprehensive development of the less developed states. Greater emphasis will be given to the development of RGCs, which will focus on coordinated development of the northern and eastern corridors as well as Sabah and Sarawak. These RGCs will provide better infrastructure and amenities, thereby facilitating the growth of more economic activities, which leverage on the natural advantages of each region such as resource-based manufacturing, craft-based industries, downstream agro-based activities, and eco-tourism. New regional development authorities will be established, especially in Sabah and Sarawak to coordinate and implement these efforts.

Reducing Employment Disparity

1.43 As a key approach towards reducing income disparity, the Ninth Plan seeks to improve ethnic participation at all occupational levels and in all sectors of the economy to better reflect the ethnic composition of the population. Apart from measures to enhance the capacity and employability of target groups,

¹ Please refer to paragraphs 1.39 to 1.40 and 1.42 to 1.46

measures will also be taken to encourage greater support for equal opportunity and workplace diversity among employers. Programmes will be implemented to encourage the increase of qualified Bumiputera in professional, managerial and technical occupations as well as in knowledge-based sectors such as biotechnology, ICT and advanced manufacturing. Conversely, measures will be undertaken to increase non-Bumiputera participation in the public sector.

Reducing Asset and Wealth Disparity

1.44 During the Ninth Plan period, measures will be taken to reduce asset and wealth disparities among the various ethnic groups. Bumiputera equity ownership is targeted to attain between 20 to 25 per cent by 2010 in order to reach the ultimate target of at least 30 per cent by 2020. In addition, steps will be taken to enhance Bumiputera asset ownership of residential and commercial property as well as intellectual property. *Yayasan Amanah Hartanah Bumiputera* and *Perbadanan UDA* will spearhead efforts to enhance Bumiputera property ownership in urban areas. *Wakaf* land and properties under the state religious Islamic authorities will be developed to tap their productive potential as well as to spawn new entrepreneurs. Measures will also be taken to expand competitive Bumiputera commercial enterprises, particularly SMEs.

1.45 Appropriate measures will also be introduced to increase Indian equity ownership to 3.0 per cent by 2020. Measures will also be put in place to encourage entrepreneurship and skills training among the Indian community, particularly the youth.

Developing Competitive Bumiputera Entrepreneurs

1.46 The development of the Bumiputera Commercial and Industrial Community (BCIC) will continue to be a key approach towards restructuring society and ensuring greater Bumiputera participation in the economy. A second phase of the BCIC programme will be launched, aimed at developing self-reliant and sustainable Bumiputera entrepreneurs and strong Bumiputera SMEs. A new model of development will be adopted that not only looks at the quantity of Bumiputera entrepreneurs produced, but more importantly focuses on their overall quality in terms of productivity and competitiveness. In order to better implement BCIC programmes, the capability of trust agencies, GLCs and cooperatives will be enhanced. The entry of Bumiputera entrepreneurs into new growth areas will be promoted. The franchise and vendor development programmes will be strengthened. The development of rural entrepreneurs will be implemented in a more systematic and focused manner guided by the Master Plan for the Development of Rural Entrepreneurs.

Bridging the Digital Divide

1.47 To ensure that all Malaysians share the benefits of the knowledge-based economy, ongoing efforts to narrow the digital divide will be further intensified. The focus of the Ninth Plan will be on implementing the infrastructure plan for universal access to the Internet and making available more affordable ICT products and services. The National Strategic Framework for Bridging the Digital Divide (BDD) will be implemented, which includes the establishment of telecentres in underserved areas, tariff reduction for telephone and Internet subscription and the promotion of personal computer ownership. Existing telecentres will be upgraded to Community Knowledge Centres, which will provide a wide range of economic and social activities for all groups. To further encourage the uptake of ICT facilities and services, content and online applications that are specific to the needs of the local community will be promoted.

Reviewing Past Programmes for Effectiveness

1.48 In order to ensure that socio-economic policies meet their objectives, emphasis will be given to improving the effectiveness of programmes through better planning, implementation and monitoring. Past programmes will be evaluated on their effectiveness and impact while future programmes will be applied based on merit and need. The system of implementation will also be reviewed and strengthened to improve targeting of beneficiaries and to minimise leakages. All Government agencies will be required to ensure that their policies and programmes contribute towards more equitable participation and distribution.

THRUST 4: TO IMPROVE THE STANDARD AND SUSTAINABILITY OF QUALITY OF LIFE

Meeting Housing Needs and Improving Urban Services

1.49 Housing is a basic social need and provision of adequate, quality and affordable housing for all income groups is a national imperative. In the Ninth Plan period, the Government will continue to provide low-cost houses under the *Program Perumahan Rakyat* while the *Syarikat Perumahan Negara Berhad* (SPNB) will complement the Government's efforts by building more than 29,000 low- and low-medium cost houses in urban and rural areas. The SPNB will also rehabilitate more than 11,000 houses. Efforts will be enhanced to promote the use of Industrialised Building Systems and designs based on the modular coordination concept in housing construction.

1.50 Legislation will be reviewed to encourage the private sector to provide low-cost houses. This includes allowing more flexibility on the quota of

low-cost houses as well as expediting the development and approval process. The registration and distribution system for low-cost houses will also be enhanced to ensure proper distribution to genuine target groups.

1.51 In line with the Government's aim to enhance public service delivery, reform of local authorities will be undertaken in order to provide efficient and quality urban services including instituting the KPI system to monitor and improve service performance. There will also be greater use of ICT to improve efficiency of operations. The National Urbanisation Policy will be formulated to assist in the planning and implementation of urban services in the country.

Improving Health Care Services

1.52 The Government will continue to provide facilities and implement programmes to improve the health status of the population, especially at the primary care level. Existing facilities will be upgraded while new facilities will be built to provide a comprehensive package of services. Preventive, early screening and detection services will be enhanced to reduce the disease burden and cost of curative and rehabilitative care. The primary, secondary and tertiary care services will be consolidated through an efficient and effective referral system, in order to provide a seamless system for the benefit of patients. To facilitate this, a nationwide information system will be introduced to enable timely and reliable access to patients' health information. The Government will also promote the concept of lifelong wellness and a proactive approach to maintain health through awareness-raising initiatives such as the establishment of Community Health Promotion Centres in all health clinics. The prevention and control of communicable diseases will be emphasised through initiatives such as the establishment of the Communicable Disease Centre in Sungai Buloh, Selangor. Further, the Government aims to eradicate the incidence of malaria, typhoid and tuberculosis by 2010.

1.53 Human resource development will be given high priority to reduce acute shortage in various categories of medical and health personnel. In this regard, training for medical health personnel will be enhanced and expanded. Continuing professional development initiatives will also be increased to meet the need for higher level of care and in new areas of specialisation. The Government will improve the terms and conditions of service to continue attracting and retaining health personnel.

1.54 To increase the quality and level of professionalism, more hospitals will be encouraged to qualify for Hospital Accreditation Certification. In addition, relevant health legislation will be reviewed and new legislation formulated to

better regulate the health sector including with respect to safe practice of traditional and complementary medicine.

Improving the Transportation System

1.55 The development of the urban transport system will focus on the provision of an integrated and efficient public transport system. Public transport in the Klang Valley will be upgraded and expanded, and a dedicated public transport commission will be established in Klang Valley to oversee the improvement. Two integrated transport terminals in Gombak and Bandar Tasik Selatan will be built to act as transit hubs into Wilayah Persekutuan Kuala Lumpur. Furthermore, in an effort to reduce urban congestion, major projects such as the monorail, outer ring road and second bridge in Pulau Pinang, and Johor Eastern Dispersal Link will be implemented. A national commission will be established to regulate the orderly and sustainable development of public transport system in urban areas. The road development programme will focus on improving access to less developed areas, particularly to RGCs and areas with potential for tourism.

1.56 Rail infrastructure will be upgraded and the communication systems modernised to increase operational efficiency and attractiveness of rail transport as a mode of transportation for passengers and freight. These include double tracking at selected priority stretches, rehabilitation of tracks and stations as well as refurbishment and procurement of rolling stock. New spur lines will also be constructed to link to new industrial areas such as Tanjung Malim in Perak. In the airline sector, passenger and cargo traffic are expected to increase, thereby necessitating the expansion of airport capacity and facilities. In this regard, many airports including the Kuala Lumpur International Airport will be expanded and upgraded. Air traffic control equipment will also be upgraded to handle the expected increase in the frequency of flights.

Improving Sufficiency and Sustainability of Energy Supply

1.57 To support economic growth, the Government will continue to ensure the sufficiency, security, reliability, quality and cost effectiveness of energy supply. Towards this end, electricity generation and transmission networks will be further developed. Rural electrification projects will also be intensified, especially in Sabah and Sarawak. However, emphasis will be put on energy diversification and efficiency. The high dependence on petroleum products will be reduced by promoting the use of alternative fuels. The use of biofuel will be promoted while R&D efforts in the production of biodiesel will be given full support. Other renewable energy sources such as solar power will continue to be developed.

Energy efficiency measures will be intensified in the industrial, transport and commercial sectors as well as in government buildings.

Enhancing the Water Delivery System

1.58 A major focus in the utilities sector will be on increasing the quality and reliability of the water supply system. Towards this end, water infrastructure such as intakes, treatment plants and dams will be constructed and upgraded. In addition, major projects such as the Pahang-Selangor Inter State Raw Water Transfer will be implemented. Stricter enforcement and rehabilitation of water distribution networks will also be carried out to reduce the rate of non-revenue water in the country from 38 per cent in 2005 to 30 per cent by 2010. Increased coverage of water supply to rural areas will also be emphasised. In order to achieve sustainability of water supply, water conservation efforts will be promoted through awareness programmes. *Suruhanjaya Pengurusan Air Negara* will commence operations during the Ninth Plan period to regulate the water supply system and sewerage services in Peninsular Malaysia. Water regulation will be aimed at improving service standards and performance in the water and sewerage industry.

Promoting Environmental Protection and Sustainable Resource Management

1.59 Environmental stewardship will continue to be promoted by the Government to ensure an optimal balance between development needs and the environment. Greater focus will be placed on preventive measures to mitigate negative environmental effects at source, reduce illegal acts against the environment as well as intensify conservation efforts to sustainably manage natural resources. Air and water quality will be monitored closely and measures will be undertaken to minimise pollution. This includes having stricter regulations and emission standards, improving the public sewerage system and promoting the use of cleaner energy.

1.60 Land resource utilisation will be optimised by applying the spatial development approach. Efforts will be intensified to protect and optimise the utilisation of biodiversity. R&D will be intensified to facilitate bio-prospecting and promote wealth generation from the country's rich biodiversity resource. In addition, mangroves and other coastal habitats will be rehabilitated to mitigate the impact of coastal erosion and *tsunami*, as well as to ensure a continuous supply of resources.

Enhancing the Role of Culture, Arts and Heritage in Society

1.61 The role of culture, arts and heritage will be enhanced. Focus will be given towards inculcating positive cultural values and enhancing appreciation

for culture, arts and heritage among the people at all levels; developing the creative cultural industry as well as the craft industry; and developing human capital in related fields to ensure continuous and sustainable development of culture, arts and heritage in the country. Greater attention will also be paid to conservation and preservation of heritage products. The Government will work closely with the private sector and civil society to carry out related programmes and activities for the benefit of the people.

Developing Sporting Excellence and a Healthier Lifestyle

1.62 To create a sports culture among Malaysians, various sports programmes for the masses will be implemented, including fitness development programmes and outdoor activities. In line with this, a total of 24,000 instructors will be trained and recruited to facilitate such programmes. Existing sports facilities at state and district levels will be upgraded or expanded to attract more participation. In addition, *Kompleks Sukan Komuniti* will be built to facilitate the organisation of sporting and community-related activities. The private sector will also be encouraged to provide sports and recreational facilities for the use of the community. Emphasis will also be given to the maintenance of these facilities.

1.63 The capacity and competency of sports associations will be enhanced. In order to achieve sporting excellence, initiatives such as the Talent Development Programme will be undertaken to provide training to 14,570 potential athletes in 37 sports. Sports-related initiatives and infrastructure in schools will be enhanced to establish a better foundation to develop and nurture athletes in high performance sports.

THRUST 5: TO STRENGTHEN THE INSTITUTIONAL AND IMPLEMENTATION CAPACITY

Promoting Good Governance

1.64 In the Ninth Plan, the implementation of PIN will be intensified in order to enhance the level of integrity in both the public and private sectors. The Integrity Institute of Malaysia (IIM) will collaborate with private sector organisations and NGOs to organise integrity-related programmes. Agencies similar to the IIM will also be set up at the state level to facilitate the implementation of PIN.

1.65 Good governance in the corporate sector will continue to be promoted. In this regard, regulatory institutions will strive to inculcate and improve good corporate governance including by reviewing the relevant rules, regulations and legal framework. Enforcement of rules and regulations will be stepped up.

Enhancing the Public Service Delivery System

1.66 The Government commits to improve the quality of public services as it is a fundamental prerequisite towards achieving the National Mission. Towards this end, the Government will continue to reduce bureaucratic red tape, especially at the local authority and district levels. Work processes and procedures as well as regulations will be revamped and streamlined while more decision centres will be established to enable effective and speedy decision making. ICT will also be leveraged to enhance access to and delivery of Government services. This will include the *e-Tanah* project, which will enhance land administration processes through the integrated utilisation of technology.

1.67 The KPI system will be implemented to monitor and measure the performance of the public sector delivery system and will be adopted in most agencies by 2010. Apart from the reports compiled by the Public Accounts Committee and the Auditor General, the public service delivery performance of various ministries and government agencies will be monitored through systematic rating systems, inspections and audits. The *Biro Pengaduan Awam* will also actively manage feedback and complaints from the public on public service delivery performance.

1.68 As a strong police force plays a pivotal role in maintaining public safety, the Government will ensure that the operations of the Royal Malaysia Police is enhanced and supported. In addition, measures will be taken to enhance the capability and preparedness of the nation's security forces.

Promoting Development through International Cooperation

1.69 International cooperation between Malaysia and its development partners will be strengthened, including through technical collaborations with South countries. This is in line with the 'prosper-thy-neighbour policy', whereby Malaysia through the Malaysian Technical Cooperation Programme will support the development of smart partnerships to promote greater self-reliance among developing countries. Malaysia has spearheaded the capacity building programme within the Organisation of Islamic Conference (OIC) to encourage the more developed member countries to assist the less developed ones in their developmental efforts. The Ninth Plan will expand the scope of such technical and economic cooperation, including by facilitating greater private sector participation and by refining the existing programmes to address the changing needs of participating countries.

1.70 Malaysia will continue with its policy of development cooperation and strengthening political and economic relations with its neighbours and friendly

countries on a bilateral basis and through regional groupings such as the ASEAN, East Asian Summit and Asia-Pacific Economic Cooperation, as well as through multilateral organisations such as the United Nations, OIC, Non-Aligned Movement and Commonwealth. Such international cooperation will continue to be actively promoted to bring about a more just and equitable international system as well as to pursue the country's goals and protect its interests as an open trading economy.

III. CONCLUSION

1.71 The Ninth Plan re-examines the policies and strategies that were put in place, proposes changes in the development approaches, and introduces new policy initiatives. As the first step, the achievement of the Ninth Plan's policies and strategies is critical to the realisation of the National Mission. Determined and focused implementation of the Plan will strengthen the foundation of the country, build upon Malaysia's past achievements, focus the country's efforts on the five key thrusts of the National Mission, and ultimately pave the way for Malaysia's smooth progression towards becoming a developed nation by 2020.



MACROECONOMIC STABILITY FOR GROWTH

2

I. INTRODUCTION

2.01 The Malaysian economy registered credible growth during the Eighth Plan period despite uncertainties in the global environment arising from the September 11 incident in 2001, wars in Afghanistan and Iraq as well as the severe acute respiratory syndrome (SARS) in 2003 and crude oil price upsurge in 2004-2005. The expansion was broad-based with all sectors registering positive growth. The economic fundamentals remained strong. Inflation and unemployment rates were low. The current account of the balance of payments strengthened and national savings remained high. Progress was also made in developing a knowledge-based economy.

2.02 During the Ninth Plan period, macroeconomic management will focus on ensuring macroeconomic stability to maintain the economy on a sustainable growth path. Private domestic demand is expected to register a strong growth that will enable the Government to continue with its pragmatic fiscal management. An appropriate monetary policy will be implemented to promote growth and price stability. Emphasis will also be given towards enhancing productivity and innovative capacity.

II. REVIEW OF MACROECONOMIC PERFORMANCE, 2001-2005

2.03 During the Eighth Plan period, gross domestic product (GDP) in real terms grew at an average rate of 4.5 per cent per annum supported by domestic demand and exports. Per capita gross national product (GNP) in current terms increased by 5.7 per cent per annum to RM17,687 in 2005. Per capita GNP in terms of purchasing power parity increased to US\$10,318 in 2005 due to lower inflation and a stable exchange rate.

Domestic Economy

Productivity and Efficiency

2.04 As the economy progressed towards becoming more knowledge-based, productivity and efficiency further improved. The total factor productivity (TFP) contribution to GDP increased to 29.0 per cent compared with 24.0 per cent achieved during the Seventh Plan period, as shown in *Table 2-1*. The contribution of labour to GDP was also higher at 33.2 per cent. However, the contribution of capital to GDP at 37.8 per cent was lower than the 45.2 per cent achieved during the Seventh Plan period, indicating the economy was gradually shifting towards productivity-driven growth. The lower incremental capital output ratio (ICOR)¹ at 6.2 during the Eighth Plan period compared with 8.6 in the Seventh Plan period indicated an improvement towards efficient utilisation of capital.

TABLE 2-1

CONTRIBUTION OF FACTORS OF PRODUCTION, 1996-2010

| Factor | Achieved | | | | Target 9MP | |
|------------------|--------------------------|--------------|--------------------------|--------------|--------------------------|--------------|
| | 7MP | | 8MP | | | |
| | % of Contribution to GDP | % of GDP | % of Contribution to GDP | % of GDP | % of Contribution to GDP | % of GDP |
| GDP | 4.8 | 100.0 | 4.5 | 100.0 | 6.0 | 100.0 |
| Labour | 1.5 | 30.8 | 1.5 | 33.2 | 1.8 | 29.9 |
| Capital | 2.2 | 45.2 | 1.7 | 37.8 | 2.0 | 34.3 |
| TFP ¹ | 1.1 | 24.0 | 1.3 | 29.0 | 2.2 | 35.8 |

Source: Economic Planning Unit

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

Knowledge-Based Economy

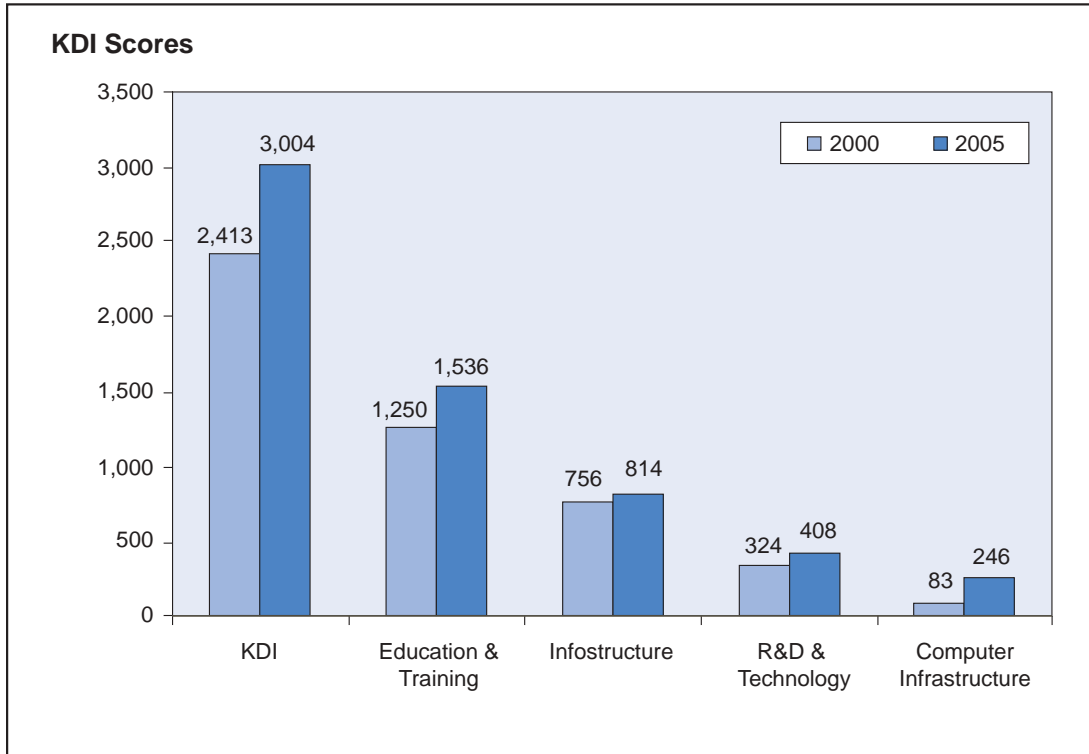
2.05 The knowledge-based economy development index (KDI)² was developed by the Government to monitor the progress of the economy towards becoming more knowledge-based. The overall KDI increased by 591 points from 2,413 in 2000 to 3,004 in 2005 with improvements recorded in all areas, as shown in *Chart 2-1*. The most significant improvement was in respect of computer

¹ Based on a 3-year moving average.

² The KDI was developed to assess Malaysia's readiness to become a knowledge-based economy. It also compares Malaysia's position relative to 21 other countries, which are mainly developed countries. 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. Currently, 21 indicators are used to construct the KDI.

CHART 2-1

**THE KNOWLEDGE-BASED ECONOMY DEVELOPMENT
INDEX: MALAYSIA, 2000 AND 2005**



Source: Economic Planning Unit

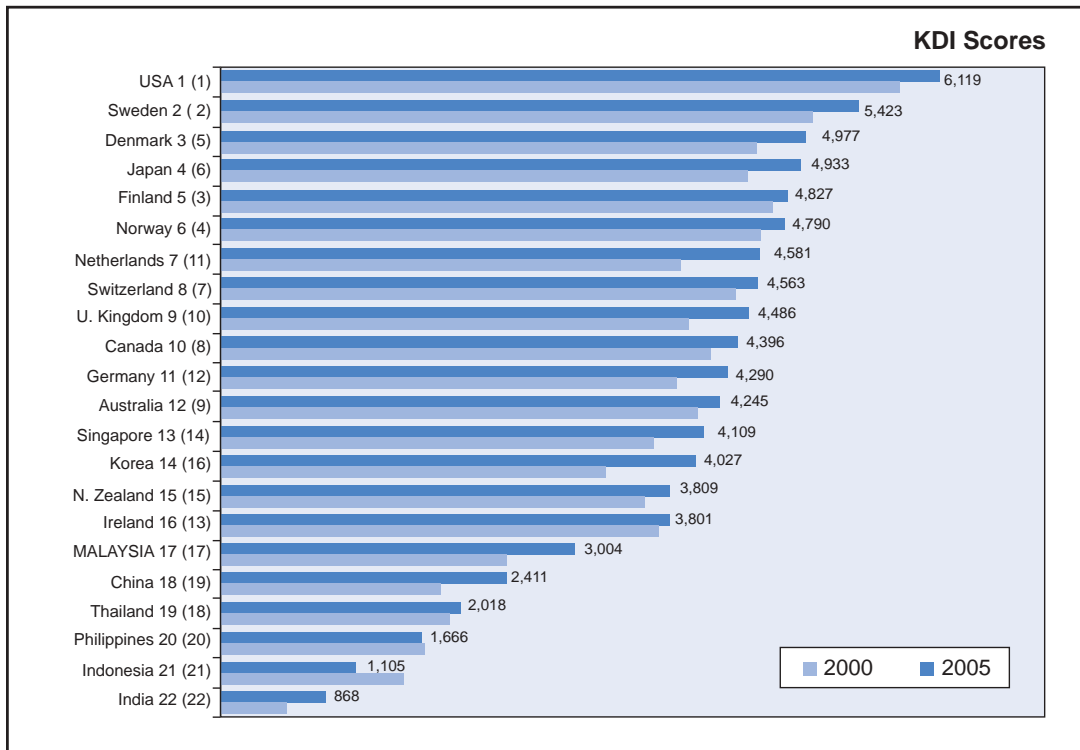
infrastructure, which registered an increase of 196.4 per cent in terms of scores between 2000 and 2005, followed by research and development (R&D) and technology at 25.9 per cent and education and training at 22.9 per cent. In terms of KDI by countries, Malaysia remained at 17th position in 2005, as shown in *Chart 2-2*.

2.06 An assessment of the knowledge readiness based on the level of knowledge content³ was also undertaken across ten manufacturing and eight services industries. It was found that all the industries that were assessed had built a certain level of knowledge competency and capability as well as embarked on some form of knowledge acquisition, generation and sharing activities. Overall, the information technology services, chemical, telecommunications, tertiary

³ The assessment is based on a survey of 1,819 firms undertaken in 2003. A total of 21 high powered variables reflecting knowledge enablers and actions were used to assess the level of knowledge content of the selected industries. The results are extracted from the Knowledge Content in Key Economic Sectors Report, 2004.

CHART 2-2

**THE KNOWLEDGE-BASED ECONOMY DEVELOPMENT
INDEX BY COUNTRY, 2000 AND 2005**



Source: Economic Planning Unit

Notes: Numbers in brackets are 2000 rankings.

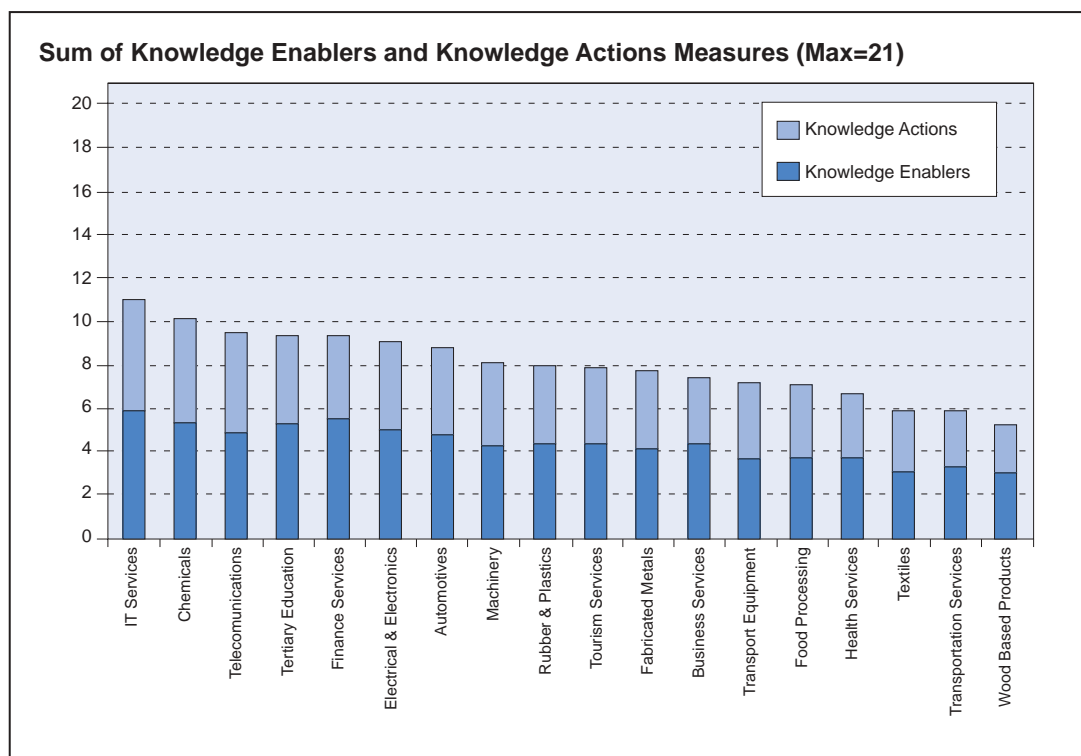
education and financial services industries exhibited better knowledge readiness, as shown in *Chart 2-3*. In terms of knowledge enablers, all industries were generally better with respect to technology and infostructure, and providing a supportive knowledge environment compared with their human resource capability and the presence of knowledge leadership. In terms of knowledge actions, all industries performed well with respect to knowledge utilisation, moderately for knowledge sharing and acquisition but were generally weak in knowledge generation.

Sectoral Output

2.07 Measures undertaken to stimulate the economy along with a better external environment and favourable commodity prices contributed to improved sectoral performance during the Plan period, as shown in *Table 2-2*. The *services sector* was the major contributor to GDP growth, growing at an average annual rate of 6.1 per cent. Its share of GDP increased to 58.1 per cent in 2005. The finance, insurance, real estate and business services subsector recorded

CHART 2-3

**AGGREGATE KNOWLEDGE CONTENT MEASURES
BY INDUSTRY, 2002**



Source: Economic Planning Unit

the highest growth at an average rate of 8.1 per cent per annum. The transport, storage and communications subsector expanded at an average rate of 6.6 per cent per annum in line with the rise in trade and travel activities. The wholesale and retail trade, hotels and restaurants subsector recorded an average annual growth of 4.3 per cent during the Plan period, supported by increased consumer and tourism activities, particularly during the 2004-2005 period.

2.08 The *manufacturing sector* achieved a growth rate averaging 4.1 per cent during the Plan period and its share to GDP increased to 31.4 per cent in 2005. The capacity utilisation rate in the manufacturing sector remained high averaging 80 per cent per year. Growth was led by resource-based industries⁴, which recorded an average growth of 5.0 per cent per annum. The main contributors to growth were the chemical products, food processing, rubber products and paper products subsectors. The non-resource-based industries⁵ grew at an

⁴ This comprised food processing, beverages and tobacco, wood products, paper products, chemical products, petroleum products, rubber products and non-metallic mineral products.

⁵ This comprised textiles and apparel, basic metal, metal products, machinery, electronics, electrical machinery, transport equipment and other manufactures.

TABLE 2-2
GROSS DOMESTIC PRODUCT BY INDUSTRY OF ORIGIN, 2000-2010

| Sector | RM million (in 1987 prices) | | | % of Total | | | Average Annual Growth Rate (%) | | Contribution to Growth (%) | |
|---|--------------------------------|----------------|----------------|--------------|--------------|--------------|-----------------------------------|------------|-------------------------------|---------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | | Achieved 8MP | Target 9MP |
| | | | | | | | Target | Achieved | | |
| Agriculture, Forestry, Livestock and Fishing | 18,662 | 21,585 | 27,518 | 8.9 | 8.2 | 7.8 | 2.0 | 3.0 | 0.3 | 0.4 |
| Mining and Quarrying | 15,385 | 17,504 | 20,675 | 7.3 | 6.7 | 5.9 | 2.9 | 2.6 | 0.2 | 0.2 |
| Manufacturing | 67,250 | 82,394 | 113,717 | 31.9 | 31.4 | 32.4 | 4.0 | 4.1 | 1.3 | 2.1 |
| Construction | 6,964 | 7,133 | 8,451 | 3.3 | 2.7 | 2.4 | 2.5 | 0.5 | 0.0 | 0.1 |
| Services | 113,408 | 152,205 | 208,086 | 53.9 | 58.1 | 59.2 | 5.2 | 6.1 | 3.4 | 3.8 |
| Government Services | 14,331 | 19,831 | 24,759 | 6.8 | 7.6 | 7.0 | 4.5 | 6.7 | 0.5 | 0.3 |
| Business and Non-Government Services | 99,077 | 132,374 | 183,327 | 47.1 | 50.5 | 52.2 | 5.3 | 6.0 | 2.9 | 3.4 |
| Electricity, Gas and Water | 8,278 | 10,860 | 14,450 | 3.9 | 4.1 | 4.1 | 5.8 | 5.6 | 0.2 | 0.2 |
| Transport, Storage and Communications | 16,858 | 23,163 | 31,984 | 8.0 | 8.8 | 9.1 | 5.8 | 6.6 | 0.5 | 0.6 |
| Wholesale and Retail Trade, Hotels and Restaurants | 31,116 | 38,437 | 53,456 | 14.8 | 14.7 | 15.2 | 3.6 | 4.3 | 0.6 | 1.0 |
| Finance, Insurance, Real Estate and Business Services | 26,755 | 39,568 | 55,385 | 12.7 | 15.1 | 15.8 | 7.0 | 8.1 | 1.1 | 1.1 |
| Other Services | 16,070 | 20,346 | 28,052 | 7.6 | 7.8 | 8.0 | 5.0 | 4.8 | 0.4 | 0.4 |
| (-) Imputed Bank Service Charges | 15,832 | 23,876 | 32,707 | 7.5 | 9.1 | 9.3 | 7.3 | 8.6 | 0.7 | 0.6 |
| (+) Imputed Duties | 4,721 | 5,083 | 5,556 | 2.2 | 1.9 | 1.6 | 6.3 | 1.5 | 0.0 | 0.0 |
| GDP at Purchasers' Value | 210,557 | 262,029 | 351,297 | 100.0 | 100.0 | 100.0 | 4.2 | 4.5 | 4.5 | 6.0 |
| Primary Sector | 34,047 | 39,089 | 48,193 | 16.2 | 14.9 | 13.7 | 2.4 | 2.8 | 0.4 | 0.6 |
| Secondary Sector | 74,215 | 89,527 | 122,168 | 35.2 | 34.2 | 34.8 | 3.8 | 3.8 | 1.3 | 2.2 |
| Tertiary Sector | 113,408 | 152,205 | 208,086 | 53.9 | 58.1 | 59.2 | 5.2 | 6.1 | 3.4 | 3.7 |
| <i>Adjusted for Import Duties less Imputed Bank Service Charges</i> | | | | | | | | | | |
| Primary Sector | 32,456 | 37,912 | 44,974 | 15.4 | 14.5 | 12.8 | 2.2 | 2.5 | 0.4 | 0.6 |
| Secondary Sector | 70,747 | 83,510 | 114,009 | 33.6 | 32.9 | 32.5 | 3.7 | 3.5 | 1.1 | 2.0 |
| Tertiary Sector | 107,355 | 140,607 | 192,314 | 51.0 | 53.7 | 54.7 | 5.0 | 5.7 | 3.0 | 3.4 |

Source : Economic Planning Unit and Department of Statistics

average rate of 3.5 per cent per annum. Despite recording a moderate growth averaging 3.0 per cent per annum, the electronics subsector remained the largest contributor, accounting for 28.0 per cent of manufacturing value added in 2005.

2.09 The *agriculture, forestry, livestock and fisheries sector* recorded an average growth of 3.0 per cent per annum. Growth was contributed by the agricultural industrial commodities and food subsectors, which grew at an annual average rate of 3.8 per cent and 1.7 per cent, respectively. Palm oil value added increased by an average rate of 6.2 per cent per annum to remain as the major contributor, accounting for 36.7 per cent of total agriculture sector value added in 2005. In the food subsector, vegetable and fruit production recorded an average annual growth of 13.8 per cent and 9.8 per cent, respectively. The livestock subsector grew at an average rate of 6.6 per cent per annum while the fisheries subsector recorded a negative growth of 0.9 per cent per annum.

2.10 The *mining sector* grew at an average rate of 2.6 per cent per annum. Production of crude oil and condensate increased by 1.3 per cent per annum from 681,000 barrels per day (bpd) in 2000 to 727,000 bpd in 2005. Prices of crude oil were volatile, particularly in 2004 and 2005, which saw the prices of the premium 'light sweet' grade, namely Tapis Blend (the Malaysian benchmark) and West Texas Intermediate (WTI) increasing to US\$55.70 and US\$56.67 per barrel, respectively, in 2005 compared with an average price of US\$24.91 and US\$25.24 per barrel, respectively, in 2001. Natural gas production also increased by an average rate of 5.8 per cent per annum to 5,800 million standard cubic feet per day (mmscfd) in 2005.

2.11 The *construction sector* recorded a marginal growth averaging 0.5 per cent per annum due to the slowdown in civil engineering activities during the second half of the Plan period. Growth was contributed by the continued demand in the residential property subsector arising from higher disposable income and attractive financing packages.

Aggregate Demand

2.12 Aggregate demand grew at an average rate of 5.5 per cent per annum in real terms. *Private investment* contracted by an average rate of 1.0 per cent per annum, as shown in *Table 2-3 and Chart 2-4*. This was due to the large contraction of 19.9 per cent in 2001 and 15.1 per cent in 2002 attributed to weak external demand and lower inflows of foreign direct investment (FDI). Nevertheless, private investment rebounded and grew at an average rate of 18.1 per cent per annum during the 2004-2005 period as businesses gained confidence in the strength of the economic expansion. Steady inflows of FDI in the manufacturing, mining and services sectors during the 2004-2005 period

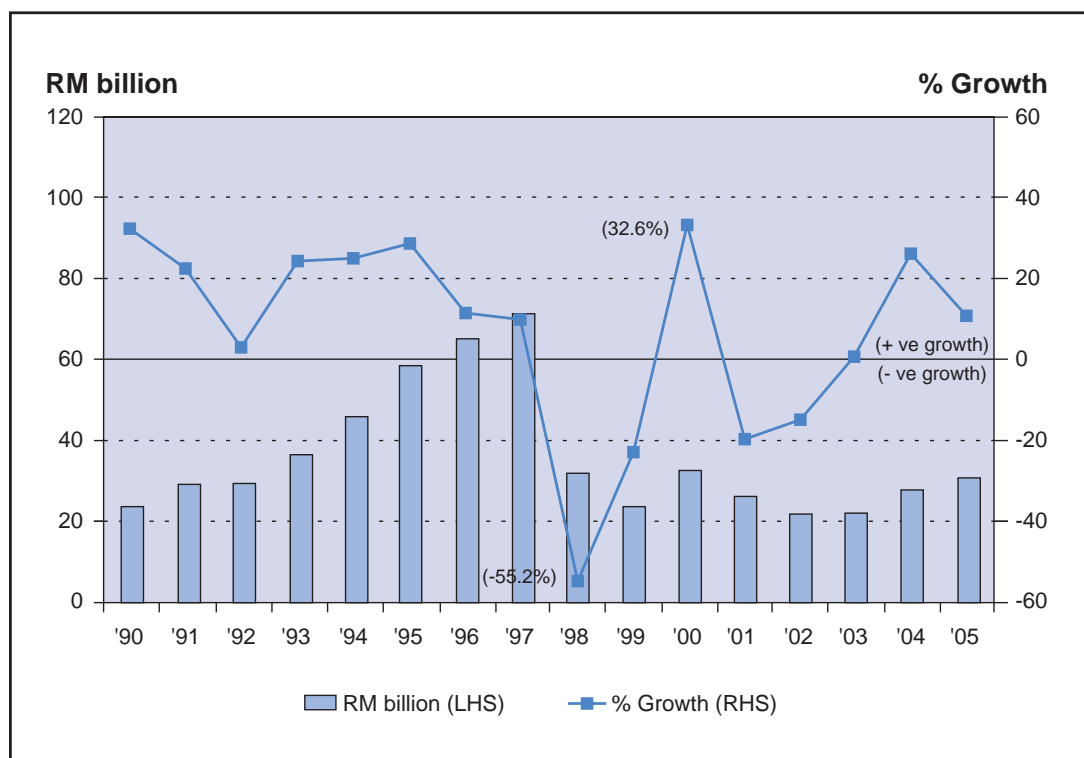
also contributed to better performance of private investment. In nominal terms, private investment totalled RM175.9 billion, lower than the RM288.6 billion achieved during the 1996-2000 period. Investment in the manufacturing sector accounted for 33.9 per cent of total investment, followed by services 21.6 per cent, construction 19.7 per cent, mining 14.5 per cent and agriculture 10.3 per cent.

TABLE 2-3
GROSS NATIONAL PRODUCT BY EXPENDITURE
CATEGORY, 2000-2010

| Category | RM million (in current prices with 1987 prices in italics) | | | Average Annual Growth Rate (%) | | | % of GDP | | |
|--|--|---|---|-----------------------------------|--------------------------|--------------------------|------------------------------|------------------------------|------------------------------|
| | 2000 | 2005 | 2010 | 8MP | | Target 9MP | 2000 | 2005 | 2010 |
| | | | | Target | Achieved | | | | |
| Consumption | 181,031 <i>119,238</i> | 280,468 <i>169,993</i> | 428,653 <i>233,074</i> | 7.4 6.1 | 9.2 7.4 | 8.9 6.5 | 52.7 56.6 | 56.7 64.9 | 59.4 66.3 |
| Private | 145,355 <i>95,370</i> | 215,876 <i>131,266</i> | 340,376 <i>182,888</i> | 6.5 5.2 | 8.2 6.6 | 9.5 6.9 | 42.4 45.3 | 43.7 50.1 | 47.1 52.1 |
| Public | 35,676 <i>23,868</i> | 64,592 <i>38,727</i> | 88,277 <i>50,186</i> | 11.0 9.4 | 12.6 10.2 | 6.4 5.3 | 10.4 11.3 | 13.1 14.8 | 12.2 14.3 |
| Gross Fixed Capital Formation | 87,729 <i>64,840</i> | 98,930 <i>70,175</i> | 148,169 <i>102,512</i> | 0.9 0.9 | 2.4 1.6 | 8.4 7.9 | 25.6 30.8 | 20.0 26.8 | 20.5 29.2 |
| Private | 44,102 <i>32,596</i> | 43,769 <i>31,047</i> | 76,170 <i>52,700</i> | -2.4 -2.3 | -0.2 -1.0 | 11.7 11.2 | 12.8 15.5 | 8.9 11.8 | 10.5 15.0 |
| Public | 43,627 <i>32,244</i> | 55,161 <i>39,128</i> | 71,999 <i>49,812</i> | 3.8 3.8 | 4.8 3.9 | 5.5 5.0 | 12.7 15.3 | 11.2 14.9 | 10.0 14.2 |
| Change in Stocks | 5,981 <i>3,383</i> | -1,059 <i>-1,708</i> | 126 <i>104</i> | - - | - - | - - | 1.7 1.6 | -0.2 -0.7 | 0.0 0.0 |
| Exports of Goods and Services | 427,004 <i>246,158</i> | 609,133 <i>316,959</i> | 923,484 <i>445,625</i> | 2.7 2.0 | 7.4 5.2 | 8.7 7.1 | 124.4 116.9 | 123.2 121.0 | 127.9 126.9 |
| Imports of Goods and Services | 358,530 <i>223,062</i> | 492,928 <i>293,391</i> | 778,213 <i>430,018</i> | 2.3 1.9 | 6.6 5.6 | 9.6 7.9 | 104.5 105.9 | 99.7 112.0 | 107.8 122.4 |
| GDP at Purchasers' Value | 343,215 <i>210,557</i> | 494,544 <i>262,029</i> | 722,219 <i>351,297</i> | 5.2 4.2 | 7.6 4.5 | 7.9 6.0 | 100.0 100.0 | 100.0 100.0 | 100.0 100.0 |
| Net Factor Payments | -28,909 <i>-19,270</i> | -21,470 <i>-13,999</i> | -39,542 <i>-23,484</i> | - - | - - | - - | | | |
| GNP at Purchasers' Value | 314,306 <i>191,287</i> | 473,074 <i>248,030</i> | 682,677 <i>327,812</i> | 5.4 4.3 | 8.5 5.3 | 7.6 5.7 | | | |
| GNP Per Capita at Purchasers' Value (RM) | 13,378 | 17,687 | 23,573 | 3.2 | 5.7 | 5.9 | | | |

Source: Economic Planning Unit and Department of Statistics

CHART 2-4
PRIVATE INVESTMENT, 1990-2005



Source: Economic Planning Unit

2.13 *Public investment* grew at an average annual rate of 3.9 per cent compared with the revised target⁶ of 3.8 per cent and its share of GDP remained at 14.9 per cent in 2005. Capital expenditure of the non-financial public enterprises (NFPEs)⁷ remained high during the Plan period, growing at an average rate of 11.3 per cent per annum, mainly due to upgrading and capacity expansion, particularly by *Petroleum Nasional Berhad* (PETRONAS), *Tenaga Nasional Berhad* (TNB) and *Telekom Malaysia Berhad* (TM).

2.14 *Private consumption* recorded a strong growth averaging 6.6 per cent per annum compared with the revised target of 5.2 per cent and its share of GDP increased to 50.1 per cent in 2005. *Public consumption* also registered a higher growth averaging 10.2 per cent per annum compared with the revised target of 9.4 per cent. This was attributed to higher Federal Government expenditure

⁶ Refers to the targets in the Mid-term Review of the Eighth Plan.

⁷ The inclusion of enterprises in the list of NFPEs was based on the criteria that the Government equity was at least 51 per cent and the turnover value was at least RM100 million or having a significant impact on the economy, including large borrowing needs and huge capital expenditure. There are 30 entities currently included in the list.

on emoluments as well as supplies and services in line with efforts to continuously upgrade the Government administrative machinery and delivery system.

Resource Balance

2.15 During the Plan period, the high level of savings was maintained, as shown in *Table 2-4*. National savings, averaging 36.3 per cent to GNP, enabled Malaysia to finance its economic growth from domestic sources. Investment as a percentage of GNP declined from 29.8 per cent in 2000 to 20.7 per cent in 2005, resulted in a surplus resource balance at 16.4 per cent to GNP in 2005 compared with 10.3 per cent in 2000.

TABLE 2-4
RESOURCE BALANCE, 2000-2010
(% to GNP)

| Sector | 2000 | 2005 | 2010 | Cumulative | |
|--------------------------|-------------|-------------|-------------|-------------|-------------|
| | | | | 8MP | Target 9MP |
| <i>Public</i> | | | | | |
| Savings | 17.6 | 16.5 | 13.9 | 15.3 | 15.2 |
| Investment | 13.9 | 11.7 | 10.5 | 14.0 | 10.9 |
| Resources Balance | 3.7 | 4.8 | 3.4 | 1.3 | 4.3 |
| <i>Private</i> | | | | | |
| Savings | 22.5 | 20.6 | 21.2 | 21.0 | 21.0 |
| Investment | 15.9 | 9.0 | 11.2 | 9.6 | 10.4 |
| Resources Balance | 6.6 | 11.6 | 10.0 | 11.4 | 10.6 |
| <i>Total</i> | | | | | |
| Savings | 40.1 | 37.1 | 35.1 | 36.3 | 36.2 |
| Investment | 29.8 | 20.7 | 21.7 | 23.6 | 21.3 |
| Resources Balance | 10.3 | 16.4 | 13.4 | 12.7 | 14.9 |

Source: Economic Planning Unit

Price Development

2.16 Inflation, as measured by the *consumer price index* (CPI) registered an average growth of 1.8 per cent per annum during the 2001-2005 period, as shown in *Table 2-5*. The core inflation, which is inflation excluding items under the Price Control Act 1946 and Price Control Order (Goods Under Price Control) 2000, also recorded an average growth of 1.5 per cent per annum during the Plan period. The rural CPI increased by an average rate of 1.7 per cent per annum and the urban CPI 1.8 per cent during the 2001-2005 period, due to higher prices for food, beverages and tobacco, transport and communications,

TABLE 2-5
PRICE DEVELOPMENT, 2001-2005

| Item | Growth Rate (%) | | | | | Average Annual Growth Rate (%), 2001-2005 |
|---|-----------------|------------|------------|------------|------------|---|
| | 2001 | 2002 | 2003 | 2004 | 2005 | |
| Consumer Price Index (2000=100) | 1.4 | 1.8 | 1.2 | 1.4 | 3.0 | 1.8 |
| of which: | | | | | | |
| Food | 0.7 | 0.7 | 1.3 | 2.2 | 3.6 | 1.7 |
| Gross Rent, Fuel and Power | 1.4 | 0.7 | 0.9 | 1.0 | 1.2 | 1.0 |
| Medical Care and Health Expenses | 2.9 | 2.4 | 1.7 | 1.4 | 1.6 | 2.0 |
| Transport and Communications | 3.6 | 6.6 | 1.6 | 0.8 | 4.4 | 3.4 |
| Consumer Price Index by Region (2000=100) | | | | | | |
| Rural | 1.3 | 1.5 | 1.0 | 1.4 | 3.2 | 1.7 |
| Urban | 1.4 | 2.0 | 1.2 | 1.4 | 3.0 | 1.8 |
| Core Consumer Price Index (2000=100)¹ | 1.1 | 1.5 | 1.0 | 1.4 | 2.6 | 1.5 |
| Consumer Price Index by Lower Income Groups (2000=100)² | 1.2 | 1.4 | 1.2 | 1.7 | 3.2 | 1.7 |
| Producer Price Index (1989=100) | | | | | | |
| of which: | | | | | | |
| Domestic Economy | -5.0 | 4.4 | 5.7 | 8.9 | 6.8 | 4.0 |
| Local Production | -6.1 | 5.7 | 6.8 | 10.3 | 7.9 | 4.8 |
| Imports | -0.4 | -0.7 | 0.8 | 2.0 | 1.5 | 0.6 |
| GDP Deflator (1987=100) | -2.9 | 3.7 | 3.5 | 6.2 | 4.5 | 3.0 |

Source: Economic Planning Unit and Department of Statistics

Notes: ¹ This index excludes items under Price Control Act 1946 and Price Control Order (Goods Under Price Control) 2000.

² Refers to income groups earning less than RM1,500 monthly.

medical care and health expenses as well as miscellaneous goods and services. Producer prices, as measured by the *producer price index* (PPI), grew at an average annual rate of 4.0 per cent during the Plan period, largely due to higher prices for commodity-related products following the higher prices of crude oil during the 2004-2005 period and crude palm oil in 2004.

Public Sector Account

2.17 There was a turnaround in the *consolidated public sector account* from an overall deficit during the 2001-2003 period to an overall surplus during the 2004-2005 period. The improvement was due to the NFPEs current surplus, which expanded from RM28.5 billion in 2000 to RM63.8 billion in 2005. The increase was attributed to higher earnings from telecommunication and utilities, oil and gas activities as well as higher prices of crude oil. The public sector account recorded an overall surplus of RM7.0 billion or 1.4 per cent to GDP in 2005, as shown in *Table 2-6*.

TABLE 2-6
CONSOLIDATED PUBLIC SECTOR ACCOUNT, 2000-2010

| Item | RM million | | | | | Cumulative | | | % to GDP | | | Average Annual Growth Rate (%) | |
|--|------------|---------|---------|------------|---------|------------|------|------|----------|-----|-----|--------------------------------|--|
| | 2000 | 2005 | 2010 | Cumulative | | 2000 | 2005 | 2010 | 8MP | 9MP | 8MP | 9MP | |
| | | | | 8MP | 9MP | | | | | | | | |
| General Government¹ | | | | | | | | | | | | | |
| Revenue | 76,002 | 122,612 | 171,530 | 533,155 | 779,468 | 22.1 | 24.8 | 23.8 | 10.0 | 6.9 | | | |
| Operating Expenditure | 64,445 | 108,414 | 148,846 | 442,036 | 655,321 | 18.8 | 21.9 | 20.6 | 11.0 | 6.5 | | | |
| Current Surplus | 11,557 | 14,198 | 22,684 | 91,120 | 124,147 | 3.4 | 2.9 | 3.1 | 4.2 | 9.8 | | | |
| NFPEs Current Surplus | 28,462 | 63,762 | 77,712 | 218,734 | 351,092 | 8.3 | 12.9 | 10.8 | 17.5 | 4.0 | | | |
| Public Sector Current Surplus | 40,019 | 77,960 | 100,396 | 309,854 | 475,239 | 11.7 | 15.8 | 13.9 | 14.3 | 5.2 | | | |
| Development Expenditure | 50,440 | 70,954 | 89,747 | 339,777 | 396,112 | 14.7 | 14.3 | 12.4 | 7.1 | 4.8 | | | |
| General Government | 27,079 | 30,973 | 46,547 | 178,673 | 218,013 | 7.9 | 6.3 | 6.4 | 2.7 | 8.5 | | | |
| NFPEs | 23,361 | 39,981 | 43,200 | 161,104 | 178,099 | 6.8 | 8.1 | 6.0 | 11.3 | 1.6 | | | |
| General Government Overall Surplus/Deficit | -15,522 | -16,775 | -23,863 | -87,554 | -93,866 | -4.5 | -3.4 | -3.3 | | | | | |
| NFPEs Overall Surplus/Deficit | 5,101 | 23,781 | 34,512 | 57,630 | 172,993 | 1.5 | 4.8 | 4.8 | | | | | |
| Public Sector Overall Surplus/Deficit | -10,420 | 7,006 | 10,649 | -29,923 | 79,127 | -3.0 | 1.4 | 1.5 | | | | | |

Source: Economic Planning Unit and Ministry of Finance

Notes: ¹ General Government comprises the Federal Government, State Governments, Local Authorities and Statutory Bodies.

2.18 Federal Government *revenue* registered an average annual growth of 11.4 per cent during the Plan period, as shown in *Table 2-7*. The increase was attributed to higher revenue collected from petroleum tax, export duties, excise duties as well as returns from investment. *Operating expenditure* of the Federal Government expanded at an average annual rate of 11.6 per cent from RM56.5 billion in 2000 to RM97.7 billion in 2005. The expansion was attributed to higher expenditure on supplies and services as well as subsidies. Taking into account the *development expenditure* amounting to RM170.0 billion, the overall Federal Government fiscal deficit declined from 5.7 per cent to GDP in 2000 to 3.8 per cent to GDP in 2005. Outstanding debt increased to RM228.7 billion or 46.2 per cent to GDP in 2005. Of the total, 86.9 per cent was domestic debt while 13.1 per cent was external debt.

External Sector

International Trade

2.19 During the Plan period, total trade expanded at an average rate of 7.2 per cent per annum from RM684.7 billion in 2000 to RM967.8 billion in 2005, as shown in *Table 2-8*. *Gross exports* grew at an average rate of 7.4 per cent per annum to RM533.8 billion in 2005, as shown in *Table 2-9*. With this performance, Malaysia was ranked the 18th largest exporter, contributing 1.5 per cent of world exports.

2.20 Manufacturing exports grew strongly, averaging 6.2 per cent per annum during the Plan period. Electrical and electronic products continued to be the mainstay of manufactured exports, although its share decreased to 65.8 per cent in 2005 from 72.5 per cent in 2000, as shown in *Chart 2-5*. Exports of agriculture and forestry products expanded at an average rate of 10.3 per cent per annum to account for 7.0 per cent of total exports attributed to higher exports for palm oil and rubber. Exports from the mining sector grew at an average rate of 14.3 per cent per annum, attributed to increased demand for crude oil and liquefied natural gas (LNG) as well as escalation in world crude oil prices from an average of US\$30 per barrel in 2000 to US\$55.70 per barrel in 2005.

2.21 *Gross imports* increased at an average rate of 6.9 per cent per annum during the Plan period particularly due to capital expansion in the manufacturing and services sectors. Import of intermediate goods grew at an average rate of 5.8 per cent per annum to account for 71.0 per cent of gross imports while import of capital goods grew by an average rate of 6.6 per cent per annum and constituted 14.0 per cent of total imports in 2005. Import of consumption goods increased by an average annual rate of 7.6 per cent to account for 5.7 per cent of gross imports at the end of the Plan period, as shown in *Table 2-10*. The import intensity declined from 51.1 per cent in 2000 to 49.9 per cent in 2005, reflecting an increase in the utilisation of locally produced components.

TABLE 2-7
FEDERAL GOVERNMENT EXPENDITURE AND FINANCING, 2000-2010

| Item | RM million | | | | | | Average Annual Growth Rate (%) | | | |
|------------------------------------|------------|---------|---------|---------|----------|------|--------------------------------|------|------|-------|
| | 2000 | | | 2010 | | | % to GDP | | | |
| | 2000 | 2005 | 2010 | 8MP | 9MP | 2000 | 2005 | 2010 | 8MP | 9MP |
| Revenue | 61,863 | 106,304 | 152,070 | 461,390 | 683,137 | 18.0 | 21.5 | 21.1 | 11.4 | 7.4 |
| Operating Expenditure ¹ | 56,547 | 97,744 | 135,723 | 396,722 | 595,529 | 16.5 | 19.8 | 18.8 | 11.6 | 6.8 |
| Current Surplus | 5,316 | 8,561 | 16,347 | 64,668 | 87,608 | 1.5 | 1.7 | 2.3 | 10.0 | 13.8 |
| Gross Development Expenditure | 27,941 | 30,571 | 41,650 | 170,000 | 200,000 | 8.1 | 6.2 | 5.8 | 1.8 | 6.4 |
| Direct Expenditure | 26,304 | 28,839 | 40,450 | 160,432 | 193,568 | 7.7 | 5.8 | 5.6 | 1.9 | 7.0 |
| Gross Lending | 1,637 | 1,732 | 1,200 | 9,568 | 6,432 | 0.5 | 0.4 | 0.2 | 1.1 | -7.1 |
| Loan Recoveries | 2,909 | 3,250 | 1,000 | 7,548 | 4,744 | 0.8 | 0.7 | 0.1 | 2.2 | -21.0 |
| Net Development Expenditure | 25,032 | 27,321 | 40,650 | 162,452 | 195,256 | 7.3 | 5.5 | 5.6 | 1.8 | 8.3 |
| Overall Surplus/Deficit | -19,715 | -18,761 | -24,303 | -97,784 | -107,648 | -5.7 | -3.8 | -3.4 | | |
| % to GDP | -5.7 | -3.8 | -3.4 | -4.8 | -3.4 | | | | | |
| Sources of Financing | | | | | | | | | | |
| Net Foreign Borrowing | 864 | -3,503 | - | 7,269 | 1,344 | 0.3 | -0.7 | 0.0 | - | - |
| Net Domestic Borrowing | 12,714 | 12,700 | 24,303 | 81,057 | 106,304 | 3.7 | 2.6 | 3.4 | - | - |
| Change in Assets ² | 6,137 | 9,564 | - | 9,421 | - | 1.8 | 1.9 | 0.0 | - | - |
| Total Debt ³ | 125,626 | 228,670 | 351,318 | 228,670 | 351,318 | 36.6 | 46.2 | 48.6 | - | - |
| Domestic | 106,805 | 198,670 | 319,974 | 198,670 | 319,974 | 31.1 | 40.2 | 44.3 | - | - |
| External | 18,821 | 30,000 | 31,344 | 30,000 | 31,344 | 5.5 | 6.1 | 4.3 | - | - |

Source: Economic Planning Unit and Ministry of Finance

Notes: ¹ This excludes transfers to Development Fund.

² A negative sign indicates accumulating of assets, a positive sign indicates draw down in assets.

³ End of period.

TABLE 2-8

DIRECTION OF TRADE, 2000-2005

| Direction | RM million | | | | | | % of Total | | | | Average Annual Growth Rate (%), 2001-2005 | | |
|--------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|--------------|--------------|---|------------|-------------|
| | Exports | | Imports | | Total Trade | | Exports | | Imports | | Exports | Imports | Total Trade |
| | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | | | |
| ASEAN ¹ | 99,028 | 139,208 | 74,940 | 110,823 | 173,968 | 250,031 | 26.5 | 26.1 | 24.1 | 25.5 | 7.0 | 8.1 | 7.5 |
| Singapore | 68,574 | 83,333 | 44,696 | 50,828 | 113,270 | 134,161 | 18.4 | 15.6 | 14.4 | 11.7 | 4.0 | 2.6 | 3.4 |
| Indonesia | 6,484 | 12,580 | 8,623 | 16,566 | 15,107 | 29,145 | 1.7 | 2.4 | 2.8 | 3.8 | 14.2 | 13.9 | 14.0 |
| Thailand | 13,485 | 28,723 | 11,987 | 22,889 | 25,472 | 51,612 | 3.6 | 5.4 | 3.8 | 5.3 | 16.3 | 13.8 | 15.2 |
| Philippines | 6,558 | 7,476 | 7,562 | 12,192 | 14,120 | 19,668 | 1.8 | 1.4 | 2.4 | 2.8 | 2.7 | 10.0 | 6.9 |
| European Union | 51,019 | 62,629 | 33,527 | 50,512 | 84,546 | 113,142 | 13.7 | 11.7 | 10.8 | 11.6 | 4.2 | 8.5 | 6.0 |
| United Kingdom | 11,566 | 9,470 | 6,080 | 6,522 | 17,646 | 15,992 | 3.1 | 1.8 | 2.0 | 1.5 | -3.9 | 1.4 | -1.9 |
| Germany, Fed. | | | | | | | | | | | | | |
| Republic of United States of America | 9,336 | 11,259 | 9,282 | 19,265 | 18,618 | 30,524 | 2.5 | 2.1 | 3.0 | 4.4 | 3.8 | 15.7 | 10.4 |
| America | 76,579 | 105,033 | 51,744 | 55,918 | 128,323 | 160,951 | 20.5 | 19.7 | 16.6 | 12.9 | 6.5 | 1.6 | 4.6 |
| Canada | 3,043 | 2,847 | 1,445 | 2,133 | 4,488 | 4,980 | 0.8 | 0.5 | 0.5 | 0.5 | -1.3 | 8.1 | 2.1 |
| Australia | 9,210 | 18,042 | 6,052 | 8,171 | 15,262 | 26,213 | 2.5 | 3.4 | 1.9 | 1.9 | 14.4 | 6.2 | 11.4 |
| Selected North East Asia countries | 103,784 | 149,105 | 117,828 | 169,236 | 221,612 | 318,338 | 27.8 | 27.9 | 37.8 | 39.0 | 7.5 | 7.5 | 7.5 |
| Japan | 48,770 | 49,918 | 65,513 | 62,982 | 114,283 | 112,899 | 13.1 | 9.4 | 21.0 | 14.5 | 0.5 | -0.8 | -0.2 |
| China, People's Republic of | 11,507 | 35,221 | 12,321 | 49,880 | 23,828 | 85,101 | 3.1 | 6.6 | 4.0 | 11.5 | 25.1 | 32.3 | 29.0 |
| Hong Kong China | 16,854 | 31,205 | 8,557 | 10,797 | 25,411 | 42,002 | 4.5 | 5.8 | 2.7 | 2.5 | 13.1 | 4.8 | 10.6 |
| Korea, Republic of | 12,464 | 17,945 | 13,926 | 21,604 | 26,390 | 39,549 | 3.3 | 3.4 | 4.5 | 5.0 | 7.6 | 9.2 | 8.4 |
| Chinese Taipei | 14,189 | 14,813 | 17,511 | 23,974 | 31,700 | 38,787 | 3.8 | 2.8 | 5.6 | 5.5 | 0.9 | 6.5 | 4.1 |
| South Asia | 10,529 | 21,245 | 3,030 | 4,504 | 13,558 | 25,749 | 2.8 | 4.0 | 1.0 | 1.0 | 15.1 | 8.3 | 13.7 |
| India | 7,312 | 14,972 | 2,748 | 4,164 | 10,059 | 19,136 | 2.0 | 2.8 | 0.9 | 1.0 | 15.4 | 8.7 | 13.7 |
| Central and South America | 5,633 | 6,169 | 2,587 | 6,786 | 8,220 | 12,955 | 1.5 | 1.2 | 0.8 | 1.6 | 1.8 | 21.3 | 9.5 |
| Africa | 2,996 | 7,649 | 1,421 | 2,511 | 4,417 | 10,160 | 0.8 | 1.4 | 0.5 | 0.6 | 20.6 | 12.1 | 18.1 |
| Others | 11,449 | 21,866 | 18,886 | 23,415 | 30,335 | 45,278 | 3.1 | 4.1 | 6.1 | 5.4 | 13.8 | 4.4 | 8.3 |
| Total | 373,270 | 533,790 | 311,459 | 434,010 | 684,729 | 967,798 | 100.0 | 100.0 | 100.0 | 100.0 | 7.4 | 6.9 | 7.2 |
| South Countries ² | 68,156 | 139,911 | 55,900 | 137,907 | 124,056 | 277,818 | 18.3 | 26.2 | 17.9 | 31.8 | 15.5 | 19.8 | 17.5 |

Source: Department of Statistics

Notes: ¹ Includes all ASEAN member countries.² Includes ASEAN other than Singapore; South Asia, North-East Asia other than Japan, Hong Kong China, Republic of Korea and Chinese Taipei; West Asia; Central and South America; Africa; and Oceania exclude Australia and New Zealand.

TABLE 2-9

MERCHANDISE TRADE, 2000-2005

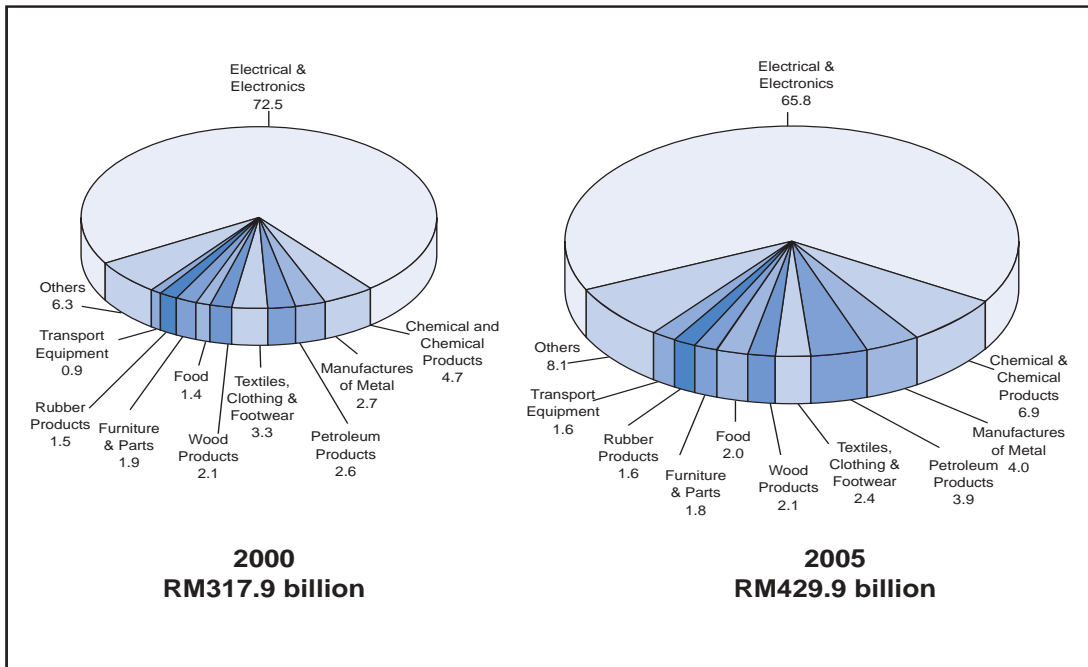
| Item | RM million | | % of Total | | Average Annual Growth Rate (%), 2001-2005 |
|-----------------------|----------------|----------------|--------------|--------------|---|
| | 2000 | 2005 | 2000 | 2005 | |
| Gross Exports | | | | | |
| Agriculture | 22,892 | 37,421 | 6.1 | 7.0 | 10.3 |
| Mining | 26,877 | 52,321 | 7.2 | 9.8 | 14.3 |
| Manufacturing | 317,908 | 429,873 | 85.2 | 80.5 | 6.2 |
| Others | 5,593 | 14,175 | 1.5 | 2.7 | 20.4 |
| Total | 373,270 | 533,790 | 100.0 | 100.0 | 7.4 |
| Gross Imports | | | | | |
| Capital Goods | 44,171 | 60,734 | 14.2 | 14.0 | 6.6 |
| Intermediate Goods | 232,687 | 308,335 | 74.7 | 71.0 | 5.8 |
| Consumption Goods | 17,040 | 24,600 | 5.5 | 5.7 | 7.6 |
| Other ¹ | 11,043 | 18,479 | 3.5 | 4.3 | 10.8 |
| Retained Imports | 304,941 | 412,148 | 97.9 | 95.0 | 6.2 |
| Import for Re-Exports | 6,518 | 21,862 | 2.1 | 5.0 | 27.4 |
| Total | 311,459 | 434,010 | 100.0 | 100.0 | 6.9 |

Source: Department of Statistics

Notes: ¹ Dual use goods, goods not elsewhere stated and transactions below RM5,000.

CHART 2-5

**GROSS EXPORTS OF MANUFACTURED GOODS, 2000 AND 2005
(% of Total)**



Source: Department of Statistics and Bank Negara Malaysia

TABLE 2-10

**GROSS IMPORTS BY END USE AND BROAD
ECONOMIC CATEGORIES, 2000-2005**

| Item | RM million | | % of Total | | Average Annual Growth Rate (%), 2001-2005 |
|---|----------------|----------------|--------------|--------------|---|
| | 2000 | 2005 | 2000 | 2005 | |
| Capital Goods | 44,171 | 60,734 | 14.2 | 14.0 | 6.6 |
| Capital Goods (except transport equipment) | 41,899 | 53,939 | 13.5 | 12.4 | 5.2 |
| Transport Equipment, Industrial | 2,272 | 6,795 | 0.7 | 1.6 | 24.5 |
| Intermediate Goods | 232,687 | 308,335 | 74.7 | 71.0 | 5.8 |
| Foods and Beverages, Primary, mainly for Industry | 1,868 | 3,747 | 0.6 | 0.9 | 14.9 |
| Foods and Beverages, Processed, mainly for Industry | 1,968 | 4,605 | 0.6 | 1.1 | 18.5 |
| Industrial Supplies, n.e.s., Primary | 6,269 | 8,895 | 2.0 | 2.0 | 7.2 |
| Industrial Supplies, n.e.s., Processed | 62,134 | 87,704 | 19.9 | 20.2 | 7.1 |
| Fuel and Lubricants, Primary | 5,380 | 15,229 | 1.7 | 3.5 | 23.1 |
| Fuel and Lubricants, Processed, Others | 6,709 | 12,263 | 2.2 | 2.8 | 12.8 |
| Parts and Accessories of Capital Goods (except transport equipment) | 144,232 | 163,660 | 46.3 | 37.7 | 2.6 |
| Parts and Accessories of Transport Equipment | 4,127 | 12,232 | 1.3 | 2.8 | 24.3 |
| Consumption Goods¹ | 17,040 | 24,600 | 5.5 | 5.7 | 7.6 |
| Foods and Beverages, Primary, mainly for Household Consumption | 2,131 | 3,403 | 0.7 | 0.8 | 9.8 |
| Foods and Beverages, Processed, mainly for Household Consumption | 4,329 | 5,877 | 1.4 | 1.4 | 6.3 |
| Consumer Goods, n.e.s. | 10,484 | 15,002 | 3.4 | 3.5 | 7.4 |
| Durables | 2,022 | 3,514 | 0.6 | 0.8 | 11.7 |
| Semi-Durables | 4,366 | 4,671 | 1.4 | 1.1 | 1.4 |
| Non-Durables | 4,096 | 6,817 | 1.3 | 1.6 | 10.7 |
| Dual Use Goods | 6,393 | 11,308 | 2.1 | 2.6 | 12.1 |
| Fuel and Lubricants, Processed, Motor Spirit | 2,469 | 6,424 | 0.8 | 1.5 | 21.1 |
| Transport Equipment, Passenger Motor Cars | 3,924 | 4,884 | 1.3 | 1.1 | 4.5 |
| Goods, n.e.s. | 158 | 563 | 0.1 | 0.1 | 29.0 |
| Transactions Below RM5,000 | 4,492 | 6,608 | 1.4 | 1.5 | 8.0 |
| Retained Imports | 304,941 | 412,148 | 97.9 | 95.0 | 6.2 |
| Import for Re-Exports | 6,518 | 21,862 | 2.1 | 5.0 | 27.4 |
| Total Gross Imports | 311,459 | 434,010 | 100.0 | 100.0 | 6.9 |

Source: Department of Statistics

Notes: ¹ Includes transport equipment for non-industrial.
n.e.s. - not elsewhere stated.

Balance of Payments

2.22 The overall *balance of payments* strengthened throughout the Plan period. The current account recorded its highest surplus of RM77.8 billion in 2005 or 16.4 per cent to GNP arising from the large surplus sustained in the goods account and improvements in the services account deficit, as shown in *Table 2-11*. The surplus in the goods account expanded to RM126.5 billion in 2005, accounting for more than 26.7 per cent to GNP during the Plan period.

TABLE 2-11
BALANCE OF PAYMENTS, 2000-2010

| Item | RM Million | | | Cumulative | |
|--|----------------|----------------|----------------|---------------|---------------|
| | 2000 | 2005 | 2010 | 8MP | Target 9MP |
| Goods and Services | 68,474 | 116,206 | 145,270 | 422.0 | 681.4 |
| Goods | 79,144 | 126,455 | 149,809 | 470.7 | 713.6 |
| Exports | 374,033 | 536,931 | 804,753 | 2,109.0 | 3,477.7 |
| Imports | 294,889 | 410,476 | 654,944 | 1,638.3 | 2,764.1 |
| Services | -10,670 | -10,249 | -4,539 | -48.7 | -32.3 |
| Transportation | -11,736 | -15,707 | -26,677 | -69.9 | -113.1 |
| Travel | 11,158 | 18,117 | 34,443 | 82.3 | 145.3 |
| Other Services | -10,030 | -12,311 | -11,914 | -59.4 | -62.5 |
| Government Transactions | -62 | -350 | -391 | -1.7 | -1.9 |
| Income | -28,909 | -21,470 | -39,542 | -119.2 | -160.7 |
| Compensation of Employees | -975 | -482 | -1,267 | -4.8 | -4.9 |
| Investment Income | -27,934 | -20,988 | -38,275 | -114.5 | -155.8 |
| Current Transfer | -7,313 | -16,963 | -14,549 | -59.6 | -80.3 |
| Current Account | 32,252 | 77,772 | 91,180 | 243.1 | 440.4 |
| (% to GNP) | 10.3 | 16.4 | 13.4 | 12.7 | 14.9 |
| Financial Account | -23,848 | -41,819 | | -65.6 | |
| Direct Investment | 6,694 | 2,711 | | 22.7 | |
| Abroad | -7,699 | -12,931 | | -34.2 | |
| In Malaysia | 14,393 | 15,642 | | 56.9 | |
| Portfolio Investment | -9,395 | -11,881 | | 17.1 | |
| Other Investment | -21,147 | -32,649 | | -105.4 | |
| Official Sector | 3,936 | -10,931 | | -11.4 | |
| Private Sector | -25,083 | -21,718 | | -94.0 | |
| Errors and Omissions | -12,107 | -23,133 | | -24.7 | |
| Overall Balance | -3,703 | 12,820 | | 152.8 | |
| Reserve Assets | | | | | |
| Central Bank Reserves ¹ | 113,541 | 266,334 | | | |
| Months of Retained Import ¹ | 4.5 | 7.8 | | | |

Source: Economic Planning Unit and Department of Statistics

Notes: ¹ Refers to end of period.

2.23 The deficit in the services account narrowed from RM10.7 billion in 2000 to RM10.2 billion in 2005. Policies to promote the export of services such as education and healthcare as well as information and communication technology (ICT) services contributed to the improvement in the services account deficit. Higher net receipts in the travel account reflected the increase in the number of tourist arrivals as well as foreign exchange earnings from education and healthcare services. Nevertheless, other components of the services account, particularly transportation and other services continued to register net outflows. The deficit in the income account remained large throughout the Plan period, averaging RM23.8 billion per annum, mainly due to the repatriation of profits and dividends accruing to foreign investors. Net outflows of transfer payments were also higher.

III. MACROECONOMIC FRAMEWORK FOR THE NINTH MALAYSIA PLAN, 2006-2010

Macroeconomic Strategies

2.24 Macroeconomic management for the Ninth Plan will focus on maintaining the macroeconomic stability to consolidate the economy on a sustainable growth path for the achievement of distributional goals as well as improvement in the quality of life of the population. The objective is to strengthen further the economic fundamentals to deal effectively with downside risks and maximise opportunities from the rapid globalisation and liberalisation process, remove imbalances as well as enhance economic resilience and competitiveness. The key macroeconomic strategies to be implemented during the Ninth Plan period are as follows:

- ❑ *achieving a credible growth rate while maintaining strong economic fundamentals;*
- ❑ *strengthening competitiveness to sustain demand for Malaysian products and services;*
- ❑ *enhancing higher contribution to growth from private sector and government-linked companies (GLCs) and attracting quality FDI to accelerate progress towards higher technology activities and expand market linkages;*
- ❑ *promoting the development of new sources of growth in the agriculture, manufacturing and services sectors as well as broadening the knowledge-based economy;*
- ❑ *raising the efficiency of capital, productivity of labour and the contribution of TFP; and*
- ❑ *sustaining pragmatic fiscal management and implementing appropriate monetary policy to support domestic economic activities.*

International Economic Outlook

2.25 The growth prospects for Malaysia in the Ninth Plan are premised on favourable developments in the domestic and international environment. On the international front, the world economy is forecast to grow at an average rate of 4.3 per cent per annum during the 2006-2010 period, as shown in *Table 2-12*. With this growth projection, demand for Malaysian exports from China, the United States of America (US) as well as other traditional and new trading partners, is expected to remain strong.

2.26 Global inflation is projected to remain moderate. The CPI in advanced economies is projected to increase at an average rate of 2.0 per cent per annum while the CPI in emerging and developing economies is expected to grow higher at 5.3 per cent per annum during the 2006-2010 period. Prices of commodities such as vegetable oils, rubber, tin and crude oil are expected to remain stable but at higher levels. The crude oil market is expected to remain tight in the medium term. Thus, crude oil price is projected to average US\$58 per barrel during the Ninth Plan period.

TABLE 2-12
WORLD ECONOMIC OUTLOOK, 2001-2010
(average annual growth rate, %)

| | 2001-2005 | 2006-2010 |
|---|------------|------------|
| WORLD OUTPUT | 3.8 | 4.3 |
| Advanced Economies | 2.1 | 2.8 |
| Other Emerging Economies and Developing Countries | 5.8 | 6.0 |
| WORLD MERCHANDISE TRADE VOLUME | 5.2 | 7.1 |
| Imports | | |
| Advanced Economies | 4.0 | 5.7 |
| Other Emerging Economies and Developing Countries | 9.2 | 10.9 |
| Exports | | |
| Advanced Economies | 3.5 | 6.0 |
| Other Emerging Economies and Developing Countries | 9.2 | 9.8 |
| WORLD PRICE IN US DOLLARS | | |
| Manufactures | 5.8 | 0.9 |
| Oil | 15.8 | 0.8 |
| Non-Fuel Primary Commodities | 6.2 | -2.5 |
| CONSUMER PRICES | | |
| Advanced Economies | 1.9 | 2.0 |
| Other Emerging Economies and Developing Countries | 6.1 | 5.3 |

Source: World Economic Outlook, September 2005, International Monetary Fund

2.27 World trade is expected to grow at an average rate of 7.1 per cent per annum during the Plan period due mainly to increased trade integration arising from bilateral and multilateral initiatives. An important development is the increasing number of regional trading agreements (RTAs) and bilateral free trade agreements (FTAs) that will enhance trade and investment flows.

Malaysian Economy

2.28 The Malaysian economy is projected to grow in line with its potential output⁸. Private expenditure will be the main impetus to growth. The Government will adopt a pragmatic approach in its fiscal management while remaining supportive of private sector initiatives. With improved productivity and efficiency, inflation is expected to increase moderately. The unemployment rate is expected to remain low due to concerted efforts to create more job opportunities in all sectors of the economy.

2.29 The economy is projected to grow at an average rate of 6.0 per cent per annum with price stability. This growth will be supported by domestic demand with strong private investment and consumption. Per capita GNP in current terms is projected to increase by an average rate of 5.9 per cent per annum to RM23,573 in 2010. Per capita GNP in terms of purchasing power parity is expected to increase to US\$13,878 in 2010.

Productivity and Efficiency

2.30 With the economy becoming more knowledge-based, the TFP contribution to GDP is projected to be higher at 35.8 per cent, as shown in *Table 2-1*, in line with the strategy to promote a productivity-driven growth. The enhancement of TFP contribution will be undertaken through programmes to upgrade skills and management capabilities, develop a more creative and skilled workforce, improve the level of educational attainment, intensify R&D and innovation activities and increase utilisation of technology and ICT in all sectors of the economy. In this regard, the private sector will be encouraged to assume a leading role.

2.31 Efficiency of capital is expected to improve further with increasing efficiency in the production process and productive utilisation of assets. The ICOR is expected to be better, averaging 4.6 compared with 6.2 recorded during the Eight Plan. Consequently, the contribution of capital to GDP is estimated at 34.3 percent. The contribution of labour to GDP is projected at 29.9 per cent with improvements in the quality of the labour force through education and training to meet the demands of a knowledge-based economy.

⁸ Potential output is defined as the level of output that is consistent with the productive capacity of an economy. Conceptually, the level of potential output is determined by the growth of non-inflationary trend levels of physical capital and the labour force as well as the rate of technological advancement.

Sectoral Output

2.32 On the supply side, growth will be supported by expansion in the manufacturing, services and agriculture sectors. Policies and strategies will be directed towards enhancing competitiveness as well as focusing on productivity and transition into higher value added and knowledge-based activities. These include efforts to strengthen small and medium enterprises (SMEs) and increase its contribution to growth.

2.33 The expansion of the *manufacturing sector* during the Plan period will be guided by the Third Industrial Master Plan (IMP3), 2006-2020. This sector is expected to become more dynamic and competitive and projected to expand at an average rate of 6.7 per cent per annum with growth emanating from the entire value chain. Emphasis will be on strengthening existing industries while harnessing new sources of growth focusing on niche products for selected markets. The private sector will be encouraged to improve their R&D capacity, technical and managerial core competencies and develop new high value products and brands with export potential. A competitive, innovative and technologically strong SMEs sector will be developed. In the resource-based industries, the food processing subsector will be strengthened to meet increasing demand for agriculture produce such as palm oil, vegetables, fruits and fish for the domestic and export markets. In addition, the development of biotechnology will further boost the advances in the manufacturing sector. Other resource-based industries such as chemicals and other chemical products, rubber processing and rubber products will continue to remain important in enhancing the value added of the manufacturing sector.

2.34 In the non-resource based industries, the electronics subsector is expected to pick-up during the first half of the Plan period following the up-cycle in global electronics demand, particularly for integrated circuits, optoelectronics, electronic discrettes, sensors and wireless products. East Asia and the US are expected to be the major source of demand. In line with this, the electronics subsector is estimated to grow at an average rate of 7.7 per cent per annum during the Plan period and constitutes 29.4 per cent of the total manufacturing value added in 2010. The liberalisation of the automotive industry is expected to stimulate the production of motor vehicles and components for the domestic and regional markets.

2.35 The *services sector* is expected to sustain its growth momentum at an average rate of 6.5 per cent per annum during the Plan period. The growth will be derived from the finance, insurance, real estate and business services as well as the wholesale and retail trade, hotels and restaurants subsectors.

2.36 The finance, insurance, real estate and business services subsector is projected to grow at an average rate of 7.0 per cent per annum. The phased

implementation of the Financial Sector Master Plan and the Capital Market Master Plan will place Malaysia as an emerging advanced financial market. The banking industry will be encouraged to strengthen group rationalization to enhance efficiency and improve risk management. Growth in the banking industry will emanate from the increase in income from fee-based and interest-based banking services. The Islamic financial system and the capital market will be further developed to take advantage of their potential and serve as new sources of growth. The use of e-banking and e-commerce is also expected to gain greater prominence during the Plan period. The insurance industry is expected to expand further following consolidation efforts by stakeholders to accelerate the pace of its development.

2.37 In moving towards a knowledge-based economy, new activities are expected to be generated in business services, particularly ICT services such as software and content development as well as Internet-based services and e-commerce solutions. During the Ninth Plan period, efforts will be undertaken to further harness ICT as a new source of wealth creation and to sustain Malaysia's position as a hub for a competitive global multimedia, shared services and outsourcing. This include the provision of improved incentives and the review of related laws and regulation which will provide a more conducive environment for investment in this subsector. In addition, the implementation of parallel efforts in nurturing human resources, building local content, strengthening intellectual property right protection, enhancing security and increasing e-enabled activities will contribute to the growth of this subsector.

2.38 The wholesale and retail trade, hotels and restaurants subsector is expected to increase at an average rate of 6.8 per cent per annum due to increasing domestic demand and the expansion of new distribution modes. Efforts to enhance Malaysia's position as an international tourist and shopping destination as well as the promotion of domestic travel and tour industry will also contribute to the growth of this subsector. During the Plan period, this subsector will continue to be transformed into a vibrant sector to provide better services. This includes sale of products and services through e-commerce, which is expected to accelerate during the Plan period.

2.39 Growth in the transport, storage and communications subsector is projected to remain robust at 6.7 per cent per annum. Major sources of growth are expected from the communications and transportation industries. The growth in the communications industry will emanate from the increased usage of cellular and its related services, broadcasting as well as Internet services, particularly e-banking, e-commerce and multimedia applications. New sources of growth such as third-generation (3G) mobile phone, terrestrial digital television and Internet telephony services are expected to gain more prominence.

2.40 The transportation industry is expected to benefit from the continuous expansion of international trade and the travel industry. Smart-partnerships between Malaysian port operators and foreign partners are expected to generate more cargo shipment and transshipment in regional markets and other international destinations. The increases in shipping services, particularly by MISC and efforts undertaken by Malaysia Airlines and AirAsia to expand their destinations are expected to contribute to the better performance projected for the transportation subsector. To facilitate better and easier access and linkages, provision of more rural roads and the restructuring of the urban public transportation will be undertaken.

2.41 The *agriculture sector* is expected to grow at an average rate of 5.0 per cent per annum. Target specific policies and strategies will be implemented to expedite the transformation of this sector into a modern, dynamic and competitive sector. The emphasis will be on *New Agriculture* involving large-scale commercial farming and participation in high quality and value-adding activities. Measures will also be undertaken to expand the use of better clones, seedlings or breed, adopt new technology and knowledge-based agriculture, gazette the necessary land for agricultural zoning, land consolidation as well as promote better coordination in project planning and implementation, extension services, quality control, financing and marketing.

2.42 The main sources of growth for the agriculture sector are palm oil, rubber and food subsectors. The production of crude palm oil is projected to increase to 19.6 million tonnes in 2010. The price of rubber is expected to remain favourable during the Plan period. In this regard, the production of rubber is expected to reach 1.3 million tonnes in 2010. The food subsector is expected to contribute 43.6 per cent to agriculture value added in 2010. Emphasis will be given to the production of livestock, fish, particularly deep-sea fishing and aquaculture as well as high value fruits and vegetables. Measures will also be undertaken to revive the cocoa industry through the rehabilitation of cocoa farms with better clones and farming techniques.

2.43 The *mining sector* is expected to expand at an average rate of 3.4 per cent per annum with the increase in condensate and natural gas production from the Third Malaysia Liquefied Natural Gas (MLNG 3) plant in Bintulu, Sarawak and from the Malaysia-Thailand Joint Authority located offshore in the Gulf of Thailand as well as the development of small gas fields offshore of Peninsular Malaysia. The production of crude oil and condensates is projected to increase to 882,000 bpd. The development of new oil fields in deep water areas offshore Sabah is expected to contribute towards a sustainable supply of crude oil and gas.

2.44 During the Plan period, the average growth of the *construction sector* is expected to be 3.5 per cent per annum. The implementation of infrastructure projects as well as residential and commercial development are expected to generate growth for this sector. For housing, among others, *Syarikat Perumahan Negara Berhad* will continue with its efforts to develop more affordable housing units, particularly for the low-income group. Among the new infrastructure projects that will be implemented are construction works on roads, airports, water supply and rail-based transportation.

Aggregate Demand

2.45 On the demand side, growth will be driven by strong domestic demand. *Private investment* is projected to grow at an average rate of 11.2 per cent per annum, as shown in *Table 2-3*. Its share to total investment is expected to increase from 44.2 per cent in 2005 to 51.4 per cent in 2010. In nominal terms, total private investment in the Ninth Plan period is projected to be RM310.0 billion or averaging RM62.0 billion per annum, higher than the RM175.9 billion achieved during the Eighth Plan period. Of the total private investment, 32.6 per cent is expected to be invested in manufacturing, 29.9 per cent in services, 14.3 per cent in construction, 12.9 per cent in mining and 10.3 per cent in agriculture.

2.46 To achieve the private investment target, efforts will be focused on enhancing the private investment climate. Measures will be undertaken to streamline the public sector delivery system to be more effective and reduce the cost of doing business. Emphasis will be especially given to human capital development through quality education and training to ensure a supply of highly knowledgeable and globally competitive individuals. Efforts will also be geared towards the provision of a range of support services to facilitate development of high value products with export potential. For greater SMEs participation, accessibility to funding will be expanded to include cash-flow based funding by the SME Bank as well as the provision of more integrated assistance packages.

2.47 The introduction of private financing initiatives to finance some of the Government development projects is expected to boost private investment further. While domestic investment is expected to assume a greater role, FDI will continue to be important, particularly for technology transfer as well as accessing global markets. Greater efforts will be undertaken to attract FDI, particularly in the high value added and technology-intensive industries.

2.48 *Public investment* is projected to grow at an average rate of 5.0 per cent per annum. The share of public investment to GDP is expected to decline

to 14.2 per cent in 2010. To improve the quality of spending, development expenditure will focus on projects that will generate maximum multiplier effects as well as extensive geographical spill overs. These projects include human resource development as well as the provision of social and physical infrastructure, particularly in the rural areas to improve accessibility and further reduce poverty. In addition, the Government will also facilitate programmes to expand the productive capacity of the economy and the development of a knowledge-based economy through technology deepening and increasing investment in R&D and innovation activities.

2.49 *Private consumption* is targeted to grow at an average rate of 6.9 per cent per annum, higher than the growth achieved during the Eighth Plan period. The expansion is due to the increase in disposable income and the continued improvement in consumer confidence underpinned by sustained employment growth and favourable commodity prices. In line with this projection, per capita private consumption is expected to increase at an average rate of 7.8 per cent per annum from RM8,071 in 2005 to RM11,753 in 2010. The share of private consumption to GDP is expected to increase to 52.1 per cent in 2010.

2.50 *Public consumption* is projected to grow at an average rate of 5.3 per cent per annum, lower than the 10.2 per cent per annum recorded during the Eighth Plan period. This reflects the effectiveness of public expenditure emphasizing value for money.

Resource Balance

2.51 The resource balance position during the Plan period augurs well for the sustained growth of the economy. Gross national savings is expected to average 36.2 per cent of GNP and investment at 21.3 per cent, as shown in *Table 2-4*. The growth in overall savings is expected to come from private savings attributed to higher income and wealth generation. The high savings rate will enable Malaysia to finance domestic investments without substantially relying on foreign borrowings. New investment instruments will be introduced to mobilise savings for investment requirements.

Price Development

2.52 Growth with price stability is essential in improving the quality of life of the population. Efforts will continue to be undertaken during the Plan period to maintain a low rate of inflation and stable prices. To reduce pressure on prices, the Government will implement measures that will contribute towards ensuring sufficient supply of products and services to meet the increasing demand. The state governments will be encouraged to facilitate the expansion in the production of fruits, vegetables and livestock as well as aquaculture

activities. In addition, GLCs as well as agricultural associations and cooperatives will be encouraged to participate in large scale food production. More *pasar tani* will be opened throughout the country to provide an alternative avenue for access to more affordable products. The Green Book Programme will be revitalised to promote cultivation of food crops at the community level. Where feasible, households will be encouraged to grow their own greens for daily consumption. Other anti-inflationary measures include the close monitoring of price movements, averting irresponsible price increases and preventing restrictive sales practices. Measures to improve the cost of doing business, including ensuring wage increases are in line with productivity growth, are also expected to reduce pressure on prices. In addition, the Government will ensure the growth of money supply is consistent with price stability. Consumers will be encouraged to practise prudent spending to avoid wastage.

Public Sector Account

2.53 During the Ninth Plan period, the *consolidated public sector account* is expected to register an overall surplus of RM79.1 billion or 2.5 per cent to GDP, as shown in *Table 2-6*. The size of the surplus is expected to increase from RM7.0 billion or 1.4 per cent to GDP in 2005 to RM10.6 billion or 1.5 per cent to GDP in 2010. The development expenditure of the public sector is expected to increase from RM70.9 billion in 2005 to RM89.7 billion in 2010.

2.54 The overall Federal Government fiscal deficit is expected to be RM107.6 billion or 3.4 per cent to GDP in the Ninth Plan period, lower than the 4.8 per cent to GDP in the Eighth Plan period. The deficit is expected to reduce gradually from 3.8 per cent to GDP in 2005 to 3.4 per cent to GDP in 2010. Domestic borrowings will be utilised to finance the deficit. In managing the fiscal deficit, focus will be on enhancing the revenue base as well as improving the efficiency and effectiveness of Government expenditure.

2.55 Total Federal Government *revenue* is expected to grow at an average rate of 7.4 per cent per annum during the Ninth Plan period from RM106.3 billion in 2005 to RM152.1 billion in 2010, as shown in *Table 2-13*. Measures will be implemented to enhance the tax administration system through improving the capacity of the tax collection agencies. Efforts will also be taken to review the tax structure and system with a view to broadening the tax base. Tax revenue is expected to increase at 6.7 per cent per annum from RM80.6 billion in 2005 to RM111.7 billion in 2010, attributed to better revenue collection projected for company and individual income taxes, import duties and excise duties. Non-tax revenue including dividends from PETRONAS and GLCs is expected to increase at an average rate of 9.4 per cent per annum from RM25.0 billion in 2005 to RM39.3 billion in 2010.

TABLE 2-13
FEDERAL GOVERNMENT REVENUE, 2000-2010

| Item | RM million | | | | | Average Annual Growth Rate (%) | |
|--------------------------------------|------------|---------|---------|------------|---------|--------------------------------|------|
| | | | | Cumulative | | | |
| | 2000 | 2005 | 2010 | 8MP | 9MP | 8MP | 9MP |
| Total Revenue | 61,863 | 106,304 | 152,070 | 461,390 | 683,137 | 11.4 | 7.4 |
| Direct Taxes | 29,156 | 53,543 | 71,541 | 231,711 | 315,884 | 12.9 | 6.0 |
| Income Taxes | 27,017 | 50,789 | 67,845 | 219,783 | 299,756 | 13.5 | 6.0 |
| Company | 13,905 | 26,381 | 35,721 | 120,172 | 154,751 | 13.7 | 6.2 |
| Individual | 7,015 | 8,649 | 12,277 | 44,934 | 52,067 | 4.3 | 7.3 |
| Petroleum | 6,010 | 14,566 | 18,752 | 52,005 | 88,044 | 19.4 | 5.2 |
| Cooperative and Holding | 87 | 1,193 | 1,094 | 2,672 | 4,894 | 68.8 | -1.7 |
| Stamp duties | 1,799 | 2,460 | 3,251 | 10,232 | 14,221 | 6.5 | 5.7 |
| Other Direct Taxes | 340 | 295 | 445 | 1,697 | 1,906 | -2.8 | 8.6 |
| Indirect Taxes | 18,017 | 27,051 | 40,180 | 114,176 | 173,433 | 8.5 | 8.2 |
| Export Duties | 1,032 | 2,085 | 2,879 | 6,511 | 13,847 | 15.1 | 6.7 |
| Import Duties and Surtax | 3,599 | 3,385 | 4,137 | 18,039 | 18,939 | -1.2 | 4.1 |
| Excise Duties | 3,803 | 8,641 | 13,783 | 28,973 | 58,284 | 17.8 | 9.8 |
| Sales and Services Taxes | 7,669 | 10,291 | 15,626 | 50,198 | 66,473 | 6.1 | 8.7 |
| Other Indirect Taxes | 1,914 | 2,648 | 3,755 | 10,453 | 15,891 | 6.7 | 7.2 |
| Non-Tax Revenue | 14,092 | 25,052 | 39,335 | 107,757 | 189,746 | 12.2 | 9.4 |
| Licences and Permits | 5,548 | 8,332 | 10,451 | 33,948 | 47,615 | 8.5 | 4.6 |
| Services Fees | 576 | 842 | 1,153 | 3,568 | 5,015 | 7.9 | 6.5 |
| Interest and Returns from Investment | 7,383 | 14,849 | 26,250 | 66,236 | 130,750 | 15.0 | 12.1 |
| Fines and Penalties | 419 | 594 | 786 | 2,681 | 3,469 | 7.3 | 5.8 |
| Other Non-Tax Revenue ¹ | 166 | 436 | 695 | 1,324 | 2,897 | 21.3 | 9.8 |
| Non-Revenue Receipts ² | 598 | 657 | 1,015 | 7,747 | 4,074 | 1.9 | 9.1 |

Source: Economic Planning Unit and Ministry of Finance

Notes: ¹ Includes returns from sales of goods, rentals and income from Malaysia-Thailand Joint Authority (MTJA).

² Includes revenue from Federal Territories.

2.56 *Operating expenditure* of the Federal Government in the Ninth Plan is estimated to amount to RM595.5 billion or 19.1 per cent to GDP, growing at an average rate of 6.8 per cent per annum from RM97.7 billion in 2005 to RM135.7 billion in 2010, as shown in *Table 2-14*. Emphasis will be given to the maintenance of facilities, buildings and infrastructure as well as improvement of the quality and efficiency of the delivery of public services. Fiscal discipline will be further enhanced to prioritise and ensure cost effectiveness of expenditure. Policies on subsidies and transfer payments will be reviewed as part of the measures to reduce the financial burden of Government as well as promote productivity and competitiveness.

TABLE 2-14
**FEDERAL GOVERNMENT OPERATING EXPENDITURE,
 2000-2010**

| Item | RM million | | | | | Average Annual Growth Rate (%) | |
|----------------------------|------------|--------|---------|------------|---------|--------------------------------|-------|
| | 2000 | 2005 | 2010 | Cumulative | | 8MP | 9MP |
| | | | | 8MP | 9MP | | |
| Operating Expenditure | 56,547 | 97,744 | 135,723 | 396,722 | 595,529 | 11.6 | 6.8 |
| Emoluments | 16,357 | 25,587 | 34,677 | 108,772 | 154,647 | 9.4 | 6.3 |
| Supplies and Services | 7,360 | 17,984 | 28,943 | 70,557 | 119,384 | 19.6 | 10.0 |
| Debt Service Charges | 9,055 | 11,604 | 18,877 | 52,373 | 79,449 | 5.1 | 10.2 |
| Pension and Gratuities | 4,187 | 6,808 | 9,638 | 28,583 | 41,905 | 10.2 | 7.2 |
| Grants to State Government | 2,077 | 2,616 | 3,374 | 12,183 | 14,136 | 4.7 | 5.2 |
| Asset Acquisition | 572 | 1,603 | 2,440 | 7,083 | 10,374 | 22.9 | 8.8 |
| Subsidies | 4,824 | 13,009 | 6,404 | 29,712 | 30,941 | 21.9 | -13.2 |
| Other ¹ | 12,115 | 18,533 | 31,370 | 87,459 | 144,694 | 8.9 | 11.1 |

Source: Economic Planning Unit and Ministry of Finance

Notes: ¹ Includes grants to statutory bodies, scholarships and educational aid, operating grants to primary and secondary schools as well as refunds and write-offs.

2.57 The *development expenditure* ceiling is RM200 billion. Economic and social programmes will continue to receive the major portion of the allocation. Allocation in the economic sector will be mainly channelled to agriculture, commerce and industry, infrastructure as well as utilities while the social programme will focus on human resource development and improvement of basic amenities. Emphasis will be given to programmes that improve the standard and quality of life, especially of the poor.

2.58 Expenditure efficiency will continue to be enhanced, including the use of cost-benefit analysis and output impact analysis. Priority of programmes and projects will be based on achieving policy objectives with maximum benefit, high multiplier effect and minimum leakages. A total approach to programme and project effectiveness will be adopted to include minimum variation from approved scope and costs as well as taking into consideration the requisite operating expenditure. To ensure value for money, emphasis will be placed on the implementation of the open tender system.

2.59 The current surplus of *NFPEs* is expected to increase from RM63.8 billion in 2005 to RM77.7 billion in 2010, totaling RM351.1 billion during the Ninth Plan period. The development expenditure of *NFPEs* is expected to register an average annual rate of 1.6 per cent, increasing from RM40.0 billion in 2005 to RM43.2 billion in 2010, totaling RM178.1 billion in the Ninth Plan period.

External Sector

International Trade

2.60 During the Ninth Plan period, total trade is anticipated to breach RM1 trillion. *Gross exports* are expected to grow at an average rate of 8.5 per cent per annum while imports expand by 9.8 per cent per annum. The progressive liberalisation of trade in goods and services under the World Trade Organisation (WTO) and ASEAN Free Trade Area (AFTA), the scheduled implementation of the ASEAN Economic Community (AEC) as well as the commitments to tariff reductions under bilateral trade arrangements will open up more markets for exports of goods and services from Malaysia. Intra-ASEAN trade is expected to increase substantially with the expected full implementation of AFTA by 2010 and the AEC, offering access to a large integrated market of more than 530 million population. In addition to traditional markets, efforts will be undertaken to enhance trade links with non-traditional and new emerging markets.

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2.61 The export of manufactures is expected to expand by an average rate of 9.3 per cent per annum during the Plan period, with earnings increasing from RM429.9 billion in 2005 to RM670.8 billion in 2010, as shown in *Table 2-15*. The major manufactured products exported will include electrical and electronic products, chemicals and chemical products, petroleum products, food, textiles, clothing and footwear, wood products, manufactures of metal and transport equipment. The growth of manufactured exports reflects the sustained expansion in demand from traditional as well as new and non-traditional markets such as China, India and Eastern Europe. In addition, the deepening and broadening of the manufacturing base will also help to boost manufactured exports.

2.62 Agricultural exports are expected to grow at an average rate of 8.0 per cent per annum during the Plan period, contributed by the positive growth in the export value of rubber, palm oil, cocoa and forestry products as well as food produce. Exports from the mining sector are expected to increase by an average rate of 2.1 per cent per annum mainly on account of the higher export of crude oil.

Balance of Payments

2.63 The current account of the *balance of payments* is expected to register a surplus of RM91.2 billion in 2010, as shown in *Table 2-11*. The goods account is projected to continue to record a surplus of RM149.8 billion or 21.9 per cent of GNP at the end of the Plan period. This surplus is partly due to better commodity prices and terms of trade.

TABLE 2-15
**COMMODITY PRODUCTION AND EXPORTS,
 2000-2010**

| Commodity | 2000 | 2005 | 2010 | Average Annual Growth Rate (%) | |
|--|----------------|----------------|----------------|--------------------------------|------------|
| | | | | 8MP | 9MP |
| Agriculture | | | | | |
| <i>Palm Oil</i> | | | | | |
| Production ('000 tonnes) | 10,842 | 14,961 | 19,561 | 6.7 | 5.5 |
| Exports ('000 tonnes) | 8,863 | 13,073 | 15,156 | 8.1 | 3.0 |
| Unit Value (RM/tonne) | 1,122 | 1,456 | 1,764 | 5.3 | 3.9 |
| Value (RM million) | 9,948 | 19,036 | 26,735 | 13.9 | 7.0 |
| <i>Rubber</i> | | | | | |
| Production ('000 tonnes) | 928 | 1,124 | 1,293 | 3.9 | 2.8 |
| Exports ('000 tonnes) | 978 | 1,128 | 1,319 | 2.9 | 3.2 |
| Unit Value (RM/tonne) | 263 | 513 | 391 | 14.3 | -5.3 |
| Value (RM million) | 2,571 | 5,787 | 5,156 | 17.6 | -2.3 |
| <i>Sawlogs</i> | | | | | |
| Production ('000 cubic metres) | 23,074 | 21,334 | 19,475 | -1.6 | -1.8 |
| Exports ('000 cubic metres) | 6,484 | 5,759 | 4,727 | -2.3 | -3.9 |
| Unit Value (RM/cubic metres) | 384 | 428 | 444 | 2.2 | 0.7 |
| Value (RM million) | 2,489 | 2,465 | 2,100 | -0.2 | -3.2 |
| <i>Sawntimber</i> | | | | | |
| Production ('000 cubic metres) | 5,590 | 4,872 | 5,024 | -2.7 | 0.6 |
| Exports ('000 cubic metres) | 2,876 | 3,686 | 2,837 | 5.1 | -5.1 |
| Unit Value (RM/cubic metres) | 1,050 | 1,099 | 1,056 | 0.9 | -0.8 |
| Value (RM million) | 3,020 | 4,051 | 2,995 | 6.0 | -5.9 |
| <i>Cocoa</i> | | | | | |
| Production ('000 tonnes) | 70 | 28 | 57 | -16.8 | 15.3 |
| Exports ('000 tonnes) | 11 | 50 | 17 | 34.5 | -19.5 |
| Unit Value (RM/tonne) | 2,878 | 5,422 | 6,024 | 13.5 | 2.1 |
| Value (RM million) | 33 | 50 | 128 | 8.9 | 20.5 |
| Mining | | | | | |
| <i>Crude Oil and Condensates</i> | | | | | |
| Production ('000 barrels per day) | 681 | 727 | 882 | 1.3 | 3.9 |
| Exports ('000 barrels per day) | 346 | 369 | 489 | 1.3 | 5.8 |
| Unit Value (RM/tonne) | 854 | 1,609 | 1,338 | 13.5 | -3.6 |
| Price (US\$/barrel) | 30 | 56 | 55 | 13.3 | -0.4 |
| Value (RM million) | 14,241 | 28,508 | 31,447 | 14.9 | 2.0 |
| <i>LNG</i> | | | | | |
| Production ('000 tonnes) | 15,430 | 21,948 | 26,470 | 7.3 | 3.8 |
| Exports ('000 tonnes) | 15,430 | 21,948 | 26,470 | 7.3 | 3.8 |
| Unit Value (RM/tonne) | 740 | 947 | 890 | 5.1 | -1.2 |
| Value (RM million) | 11,422 | 20,790 | 23,558 | 12.7 | 2.5 |
| <i>Tin</i> | | | | | |
| Production ('000 tonnes) | 6.3 | 2.8 | 3.1 | -15.0 | 2.2 |
| Exports ('000 tonnes) | 21 | 34 | 29 | 10.3 | -3.1 |
| Unit Value (RM/tonne) | 21,089 | 27,828 | 28,641 | 5.7 | 0.6 |
| Value (RM million) | 435 | 935 | 824 | 16.6 | -2.5 |
| Manufactured Exports (RM million) | 317,908 | 429,873 | 670,767 | 6.2 | 9.3 |
| Other Exports (RM million) | 5,593 | 14,175 | 20,127 | 20.4 | 7.3 |
| Gross Exports (RM million) | 373,270 | 533,790 | 803,949 | 7.4 | 8.5 |

Source: Economic Planning Unit, Department of Statistics, Ministry of Agriculture and Agro-Based Industry and PETRONAS

2.64 The services deficit is expected to narrow further to RM4.5 billion by 2010 due to continuous efforts to promote tourism and the increase in the export of services including education, healthcare as well as computer and information services. The private sector will be encouraged to leverage on the AFTA to export their services by investing in quality enhancement and product innovation. In addition, the development of ICT products and related services is expected to strengthen the growth in exports of computer and information services.

2.65 The income account is projected to remain in deficit at RM39.5 billion in 2010, mainly attributed to higher profits and dividends accruing to foreign investors. Nevertheless, the Government will continue to encourage foreign investors to retain part of their profits for reinvestment purposes.

IV. INSTITUTIONAL SUPPORT

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2.66 The macroeconomic planning and management of the economy during the Ninth Plan period will be steered by the Economic Planning Unit (EPU), the Ministry of Finance and Bank Negara Malaysia through the inter agency planning groups. The Department of Statistics will be responsible for the collection and dissemination of data for planning and monitoring of economic performance. The Implementation Coordination Unit together with EPU and the respective ministries and agencies will undertake continuous project monitoring and output impact analysis. To ensure cost effectiveness and compliance with established standards and quality, the Standards and Costs Sub-committee of the National Planning Development Committee will be strengthened.

2.67 A high-level Implementation Committee, chaired by the Prime Minister, will be established to monitor the overall performance and effectiveness of programmes and projects by sector in achieving the policies and strategies outlined in the Ninth Plan. An evaluation framework will be drawn-up by EPU to facilitate output impact analysis of the programmes and projects.

V. CONCLUSION

2.68 Despite the adverse external environment in the first half of the Eighth Plan period, the economy achieved credible growth with strong fundamentals. The main challenge during the Ninth Plan period is to sustain a higher contribution from the private sector to growth, in particular private investment. Given the openness of the Malaysian economy, initiatives to enhance competitiveness will continue to be a priority. In addition, measures to contain inflation will be

strengthened to ensure that growth is accompanied by price stability. Therefore, efforts will be undertaken to further strengthen the economic fundamentals as well as provide the enabling environment for private investment. This is crucial in ensuring the long-term sustainability and resilience of the economy in line with the first thrust of moving the economy up the value chain under the National Mission.



STRENGTHENING AGRICULTURE AND THE AGRO-BASED INDUSTRY

3

I. INTRODUCTION

3.01 The agriculture sector registered favourable growth during the Eighth Plan period. Export earnings of the sector expanded significantly due to the increase in export volume and better prices of agricultural industrial commodities. The sector continued to provide the raw materials required by the domestic agro-based industries and part of the nation's food demand.

3.02 During the Ninth Plan period, the agriculture sector will be revitalised to become the third engine of growth. The emphasis will be on *New Agriculture* which, will involve large-scale commercial farming, the wider application of modern technology, production of high quality and value-added products, unlocking the potential in biotechnology, increased convergence with information and communications technology (ICT), and the participation of entrepreneurial farmers and skilled workforce. The functions of agricultural agencies will also be streamlined to enhance service delivery and efficiency.

II. PROGRESS, 2001-2005

3.03 During the Eighth Plan period, the performance of the agriculture sector improved in terms of production, value added and exports, driven by the utilisation of new technologies, shift to large-scale commercial production, wider adoption of the group farming system, increased market accessibility and better commodity prices. Emphasis was given to the redevelopment of alienated agricultural land, particularly to expedite modernisation and improve productivity. The improved output of the agriculture sector contributed to better income and standard of living, particularly for farmers in rural areas.

Growth Performance

3.04 The agricultural value added grew at an average rate of 3.0 per cent per annum during the Plan period, higher than the target of 2.0 per cent, as shown in *Table 3-1*. The higher growth was due to better performance of the agricultural

industrial commodities subsector, particularly oil palm and rubber. The share of the sector to gross domestic product (GDP) decreased slightly from 8.9 per cent in 2000 to 8.2 per cent in 2005. Nevertheless, total agricultural value added increased from RM18.7 billion in 2000 to RM21.6 billion in 2005. The value added of agro-based industry grew at an average rate of 4.5 per cent per annum to reach RM16.9 billion in 2005. The combined value added of the agriculture and agro-based industry was RM38.5 billion or 14.7 per cent of GDP in 2005. Total agricultural and agro-based export earnings also increased by an average rate of 9.5 per cent per annum, as shown in *Table 3-2*.

TABLE 3-1
**VALUE ADDED OF AGRICULTURE AND
 AGRO-BASED INDUSTRY,
 2000-2010**

| Commodity | RM million (in 1987 prices) | | | % of Total | | | Average Annual Growth Rate (%) | | |
|---|--------------------------------|----------------|----------------|--------------|--------------|--------------|-----------------------------------|------------|---------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | | 9MP Target |
| | | | | | | | Target | Achieved | |
| Agriculture | 18,662 | 21,585 | 27,517 | 100.0 | 100.0 | 100.0 | 2.0 | 3.0 | 5.0 |
| Industrial Commodities | 11,033 | 13,278 | 15,521 | 59.1 | 60.6 | 56.4 | 0.7 | 3.8 | 3.2 |
| Oil Palm | 5,860 | 7,915 | 10,068 | 31.4 | 36.7 | 36.6 | 3.4 | 6.2 | 4.9 |
| Forestry and Logging | 3,055 | 3,016 | 2,761 | 16.4 | 13.0 | 10.0 | -5.6 | -0.3 | -1.7 |
| Rubber | 1,868 | 2,264 | 2,554 | 10.0 | 10.5 | 9.3 | 1.1 | 3.9 | 2.4 |
| Cocoa | 250 | 83 | 138 | 1.3 | 0.4 | 0.5 | 0.1 | -19.8 | 10.8 |
| Food Commodities | 7,629 | 8,308 | 11,996 | 40.9 | 39.4 | 43.6 | 4.0 | 1.7 | 7.6 |
| Fisheries | 2,493 | 2,389 | 3,875 | 13.4 | 12.6 | 14.1 | 4.1 | -0.9 | 10.2 |
| Livestock | 1,520 | 2,089 | 2,483 | 8.1 | 8.1 | 9.0 | 6.0 | 6.6 | 3.5 |
| Padi | 590 | 632 | 988 | 3.2 | 3.4 | 3.6 | 2.7 | 1.4 | 9.4 |
| Other Agriculture ¹ | 3,026 | 3,198 | 4,650 | 16.2 | 15.2 | 16.9 | 3.2 | 1.1 | 7.8 |
| Agro-Based Industry | 13,584 | 16,928 | 22,221 | 100.0 | 100.0 | 100.0 | 4.0 | 4.5 | 5.6 |
| Vegetable and Animal Oils & Fats | 2,526 | 3,639 | 5,614 | 18.6 | 21.5 | 25.3 | 6.3 | 7.6 | 9.1 |
| Other Food Processing, Beverages & Tobacco | 4,010 | 4,790 | 6,333 | 29.5 | 28.3 | 28.5 | 2.0 | 3.6 | 5.7 |
| Wood Products including Furniture | 2,934 | 2,972 | 3,761 | 21.6 | 17.6 | 16.9 | 0.6 | 0.3 | 4.8 |
| Paper & Paper Products, Printing & Publishing | 2,293 | 2,640 | 3,275 | 16.9 | 15.6 | 14.7 | 3.4 | 2.9 | 4.4 |
| Rubber Processing & Products | 1,821 | 2,887 | 3,238 | 13.4 | 17.1 | 14.6 | 4.7 | 9.7 | 2.3 |
| Total Agriculture and Agro-Based Industry | 32,246 | 38,513 | 49,738 | | | | 2.7 | 3.6 | 5.2 |
| Gross Domestic Product at Purchasers' Prices | 210,558 | 262,029 | 351,297 | | | | | 4.5 | 6.0 |

Source: Department of Statistics and Economic Planning Unit

Notes: ¹ Includes coconut, vegetables, fruits, tobacco and pepper.

TABLE 3-2
**AGRICULTURE AND AGRO-BASED MANUFACTURED EXPORT,
 2000-2010**

| Commodity | RM million | | | % of Total | | | Average Annual Growth Rate (%) | |
|---|----------------|----------------|----------------|--------------|--------------|--------------|--------------------------------|-------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP Achieved | 9MP Target |
| Agriculture Exports | 22,892 | 37,421 | 54,992 | 48.1 | 50.0 | 47.5 | 10.3 | 8.0 |
| % to Total Exports | 6.1 | 7.0 | 6.8 | | | | | |
| Industrial Commodities | 18,428 | 31,509 | 37,244 | 38.7 | 42.1 | 32.2 | 11.3 | 3.4 |
| Palm Oil | 9,948 | 19,036 | 26,735 | 20.9 | 25.4 | 23.1 | 13.9 | 7.0 |
| Rubber | 2,571 | 5,787 | 5,156 | 5.4 | 7.7 | 4.5 | 17.6 | -2.3 |
| Sawlogs | 2,489 | 2,465 | 2,100 | 5.2 | 3.3 | 1.8 | -0.2 | -3.2 |
| Sawntimber | 3,020 | 4,051 | 2,995 | 6.3 | 5.4 | 2.6 | 6.0 | -5.9 |
| Cocoa | 33 | 50 | 128 | 0.1 | 0.1 | 0.1 | 8.8 | 20.5 |
| Pepper | 367 | 120 | 130 | 0.8 | 0.2 | 0.1 | -20.0 | 1.6 |
| Food Commodities | 4,464 | 5,913 | 17,748 | 9.4 | 7.9 | 15.3 | 5.8 | 24.6 |
| Agro-Based Manufactured Exports | 24,686 | 37,442 | 60,660 | 51.9 | 50.0 | 52.5 | 8.7 | 10.1 |
| % to Total Exports | 6.6 | 7.0 | 7.6 | | | | | |
| Food | 4,509 | 8,627 | 15,803 | 9.5 | 11.5 | 13.7 | 13.9 | 12.9 |
| Beverages and Tobacco | 1,207 | 1,755 | 2,446 | 2.5 | 2.3 | 2.1 | 7.8 | 6.9 |
| Wood Product | 6,801 | 9,665 | 13,909 | 14.3 | 12.9 | 12.0 | 7.3 | 7.6 |
| Furniture and Parts | 6,077 | 8,454 | 14,335 | 12.8 | 11.3 | 12.4 | 6.8 | 11.1 |
| Paper and Paper Product | 1,397 | 2,018 | 2,799 | 2.9 | 2.7 | 2.4 | 7.6 | 6.8 |
| Rubber Product | 4,695 | 6,923 | 11,368 | 9.9 | 9.3 | 9.8 | 8.1 | 10.4 |
| Total Agriculture and Agro-Based Exports | 47,578 | 74,863 | 115,652 | 100.0 | 100.0 | 100.0 | 9.5 | 9.1 |
| % of Total Exports | 12.7 | 14.0 | 14.4 | | | | | |
| Total Exports | 373,270 | 533,790 | 803,163 | | | | 7.4 | 8.5 |

Source: Department of Statistics and Economic Planning Unit

3.05 Employment in the agriculture sector continued to contract at an average rate of 0.2 per cent per annum to 1.4 million in 2005, as shown in *Table 3-3*. However, labour productivity improved, as reflected by the increase in value added per worker from RM13,120 in 2000 to RM15,750 in 2005, at an average rate of 3.7 per cent per annum. The Agricultural Census 2005¹ identified a total of 816,813 individuals or 7.2 per cent of the total labour force who was involved in the agriculture sector. Of this total, 52.8 per cent was agricultural operators, 37.2 per cent workers and 10.0 per cent unpaid family workers. In terms of age profile, 43.8 per cent was in the age group 55 and above while only 25.3 per cent was in the 15 to 40 year age group.

1. The Agricultural Census 2005 covered:
- (i) Occupations involved in primary agriculture activities including agricultural services;
 - (ii) worked at least three months in the sector; and
 - (iii) smallholdings.

TABLE 3-3
**EMPLOYMENT AND VALUE ADDED PER WORKER IN
 AGRICULTURE AND AGRO-BASED INDUSTRY,
 2000-2010**

| | 2000 | 2005 | 2010 | Average Annual Growth Rate (%) | | |
|--|----------------|----------------|----------------|--------------------------------|------------|---------------|
| | | | | 8MP | | 9MP Target |
| | | | | Target | Achieved | |
| Agriculture Employment | | | | | | |
| Number ('000) | 1,423.0 | 1,405.7 | 1,323.8 | -1.4 | -0.2 | -1.2 |
| % of Total Employment | 15.3 | 13.3 | 10.9 | | | |
| Value Added Per Worker (RM in 1987 prices) | 13,115 | 15,752 | 21,299 | 4.5 | 3.7 | 6.2 |
| Agro-Based Employment | | | | | | |
| Number ('000) | 844.0 | 981.9 | 1,110.2 | | 3.1 | 2.5 |
| % of Total Employment | 9.1 | 9.3 | 9.1 | | | |
| Value Added Per Worker (RM in 1987 prices) | 16,107 | 17,002 | 19,688 | | 1.1 | 3.0 |
| Total Employment in Agriculture and Agro-Based Industry | 2,267.0 | 2,387.6 | 2,434.0 | | 1.0 | 0.4 |
| % of Total Employment | 24.4 | 21.9 | 20.3 | | | |

Source: Department of Statistics and Economic Planning Unit

Land Utilisation

3.06 Agricultural land use increased from 5.9 million hectares in 2000 to 6.4 million hectares in 2005, largely due to the expansion in the hectareage of oil palm, coconuts, vegetables and fruits. Of the total land area, 4.0 million hectares were under oil palm followed by 1.3 million hectares under rubber. During the Plan period, a total of 163,000 hectares of agricultural land remained idle. Efforts to optimise the utilisation of idle land were hindered by several constraints, particularly absentee landlords, ageing landowners and farmers as well as difficulties in consolidating native and customary land.

Agricultural Production

3.07 During the Plan period, production of agricultural commodities except sawlogs, cocoa and pepper, continued to record positive growth. The increase in production was attributed to higher prices and market expansion as well as the effective implementation of programmes and projects to improve productivity and quality of outputs.

Agricultural Industrial Commodities

3.08 Crude *palm oil* (CPO) production increased at an average rate of 6.7 per cent per annum due to improvements in yield, higher oil extraction rate (OER), expansion in matured areas as well as higher palm oil prices. The palm oil industry benefited from the tight world supply of edible oils and fats, which resulted in palm oil prices rising to its highest level of RM1,610 per metric tonne during the Plan period.

3.09 The production of *rubber* increased at an average rate of 3.9 per cent per annum, attributed mainly to increasing demand for natural rubber, particularly from The People's Republic of China, which resulted in higher rubber prices. The higher production was also due to increased tapping and wider adoption of the Low Intensity Tapping System (LITS) among smallholders. These contributed to an increase in the average monthly income of smallholders from RM500 to RM2,000.

3.10 *Cocoa* bean production declined to 28,000 metric tonnes in 2005, in tandem with the reduction in planted area due to protracted low prices of cocoa beans. The production of *pepper* declined to 19,100 metric tonnes in 2005, largely due to low prices and high production costs. The implementation of the grower-curer system, upgrading of irrigation and drainage facilities and better support services contributed to an increase in the production of *tobacco* to 14,000 metric tonnes in 2005.

3.11 With the continued commitment to conservation of natural forests and the implementation of sustainable forest management, the annual allowable cut rate (ACR) was reduced to 272,800 hectares per year during the Plan period. In addition, selective harvesting contributed further to the reduction in loggable areas. As a result, the production of *sawlogs* declined at an average rate of 1.6 per cent per annum.

Food Commodities

3.12 During the Plan period, the production of food commodities recorded positive growth as a result of the aggressive implementation of programmes and projects to increase food production and exports. Subsequently, self-sufficiency levels of almost all food items improved. In addition, export of food grew at an average rate of 8.7 per cent per annum, higher than that of imports at 7.9 per cent.

3.13 Further consolidation of *padi* smallholdings through the group farming concept in the eight granary areas and the implementation of the Ten Tonnes Per Hectare Project, enabled the greater adoption of the Good Agriculture Practices (GAP) and better farm management. As a result, *padi* production increased at an average rate of 2.3 per cent per annum.

3.14 The expansion in hectareage for *fruit* cultivation led to an increase in production at an average rate of 9.8 per cent per annum. Production was concentrated on 15 types of fruits with potential for commercialisation. *Coconut* production increased at an average annual rate of 4.8 per cent, particularly due to greater utilisation of higher yielding clones, namely *kelapa matag* and *kelapa pandan*, as well as expansion in cultivated areas and increase in demand.

3.15 The production of *vegetables* grew at an average rate of 13.8 per cent per annum attributed to the expansion in cultivated areas, intensive implementation of estate-based activities and higher productivity from good farming practices as well as improvements in post-harvest handling. The production of organic vegetables was further promoted with the introduction of the Malaysian Organic Scheme, which enabled growers to sell their produce at premium prices. At the end of the Plan period, a total of 132 hectares of organic vegetable farms was certified under this scheme.

3.16 *Fish* production increased at an average rate of 1.6 per cent per annum to reach 1.6 million metric tonnes in 2005. This was due to the increase in marine catch as well as expansion in aquaculture, particularly by the private sector.

3.17 *Livestock* production recorded positive growth during the Plan period. *Mutton* registered the highest growth, averaging 10.8 per cent per annum followed by *beef* at 10.2 per cent per annum. The increase was largely contributed by the rearing of cattle and goats in oil palm and rubber plantations as well as feedlot cattle rearing by the private sector. The *poultry* industry, including production of eggs, remained resilient despite the outbreak of the avian bird flu in 2003. This was due to the expansion in the application of the closed-house system. *Pork* production, which recovered from the outbreak of the Nipah virus, increased at an annual growth rate of 5.5 per cent.

New Sources of Growth

3.18 The development of new sources of growth, particularly *ornamental fish*, *seaweed*, *tuna* and *floriculture* was continued during the Plan period. The production of ornamental fish increased from 306 million tails in 2000 to 438 million tails in 2005 with a market value of RM103 million. With regard to seaweed, production increased at an average annual rate of 73.7 per cent, to reach 65,000 metric tonnes in 2005, as a result of intensive cultivation based on the estate concept in the offshore areas of Sabah. The first integrated tuna fishing port was constructed in Batu Maung, Pulau Pinang under the privatization concept to promote the development of the tuna industry. The performance of the floriculture industry improved with the production of flowers increasing to 126 million stalks in 2005. The nursery and landscape industry was further developed to take advantage of the increasing demand for nursery products and landscaping services.

Agro-Based Industry

3.19 The agro-based industry grew at 4.5 per cent per annum. Total export earnings of the agro-based industry increased significantly by 8.7 per cent per annum to reach RM37.4 billion in 2005. The processing of end-products from agricultural industrial commodities such as palm oil, rubber and cocoa increased during the Plan period.

3.20 The processing of food commodities continued to be encouraged and to support small producers, the products were marketed, particularly under the brand name *Agromas* and *Olemas*. Towards this end, the Ministry of Agriculture and Agro-Based Industry (MOA) provided extension services to 14,883 entrepreneurs. The Malaysian Agricultural Research and Development Institute (MARDI) developed 44 food products and 200 processing technologies, particularly to facilitate the activities of small and medium-scale enterprises (SMEs).

Agricultural Programmes

3.21 During the Plan period, agricultural programmes were focused on transforming traditional farming into modern and commercial farming to increase the income and productivity of farmers as well as improving their competitiveness. In this regard, efforts were intensified to encourage agricultural entrepreneurs, farmers and smallholders, particularly among the Bumiputera, to adopt new agronomic and modern farm management practices, increase mechanisation and familiarise them with GAP.

3.22 *Replanting.* The replanting programme under various agencies, which comprised replanting of rubber to rubber as well as rubber to oil palm, achieved 77.6 per cent of its target. Of this total, 74 per cent was replanted with rubber and the balance with oil palm. The performance of this programme was affected by the high rubber prices, which led smallholders to delay replanting.

3.23 *Land Consolidation and Rehabilitation.* A total of 31,332 hectares of land was consolidated and rehabilitated whereby FELCRA Berhad managed to consolidate 10,200 hectares. *Lembaga Pertubuhan Peladang* (LPP) rehabilitated 4,433 hectares including idle land for commercial farming of food commodities, which benefited 3,159 farmers.

3.24 *Permanent Food Production Parks.* During the Plan period, large-scale commercial production of food was undertaken through the establishment of Permanent Food Production Parks in various states including in Pahang, Selangor and Johor. These parks were aimed at creating entrepreneur farmers with a minimum income of RM3,000 per month. In this regard, 28 parks were established, involving 2,007 hectares of land and 319 entrepreneur farmers.

3.25 *Forest Development.* To provide adequate and sustainable supply of timber and rubber wood for the local furniture industry, measures were undertaken to convert degraded forest and idle land into forest plantations including rubber forest plantations. About 3,400 hectares of rubber forest plantations were developed in Peninsular Malaysia.

3.26 *Marketing Services.* Marketing services, particularly in the food subsector was further improved with the setting up of the FAMAXchange in 2004 and the expansion of Agribazaar portal. In addition, other portals were also developed including *Ikan Online*, SIRIP and Padi Net.

3.27 The regional offices of Malaysian Palm Oil Board (MPOB) Technical Advisory Services Units continued their efforts to increase market acceptance and consumption of palm oil. The Malaysian Rubber Board (MRB) continued its efforts to encourage local and foreign direct investments in rubber product manufacturing and promote the products to local and overseas consumers.

3.28 Efforts to penetrate hypermarkets were intensified through the arrangement of more agricultural products supply contracts by the government agencies. Marketing of marine fish was enhanced through the increased involvement of fishermen associations as wholesalers from 15 in 2002 to 43 in 2005. In addition, the sale of agriculture produce under the brand names of *Malaysia's Best*, *Agromas* and *Olemas* was further promoted. The introduction of the farm accreditation schemes and development of food safety standards enabled greater access of local agricultural products to international markets.

3.29 *Research and Development.* Agricultural research and development (R&D) continued to be emphasised to further improve competitiveness of the sector. During the Plan period, of the total 535 R&D projects undertaken by the agricultural research agencies, 90 were commercialised while another 30 were ready to be commercialised.

3.30 *Training and Extension Services.* Focus was given to commercialisation of agricultural activities, modern farming practices, post-harvest handling, processing and marketing. By the end of the Plan period, a total of 260,930 entrepreneurs and farmers was trained. In addition, four agricultural training institutions conducted the National Agricultural Skills Training Programme based on the National Occupational Skills Standard (NOSS) beginning 2004. Since its introduction, a total of 564 trainees was enrolled in courses related to fisheries, horticulture, livestock, food processing and marketing.

3.31 *Agriculture Credit.* The disbursement of credit for agricultural projects by the banking sector during the Plan period amounted to RM56.3 billion. This represented only 2.5 per cent of the total loans disbursed by this sector. Bank Pertanian Malaysia (BPM) disbursed a total of RM3.4 billion to increase farm mechanisation, promote Bumiputera participation, encourage the involvement

of graduates in commercial farming as well as provide micro-credit for food production and financial assistance to agricultural-related SMEs. Specific funds were also established to provide financial assistance to farmers, smallholders and fishermen. Towards this end, *Dana Nelayan* with a total fund of RM63 million benefited 3,074 fishermen while the *Kumpulan Wang Pinjaman Pertubuhan Peladang* provided loans totalling RM79.6 million to farmers' organisations. A total of RM88.6 million was also disbursed to 642 farmers and entrepreneurs under the *Skim Pembiayaan Ekonomi Desa* (SPED). The fund was utilised to assist entrepreneurs involved in agriculture, manufacturing, services and rural tourism activities for the setting up and expansion of businesses.

3.32 *Drainage and Irrigation*. A total of RM453 million was expended on various agricultural drainage and irrigation, and water resources projects to improve flood control and water supply. These included the construction of new drainage and irrigation facilities, farm roads and crossings, covering a total of 70,000 hectares of agricultural land as well as the Beris Dam in Sik, Kedah.

III. PROSPECTS, 2006-2010

3.33 During the Ninth Plan period, the focus will be on developing *New Agriculture*. This will entail further expanding large-scale commercial farming and venturing into high quality and value added primary and processing activities as well as unlocking the potential in biotechnology. The productivity, efficiency, and the income and wealth generating potential of the sector will be enhanced through the wider application of modern farming methods and ICT, strengthening R&D and innovation, improving marketing capability, and promoting increased participation of the private sector including entrepreneurial farmers and skilled workers. Optimisation of land use as well as land consolidation and rehabilitation will be given priority. The agriculture sector is expected to grow at a higher average annual rate of 5.0 per cent. With the inclusion of the agro-based industry, the growth rate is expected to be 5.2 per cent. The issues related to the prevalence of pockets of poverty among small-scale farmers, the slow transformation of smallholdings into modern farming and agricultural land constraints will also be addressed.

Policy Thrusts

3.34 During the Plan period, the overall policy thrusts of the agriculture sector will focus on its reorientation towards greater commercialisation and the creation of high-income farmers as well as promotion of greater private sector investment including foreign investment. In this regard, the policy thrusts will be as follows:

- ❑ *increasing agricultural production including by venturing into new sources of growth with greater private sector participation;*
- ❑ *expanding agro-based processing activities and product diversification;*

- ❑ *strengthening marketing and global networking;*
- ❑ *enhancing incomes of smallholders, farmers and fishermen; and*
- ❑ *improving the service delivery system.*

Increasing Agricultural Production

3.35 During the Plan period, efforts will be undertaken to increase agricultural production through new land development, replanting, land consolidation and rehabilitation as well as greater utilisation of high yielding clones and breeds, farm mechanisation and good agronomic practices towards productivity improvements. The private sector and the government-linked companies (GLCs) will be further encouraged to increase agricultural investments through better incentives and support measures.

3.36 The production of *palm oil* is expected to increase at an average rate of 5.5 per cent per annum with the expansion in planted area and higher OER, as shown in *Table 3-4*. The development of the *rubber* subsector will be focused on accelerating efforts to consolidate and rehabilitate rubber smallholdings to increase productivity. In this regard, an optimum area of 800,000 hectares will be maintained as rubber zone by 2020 to meet the requirement of the domestic rubber processing industries. *Cocoa* production will be increased to supply raw materials for local downstream processing. Production of *pepper* is expected to increase through productivity improvements and promotion of good agricultural practices among pepper farmers. The *tobacco* growing industry will be further restructured in line with the commitment to the Framework Convention on Tobacco Control. The production of *sawlogs* will continue to be based on sustainable forest management. In this regard, the ACR will be set at 266,940 hectares per annum.

3.37 The food commodities subsector is expected to grow at an average rate of 7.6 per cent per annum through improvements in efficiency and productivity as well as expansion in hectarage. Exports of food commodities will be increased to achieve a positive food trade balance, as shown in *Table 3-5*. The production of *padi* will be increased to meet the target of self-sufficiency level of 90 per cent, as shown in *Table 3-6*. The production of *fruits* will be undertaken on a large-scale in the fruit production zones using the cluster development approach and concentrating on nine fruit species which have export potential. The production of *vegetables* will focus on high value varieties for local consumption and selected export markets. The Green Book Programme to promote cultivation of food crops at the community level will be reactivated.

3.38 *Fish* production will focus on expanding aquaculture and deepsea fishing activities. Aquaculture including marine fish farming will focus on high value species such as humpback seabass, six-banded grouper and tiger prawns. The development of the *livestock* industry will centre on various activities along the value chain including production of breeders and animal feed. To cater for the increase in demand for animal feeds and to reduce imports, efforts will be

TABLE 3-4
**PRODUCTION OF AGRICULTURAL COMMODITIES,
 2000-2010**

| Commodity | Metric Tonnes ('000) | | | Average Annual Growth Rate (%) | | |
|-------------------------------|----------------------|---------|---------|--------------------------------|----------|---------------|
| | | | | 8MP | | 9MP Target |
| | 2000 | 2005 | 2010 | Target | Achieved | |
| Industrial Commodities | | | | | | |
| Rubber | 928 | 1,124 | 1,293 | 4.0 | 3.9 | 2.8 |
| Crude Palm Oil | 10,842 | 14,961 | 19,561 | 6.1 | 6.7 | 5.5 |
| Palm Kernel Oil | 1,384 | 1,868 | 2,570 | 5.0 | 6.2 | 6.6 |
| Sawlogs ¹ | 23,074 | 21,334 | 19,475 | -5.3 | -1.6 | -1.8 |
| Cocoa | 70 | 28 | 57 | -5.7 | -16.7 | 15.5 |
| Food Commodities | | | | | | |
| Padi | 2,141 | 2,400 | 3,202 | 0.2 | 2.3 | 5.9 |
| Fisheries | 1,454 | 1,575 | 2,071 | 7.2 | 1.6 | 5.6 |
| Marine | 1,286 | 1,325 | 1,409 | 5.9 | 0.6 | 1.2 |
| Aquaculture | 168 | 250 | 662 | 18.3 | 8.3 | 21.5 |
| Livestock | | | | | | |
| Beef | 17.5 | 28.5 | 45.0 | 18.0 | 10.2 | 9.6 |
| Mutton | 0.9 | 1.5 | 2.3 | 11.0 | 10.8 | 8.9 |
| Pork | 159.8 | 209.0 | 241.0 | 6.6 | 5.5 | 2.9 |
| Poultry | 714.3 | 980.1 | 1,295.0 | 4.7 | 6.5 | 5.7 |
| Eggs | 399.0 | 443.0 | 600.0 | 4.0 | 2.1 | 6.3 |
| Milk ² | 29.5 | 41.1 | 68.4 | 8.9 | 6.9 | 10.7 |
| Miscellaneous | | | | | | |
| Pepper | 24.0 | 19.1 | 30.0 | 5.9 | -4.5 | 9.5 |
| Pineapple | 265.7 | 407.6 | 1,106.0 | 2.0 | 8.9 | 22.1 |
| Tobacco | 7.4 | 14.0 | 12.0 | 13.6 | 13.6 | -3.0 |
| Flowers ³ | 120.4 | 126.4 | 147.3 | 3.3 | 1.0 | 3.1 |
| Fruits | 993.0 | 1,586.9 | 2,555.7 | 3.1 | 9.8 | 10.0 |
| Vegetables | 404.0 | 771.3 | 1,133.3 | 0.6 | 13.8 | 8.0 |
| Coconut | 475.7 | 602.0 | 660.0 | 0.6 | 4.8 | 1.9 |

Source: Ministry of Agriculture and Agro-Based Industry and Ministry of Plantation Industries and Commodities

Notes: ¹ Measured in thousand cubic metres.

² Measured in million litres.

³ Measured in million stalks.

TABLE 3-5

EXPORTS AND IMPORTS OF FOOD, 2000-2010

| Commodity | RM million | | | % of Total | | | Average Annual Growth Rate (%) | |
|--|-----------------|-----------------|-----------------|--------------|--------------|--------------|--------------------------------|-------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP Achieved | 9MP Target |
| Exports | 5,268.6 | 7,986.8 | 15,501.0 | 100.0 | 100.0 | 100.0 | 8.7 | 14.2 |
| Live Animals | 357.4 | 425.1 | 467.0 | 6.8 | 5.3 | 3.0 | 3.5 | 1.9 |
| Meat & Meat Preparations | 64.6 | 85.9 | 2,895.0 | 1.2 | 1.1 | 18.7 | 5.9 | 102.1 |
| Dairy Products | 410.2 | 413.2 | 520.0 | 7.8 | 5.2 | 3.4 | 0.1 | 4.7 |
| Vegetables | 278.4 | 491.6 | 614.0 | 5.3 | 6.2 | 4.0 | 12.0 | 4.5 |
| Fruits | 512.4 | 471.9 | 2,153.2 | 9.7 | 5.9 | 13.9 | -1.6 | 35.5 |
| Sugar, Sugar Preparations & Honey | 353.7 | 479.2 | 474.6 | 6.7 | 6.0 | 3.1 | 6.3 | -0.2 |
| Cereal & Cereal Preparations | 610.8 | 916.6 | 576.5 | 11.6 | 11.5 | 3.7 | 8.5 | -8.9 |
| Fish, Crustaceans, Molluscs & Preparations thereof | 1,263.3 | 2,265.9 | 4,624.7 | 24.0 | 28.4 | 29.8 | 12.4 | 15.3 |
| Feeding Stuff for Animals | 375.3 | 547.1 | 531.0 | 7.1 | 6.9 | 3.4 | 7.8 | -0.6 |
| Others | 1,042.5 | 1,890.3 | 2,645.0 | 19.8 | 23.7 | 17.1 | 12.6 | 6.9 |
| Imports | 10,543.5 | 15,435.0 | 14,276.9 | 100.0 | 100.0 | 100.0 | 7.9 | -1.5 |
| Live Animals | 154.6 | 177.4 | 127.0 | 1.5 | 1.1 | 0.9 | 2.8 | -6.5 |
| Meat & Meat Preparations | 771.4 | 1,054.6 | 1,262.0 | 7.3 | 6.8 | 993.7 | 6.5 | 3.7 |
| Dairy Products | 1,176.5 | 1,745.1 | 1,533.0 | 11.2 | 11.3 | 121.5 | 8.2 | -2.6 |
| Vegetables | 1,023.6 | 1,620.2 | 670.0 | 9.7 | 10.5 | 43.7 | 9.6 | -16.2 |
| Fruits | 561.6 | 694.9 | 812.1 | 5.3 | 4.5 | 121.2 | 4.4 | 3.2 |
| Sugar, Sugar Preparations & Honey | 1,085.2 | 1,406.0 | 1,216.0 | 10.3 | 9.1 | 149.7 | 5.3 | -2.9 |
| Cereal & Cereal Preparations | 1,839.1 | 2,267.1 | 1,464.8 | 17.4 | 14.7 | 10.3 | 4.3 | -8.4 |
| Fish, Crustaceans, Molluscs & Preparations thereof | 1,085.8 | 1,851.9 | 841.0 | 10.3 | 12.0 | 5.9 | 11.3 | -14.6 |
| Feeding Stuff for Animals | 1,928.4 | 2,838.2 | 4,303.0 | 18.3 | 18.4 | 30.1 | 8.0 | 8.7 |
| Others | 917.3 | 1,779.6 | 2,048.0 | 8.7 | 11.5 | 14.3 | 14.2 | 2.8 |

Source: Department of Statistics and Ministry of Agriculture and Agro-Based Industry

undertaken to increase the utilisation of feedrice and local forage including *kenaf*, oil palm fronds as well as its by-products. The output of livestock products, particularly poultry and eggs will be further increased using more modern production systems to meet local and export demand.

3.39 *New Sources of Growth.* The development of new sources of growth in the agriculture sector will be accelerated during the Plan period. In this regard, large-scale production of tuna, ornamental fish and plants, floriculture, herbs and seaweed will be encouraged through the provision of extension services, incentives, basic infrastructure, marketing facilities and the promotion of downstream processing activities. The completion of the Malaysian International Tuna Port in Batu Maung, Pulau Pinang will enable larger tuna landings and accelerate

TABLE 3-6
**SELF-SUFFICIENCY LEVELS IN FOOD COMMODITIES,
 2000-2010
 (%)**

| <i>Commodity</i> | 2000 | 2005 | 2010 |
|------------------|------|------|------|
| Rice | 70 | 72 | 90 |
| Fruits | 94 | 117 | 138 |
| Vegetables | 95 | 74 | 108 |
| Fisheries | 86 | 91 | 104 |
| Beef | 15 | 23 | 28 |
| Mutton | 6 | 8 | 10 |
| Poultry | 113 | 121 | 122 |
| Eggs | 116 | 113 | 115 |
| Pork | 100 | 107 | 132 |
| Milk | 3 | 5 | 5 |

Source: Ministry of Agriculture and Agro-Based Industry

tuna processing activities. In addition, R&D on agronomic practices and product development as well as the commercialisation of products from biomass and new products from biotechnology will be accelerated further. Measures will also be undertaken to further promote the nursery and landscape industry.

3.40 Sanitary and Phytosanitary (SPS) as well as biosecurity measures will be further enhanced to reduce risk and losses of agricultural production and enhance the country's potential in expanding exports of food products. Specific eradication programmes to control and contain diseases of economic and zoonotic importance such as Foot and Mouth Disease (FMD), Highly Pathogenic Avian Influenza (HPAI), citrus greening and white spot virus, will be strengthened and disease-free zones established during the Plan period. Emergence and entrance of new diseases into the country will be minimised through more effective risk management and capacity building.

3.41 Production of *halal* food will be further promoted to take advantage of the vast potential of the *halal* export market. This will include processing and packaging of meat, fisheries and other food-based products. In addition, Malaysia will be developed as the centre for the certification of *halal* products and the *Jabatan Kemajuan Islam Malaysia* (JAKIM) *halal* certification will be promoted worldwide.

3.42 *Financing.* Financial institutions will be encouraged to provide adequate funds for investments in agricultural production, processing, agro-based and other related agricultural activities. Measures will be undertaken by the Bank Negara Malaysia to ensure easier access to credit. BPM will be restructured to strengthen its capacity and capability in providing loans. The Fund For Food will be continued, particularly to finance medium- and large-scale food production projects including deepsea fishing. To facilitate the participation of small farmers and fishermen in various projects, micro-credit will be provided.

New Land Development

3.43 New land development will concentrate on expanding oil palm cultivation by the private sector. In addition, large-scale production and precision farming systems will be implemented in new production zones for fruits, vegetables, aquaculture and livestock. A more orderly development of these zones will be undertaken through four major approaches, namely Modern Farm and Permanent Food Production Parks (PFPP) for large-scale production by the private sector as well as Agricultural Concentrated Development Area (ACDA) and Area Specific Development Project (ASDP) for small-scale entrepreneurs and farmers. The development of Modern Farm will involve acquisition of large state land by the Federal Government to be leased by the private sector to undertake modern agricultural project while PFPP involve gazetting of state land for the same purpose. The development of PFPP is expected to cover an additional 2,380 hectares involving 600 entrepreneurs in various states. The ACDA and ASDP involve redevelopment of existing non-productive and fragmented farmer's land and will be done on a smaller scale. A total of 13 ACDAs and eight ASDPs will be established during the Plan period. Agricultural land use is expected to increase at an average rate of 1.5 per cent during the Plan period, as shown in *Table 3-7*.

Replanting Programme

3.44 The replanting programme for rubber and oil palm involving 383,010 hectares will be implemented mainly by Rubber Industry Smallholders Development Authority (RISDA) and Federal Land Development Authority (FELDA), as shown in *Table 3-8*. In this regard, high yielding clones will be promoted. Replanting of rubber using latex timber clones for rubber wood will be intensified. To reduce the extraction of timber from natural forests, the implementation of forest plantations, including rubber forest, will be expedited. Efforts will be undertaken to achieve an annual target of 25,000 hectares of forest plantations through the planting of fast growing and high value timber species.

Land Consolidation and Rehabilitation

3.45 Land consolidation and rehabilitation will be continued on a larger scale to accelerate the modernisation of smallholdings as well as increase productivity,

TABLE 3-7
**AGRICULTURAL LAND USE,
 2000-2010**

| Crop | Hectares ('000) | | | Average Annual Growth Rate (%) | | |
|--------------------------|-----------------|--------------|--------------|--------------------------------|------------|---------------|
| | | | | 8MP | | 9MP Target |
| | 2000 | 2005 | 2010 | Target | Achieved | |
| Oil Palm | 3,377 | 4,049 | 4,555 | 3.2 | 3.7 | 2.4 |
| Rubber | 1,431 | 1,250 | 1,179 | -2.7 | -2.7 | -1.2 |
| Padi ¹ | 478 | 452 | 450 | -0.5 | -1.1 | -0.1 |
| Fruits | 304 | 330 | 375 | 5.1 | 1.7 | 2.6 |
| Coconut | 159 | 180 | 180 | -0.6 | 2.5 | 0.0 |
| Cocoa | 76 | 33 | 45 | -2.4 | -15.2 | 6.2 |
| Vegetables | 40 | 64 | 86 | 4.2 | 9.9 | 6.1 |
| Tobacco | 15 | 11 | 7 | 2.5 | -6.0 | -7.4 |
| Pepper | 13 | 13 | 14 | 2.1 | 0.0 | 0.6 |
| Total² | 5,893 | 6,383 | 6,891 | 1.5 | 1.6 | 1.5 |

Source: Ministry of Agriculture and Agro-Based Industry and Ministry of Plantation Industries and Commodities

Notes: ¹ Based on padi parcel.

² Excludes areas for other crops like tea, coffee and herbs as well as aquaculture.

particularly of rubber, padi, fruits, vegetables, cocoa, pepper and sago. Farmers in the padi growing areas outside the granaries will be encouraged to cultivate high quality padi varieties as well as to convert their land to other uses that provide better income.

3.46 Agricultural Infrastructure. During the Plan period, agricultural infrastructure, particularly drainage and irrigation facilities, farm roads and crossings will be further upgraded and expanded to support the greater use of modern technology and mechanisation. The existing drainage and irrigation density averaging 20 metres per hectare will be further increased to 50 metres per hectare to achieve a higher padi yield. In addition, good water resource management practices will be adopted including the use of the Decision Support System and automation of control gates to ensure equal water distribution and support the implementation of the 'water on demand' concept.

Enhancing Productivity

3.47 Efforts to enhance productivity will be undertaken through the utilisation of high yielding clones and improvements in agronomic practices among smallholders and plantations as well as increased mechanisation. In addition, the provision of adequate support services and infrastructure in the agricultural production areas is expected to further improve productivity in the sector, as shown in *Table 3-9*.

TABLE 3-8

**REPLANTING, LAND CONSOLIDATION AND
REHABILITATION PROGRAMMES BY AGENCY,
2001-2010**

| Programme/Agency | 8MP | | | 9MP | |
|--|----------------------|------------------------|-------------------------|----------------------|---------------|
| | Target (hectares) | Achieved (hectares) | % Achieved of Target | Target (hectares) | % of Total |
| Replanting | 306,019 | 237,603 | 77.6 | 383,010 | 78.9 |
| Federal Land Development Authority | 148,747 | 126,618 | 85.1 | 116,484 | 30.4 |
| Rubber Industry Smallholders Development Authority | 138,742 | 101,350 | 73.0 | 225,000 | 58.7 |
| FELCRA Berhad | 15,000 | 6,052 | 40.3 | 35,526 | 9.3 |
| Sabah Rubber Industry Board | 3,530 | 3,583 | 101.5 | 6,000 | 1.6 |
| Land Consolidation and Rehabilitation | 50,649 | 31,332 | 61.9 | 102,663 | 21.1 |
| FELCRA Berhad | 25,000 | 10,203 | 40.8 | 50,000 | 48.7 |
| Department of Forestry Sarawak | 7,500 | 4,228 | 56.4 | - | - |
| Department of Agriculture Peninsular Malaysia | 6,500 | 5,837 | 89.8 | 12,000 | 11.7 |
| <i>Lembaga Pertubuhan Peladang</i> | 4,377 | 4,433 | 101.3 | 6,597 | 6.4 |
| Sabah Rubber Industry Board | 3,750 | 4,053 | 108.1 | 20,000 | 19.5 |
| National Tobacco Board | 2,000 | 1,838 | 91.9 | 3,000 | 2.9 |
| <i>Lembaga Kemajuan Kelantan Selatan</i> | 1,523 | 740 | 48.6 | 11,065 | 10.8 |
| Total | 356,668 | 268,935 | 75.4 | 485,673 | 100.0 |

Source: Ministry of Rural and Regional Development, Ministry of Agriculture and Agro-Based Industry, Ministry of Natural Resources and Environment, Ministry of Plantation Industries and Commodities and FELDA

3.48 Productivity will also be increased through wider application of the latest technology and knowledge-based production systems. To ensure quality control and high standards in oil palm plantations as well as improve productivity, efforts will be geared towards encouraging plantations to adopt international standards. In addition, to achieve Vision 35:25, a target of 35 metric tonnes of fresh fruit bunch (FFB) per hectare and 25 per cent OER, plantations will be encouraged to use quality oil palm seedlings. Adequate credit facilities will be provided to encourage smallholders to replant oil palm trees, which are over 25 years old with high yielding clones.

3.49 Efforts will be intensified to further increase the productivity of padi in the eight granary areas to achieve the yield target of 10 metric tonnes per hectare. This is a pre-emptive measure to increase competitiveness of local growers to sustain their position with the implementation of ASEAN Free Trade Area (AFTA).

TABLE 3-9
**PRODUCTIVITY OF AGRICULTURAL COMMODITIES,
 2000-2010**
 (%)

| Commodity | 2000 | 2005 | 2010 |
|--|-------|-------|-------|
| Industrial Commodities | | | |
| Oil Palm FFB (metric tonnes/hectare/year) | 19.1 | 22.5 | 25.0 |
| Rubber (metric tonnes/hectare/year) | 1.2 | 1.3 | 1.7 |
| Pepper (metric tonnes/hectare/year) | 2.1 | 1.5 | 1.8 |
| Cocoa (metric tonnes/hectare/year) | 0.9 | 1.2 | 1.6 |
| Tobacco Grower-Curer System (metric tonnes/hectare/season) | 1.1 | 1.4 | 1.5 |
| Food Commodities | | | |
| Padi (metric tonnes/hectare/season) | | | |
| Granary | 3.8 | 4.5 | 6.5 |
| Non-Granary | 2.2 | 5.0 | 5.0 |
| Aquaculture (metric tonnes/hectare/cycle) | | | |
| Freshwater | 0.4 | 0.4 | 0.5 |
| Brackish Water | 1.0 | 1.1 | 1.1 |
| Miscellaneous | | | |
| Pineapple (metric tonnes/hectare/cycle) | 16.9 | 21.1 | 22.1 |
| Flowers (thousand stalks/hectare/season) | 155.6 | 162.9 | 190.4 |
| Fruits (metric tonnes/hectare/season) | 3.3 | 4.8 | 6.8 |
| Vegetables (metric tonnes/hectare/cycle) | 10.1 | 12.1 | 13.2 |
| Coconut (metric tonnes/hectare/year) | 3.0 | 3.3 | 3.7 |

Source: Ministry of Agriculture and Agro-Based Industry and Ministry of Plantation Industries and Commodities

3.50 Construction of artificial reefs and fish shelter to enrich coastal marine resources and the development of community-based large-scale marine fish farms will be undertaken to boost coastal fish production. Productivity in marine fisheries will be further enhanced by upgrading the capacity of fishing vessels and equipment. Investments in aquaculture, including intensive on-shore marine fish aquaculture activities using new technologies and management systems will be further promoted. To increase deepsea fish landing including tuna and to support the growth of upstream and downstream fisheries-based activities, a national fisheries consortium, *Konsortium Perikanan Nasional Berhad* (KPNB) driven by the private sector will be established.

3.51 *Research and Development.* R&D activities will be strengthened further to improve productivity. In this regard, R&D activities will be market oriented and concentrated on generating high yielding seeds and breeds, pest and disease control, post-harvest handling and mechanisation. Intensive efforts in

developing more advanced cultivation technologies will also be undertaken while the dissemination of information on new technologies to the target groups will be accelerated.

3.52 *Human Capital Development.* During the Plan period, labour productivity is expected to increase by an average rate of 6.2 per cent per annum. Emphasis will be given to the provision of training to change the mindset and attitude of farmers and fishermen as well as the younger generation including those with higher education to participate more effectively in modern and commercially-oriented agricultural activities. These efforts will create job opportunity, particularly among the unemployed graduates. A total of 657,720 entrepreneurs and farmers is expected to be trained during the Plan period, as shown in *Table 3-10*. In this respect, several agricultural training institutions will be upgraded to implement the National Agricultural Skills Training Programme in line with the NOSS. In addition, institutions of higher education will review existing programmes and develop new curricula to meet market requirements. Skills will be developed in areas such as deepsea fishing, aquaculture, ornamental fish breeding, seaweed cultivation and agro-based processing. Extension workers will also be retrained to deliver effective services to target groups.

TABLE 3-10
**AGRICULTURAL TRAINING BY AGENCIES,
2001-2010**

| Agency | Number of Participants | |
|---|------------------------|----------------|
| | 8MP | 9MP |
| Department of Agriculture Peninsular Malaysia | 102,500 | 376,900 |
| LKIM | 28,900 | 35,400 |
| Department of Fishery | 17,900 | 76,715 |
| FAMA | 16,900 | 18,600 |
| Department of Agriculture Sarawak | 12,200 | 13,800 |
| MARDI | 10,700 | 11,500 |
| BPM | 10,500 | 16,100 |
| LPP | 38,828 | 50,000 |
| RISDA | 8,800 | 18,300 |
| Department of Veterinary Services | 6,000 | 20,100 |
| FELCRA Berhad | 4,800 | 14,600 |
| MPOB | 2,100 | 3,700 |
| Forest Research Institute of Malaysia | 800 | 2,000 |
| Total | 260,928 | 657,715 |

Source: Ministry of Agriculture and Agro-Based Industry, Ministry of Plantation Industries and Commodities and Ministry of Natural Resources and Environment

3.53 In line with the policy to turn agriculture into a viable business, more vigorous efforts will be undertaken to develop new agricultural entrepreneurs, strengthen existing small and medium-scale entrepreneurs as well as promote agricultural exporters. This will include agricultural entrepreneurship programmes to develop more competent Bumiputera agricultural entrepreneurs. In this regard, special training, credit facilities and technical assistance will be provided. Efforts will also be undertaken to develop entrepreneurs among the new generation of FELDA settlers and participants of other land development projects.

Expanding Agro-Based Processing and Product Diversification

3.54 During the Plan period, agro-based development will focus on increasing utilisation of agricultural produce in the production of high value added products as well as processing activities. Efforts will be enhanced to increase private sector investment in agro-based processing activities including from agriculture-related GLCs, subsidiary companies of the agricultural agencies as well as farmers' and fishermen associations and cooperatives. Focus will also be given to increasing participation of individual farmers and fishermen in agro-based processing activities. The processing of end-products from agricultural industrial commodities is expected to increase further, as shown in *Table 3-11*.

TABLE 3-11
**LOCAL PROCESSING AND UTILISATION OF
AGRICULTURAL INDUSTRIAL COMMODITIES,
2000-2010**

| Commodity | Metric Tonnes ('000) | | | Average Annual Growth Rate (%) | |
|---------------------------------------|----------------------|--------|--------|--------------------------------|------------|
| | 2000 | 2005 | 2010 | 8MP Achieved | 9MP Target |
| Sawlogs Production ('000 cubic metre) | 23,074 | 21,334 | 19,475 | -1.6 | -1.8 |
| Sawlogs used for End-products | 16,590 | 15,450 | 14,748 | -1.4 | -0.9 |
| % of Sawlogs used for End-products | 71.9 | 72.4 | 75.7 | 0.1 | 0.9 |
| Palm Oil Production | 10,842 | 14,961 | 19,561 | 6.7 | 5.5 |
| Palm Oil used for End-products | 1,018 | 1,189 | 2,061 | 3.1 | 11.6 |
| % of Palm Oil used for End-products | 9.4 | 7.9 | 10.5 | -3.3 | 5.8 |
| Rubber Production | 928 | 1,124 | 1,293 | 3.9 | 2.8 |
| Rubber used for End-products | 364 | 401 | 500 | 2.0 | 4.5 |
| % of Rubber used for End-products | 39.2 | 35.7 | 38.7 | -1.9 | 1.6 |
| Cocoa Production | 70 | 28 | 57 | -16.7 | 15.3 |
| Cocoa used for End-products | 8 | 3 | 7 | -19.1 | 20.1 |
| % of Cocoa used for End-products | 11.5 | 10.0 | 12.3 | -2.8 | 4.2 |
| Pepper Production | 24 | 19 | 30 | -4.5 | 9.5 |
| Pepper used for End-products | 2 | 4 | 6 | 11.8 | 11.4 |
| % of Pepper used for End-products | 8.3 | 18.3 | 20.0 | 17.1 | 1.8 |

Source: Ministry of Plantation Industries and Commodities and Economic Planning Unit

3.55 *The Rubber Processing and Rubber Products Industry.* Efforts will be undertaken to promote the further development of downstream industries in the rubber processing and rubber products industry as it possesses the potential for producing a wide range of high value added products, both for the domestic and export markets. Greater investment in industrial rubber goods (IRG) that cater for a variety of industries will be encouraged.

3.56 Initiatives will be undertaken to develop quality marks and certification for selected rubber products under the General Rubber Goods (GRG) and IRG categories. In addition, R&D efforts on the development of advanced materials as well as processing and manufacturing technologies to generate new products for the rubber-based subsector will be intensified. R&D activities will also focus on developing new rubber products through the utilisation of biotechnology.

3.57 *The Palm Oil Industry.* During the Plan period, the palm oil industry is expected to benefit from greater downstream product diversification. To accelerate the development of the palm oil downstream industry, palm oil industrial clusters (POICs) will be established in the transborder areas of Eastern Johor-Southern Pahang and Southern Kelantan-Northern Terengganu as well as Sabah and Sarawak. The POICs will act as a catalyst in creating the value chain of the palm oil industry as well as assist in the development of related supporting industries. Efforts will also be intensified to develop Malaysian brands of palm oil products, particularly in the oleochemicals derivatives industry, as well as build upon international networking to penetrate new markets.

3.58 The palm oil industry will be encouraged to expand its activities overseas, particularly in countries with high demand for palm oil and derivatives. Collaboration between the palm oil industry and research institutions will be further intensified to accelerate the commercialisation of R&D findings to widen the base for new product development and improve manufacturing processes. Commercialisation of oil palm biomass products and biofuel will be expedited through greater private sector participation. Research on palm oil will focus on the utilisation of advanced oleochemical technology and biotechnology including nutraceutical and pharmaceutical products.

3.59 *The Wood and Wood Products Industry.* The furniture and furniture components manufacturers will be encouraged to focus on innovative product design and quality and expand their product range to include high-end niche products while improving existing activities. Measures will be undertaken to aggressively promote exports of high quality products in compliance with eco-labelling requirements to sustain market share as well as diversify into new markets.

3.60 *The Biotechnology Industry.* In line with the National Biotechnology Policy, the application of biotechnology to agriculture will be further promoted and intensified to harness the potentials of the agriculture sector in creating new

wealth, particularly through the production of higher yielding clones, better animals breeds and fish fries as well as new high value added products. To accelerate R&D activities in biotechnology, research institutions including institutions of higher education will be equipped with the requisite facilities and equipment. In addition, public researchers will be trained in the field of advanced biotechnology including biodiversity through attachment programmes and greater collaboration with the private sector.

3.61 *The Food Manufacturing Industry.* The food manufacturing industry will be encouraged to leverage on Malaysia's strong credentials in *halal* certification to tap the growing global *halal* market. In this regard, efforts will be intensified to develop Malaysia as a regional hub for *halal* food. While upgrading the existing infrastructure and facilities for *halal* food production, a number of new *halal* food parks will be established. Greater attention will also be given to promote the country's image as a source of safe and quality *halal* food products as well as to position the country's *halal* certification standard MS1500:2004, General Guidelines on the Production, Preparation, Handling and Storage of *Halal* Foods, as a premium standard for *halal* food.

3.62 The market for convenience and functional foods is expected to grow rapidly in view of the changing consumption patterns and greater awareness of healthy lifestyles. In this regard, the production and supply of ready-to-use seafood, livestock products and vegetable-based convenience food will be promoted as new areas of investment. In addition, the programme 'Malaysia the Truly Asian Kitchen' will be implemented. The manufacture of fruit and vegetable-based foods including high fibre products, spreads and fruit juices as well as food additives and ingredients also represents a potential area of new investment. Palm oil and cocoa-based food ingredients will be further developed in terms of product range and quality. Existing programmes to assist industries will be strengthened to facilitate the application of modern processing technologies, innovative packaging and branding to meet varying consumer preferences and market demand at home and abroad. Emphasis will also be placed on facilitating small and medium-enterprises to network with multinational companies in order to penetrate new export markets.

3.63 *Research and Development Activities.* R&D in the agro-based industry and commercialisation of R&D findings will be strengthened through greater participation of the institutions of higher education and the private sector. Commercialisation of R&D findings related to product development will be expedited through the provision of incentives and involvement of agriculture-related GLCs. Private sector participation in agricultural R&D and commercialisation of findings will also be increased through venture capital.

3.64 Programmes such as provision of incubators will be implemented to accelerate the commercialisation of research findings and develop new entrepreneurs. The Agropolis will be established in Serdang, Selangor to serve

as a food valley hub as well as the centre of excellence for biotechnology-based food production and processing. It will also undertake agricultural R&D through greater collaboration between public R&D institutions, local higher education institutions and the private sector.

Strengthening Marketing and Global Networking

3.65 During the Plan period, focus will be given to improving the efficiency of marketing delivery services and strengthening the global network through strategic alliances. Towards this end, efforts will be undertaken to strengthen traditional markets and diversify into new markets. Promotional programmes will be intensified to increase consumption of foods with high nutritional value and create greater awareness among Malaysians on the safety of food products.

3.66 To further strengthen the marketing of food and food-based products, efforts will be undertaken to ensure compliance with international requirements. Efforts will be intensified to roll out the adoption of farm accreditation schemes and product standardisation. In this regard, a one-stop centre will be established to facilitate accreditation of farms and certification of standards for food products. The marketing functions of Federal Agricultural Marketing Authority (FAMA), LPP and *Lembaga Kemajuan Ikan Malaysia* (LKIM) will be reviewed to enhance coordination. In addition, the Malaysian Quarantine and Inspection Services (MAQIS) will be established to ensure imports of food products comply with national and international food safety standard.

3.67 Steps will also be undertaken to improve collection, grading and marketing of local agricultural produce and food-based industrial products through the establishment of National Food Terminals (TEMAN) as well as new collection centres and distribution centres in selected locations, including in Sabah and Sarawak. In addition, FAMA will increase contract farming arrangements, particularly with wholesalers, hypermarkets, supermarkets, hotels and resorts.

3.68 The mechanism to access market information as well as to conduct trading of food products using ICT will be upgraded through the expansion of the Supply and Demand Virtual Information (SDVI) system, e-trade through FAMAXchange and Agribazaar portals. In addition, the establishment of an additional 170 *Medan InfoDesa* facilities in the rural areas is expected to increase the accessibility of rural folks to the Agribazaar portal. LKIM will further strengthen its fish marketing programme through greater involvement of the fishermen associations.

3.69 The marketing of agricultural industrial commodities, particularly palm oil will be focused on creating and strengthening niche markets by establishing a chain of production processes in strategic locations around specific regions and relocating manufacturing sub-processes to consuming countries, as part of the

efforts in market penetration. The Malaysian Criteria and Indicators for Forest Management Certification (MC&I), which is recognised as a tool for sustainable forest management, will be expanded to meet the requirements of importing countries, particularly Europe, the United States of America and Japan.

3.70 Agricultural consuls will be posted to selected countries having high export market potential to promote food products. In addition, the Malaysia External Trade Development Corporation will increase its efforts in promoting Malaysian agriculture produce and agro-based products.

Enhancing Income

3.71 More effective measures will be undertaken to increase incomes of smallholders, farmers and fishermen through productivity improvements within the agricultural subsectors. Ageing smallholders and farmers will be encouraged to participate in exit schemes through land consolidation and rehabilitation as well as group replanting programmes. Incomes of rubber and oil palm smallholders will be enhanced through replanting programmes using high yielding clones based on the mini-estate and group farming concepts as well as mixed farming including integration of livestock in plantations, aquaculture and off-farm economic activities. Cocoa, pepper and sago smallholders, particularly in Sabah and Sarawak will be provided with financial assistance to rehabilitate their farms through estate-based concept as well as encouraged to participate in the related agro-based processing activities. In addition, sustainable income-generating activities will be promoted and training provided to improve the quality of life of subsistence farmers and the forest dependent communities.

3.72 Padi farmers will be encouraged to participate in mini-estates and group farming activities which will be implemented by the LPP and the Department of Agriculture as well as Integrated Agricultural Development Projects (IADPs). An estimated 25,000 padi farmers will benefit from this programme, with their average income increasing from RM3,900 to RM7,800 per hectare per year. Emphasis will also be given to increasing their participation in the Ten Tonnes Per Hectare Project. In addition, padi farmers will be encouraged to participate in food processing activities, including producing rice-based products.

3.73 Efforts will be undertaken to improve incomes and standard of living of FELDA settlers and the new generation. In this regard, selected areas in FELDA land schemes will be developed as new growth centres which consist of downstream industrial activities and equipped with improved infrastructure and social amenities. In addition, the participation of the settlers and the new generation in non-farm activities including agro-based industrial activities and in the handicraft industry will be increased further. A total of 9,390 new entrepreneurs is expected to be created with an income of at least RM3,000 per month.

3.74 The quality of life of coastal fishermen will be improved through socio-economic programmes. The capabilities of coastal fishermen will be enhanced through the upgrading of boats, engines and fishing equipment. They will also be encouraged to undertake fish-farming activities and fisheries-based processing activities to stabilise their income. Income of small-scale livestock farmers will be increased through participation in contract farming. Inefficient tobacco growers will be encouraged to gradually replace tobacco with alternative crops to ensure sustainable income through contract farming arrangements.

3.75 To improve incomes of poor households in the agriculture sector, the *Skim Pembangunan Kesejahteraan Rakyat* (SPKR) and a special programme to diversify the incomes of farmers, livestock breeders and fishermen will be further expanded to benefit more households. A total of 70,000 poor families is expected to benefit from these programmes which include capacity building and provision of free housing for the hardcore poor as well as income generating activities where participants earn a minimum supplementary income of RM500 per month. A mechanism will be established to closely monitor the effectiveness of these programmes on the target groups.

Strengthening the Service Delivery System

3.76 The restructuring of agricultural agencies, particularly those involved in the development of food commodities will be undertaken to improve the delivery of services and facilitate the achievement of the growth target of the sector. Various agricultural activities will be managed and monitored on an integrated basis to eliminate duplication of functions and target groups as well as optimise utilisation of resources. The integrated approach will also facilitate the development of value added activities along the value chain including agro-based processing.

3.77 The placement of officers and staff of various agricultural agencies will be based on the zoning of production areas. This will include rationalizing and consolidating of branches of agencies in areas of low priority. Subsidiary companies of these agencies will be reviewed to improve their effectiveness in agricultural development. In addition, the marketing activities of FAMA will be streamlined with the National Agriculture and Food Corporation (NAFC). In this regard, FAMA will focus on assisting the marketing of agricultural products of small farmers and entrepreneurs as well as undertake regulatory functions. The marketing and distribution of agriculture produce and agro-based products on a larger scale including for exports will be undertaken by the NAFC. The role of LPP will be enhanced in promoting the involvement of farmers' organisations in various agricultural related activities along the value chain, commercialisation of smallholdings as well as in contract farming and nucleus estates.

3.78 The development of the pepper industry will be facilitated through the restructuring of the Pepper Marketing Board to take over the responsibility of the Department of Agriculture Sarawak pertaining to pepper production and R&D. To accelerate the development of *kenaf* and herbal industries, the MOA will be given the responsibility to oversee the development of these industries. Professionals from the private sector will be appointed on a pilot basis to manage agricultural projects in selected areas.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

3.79 The transformation of the agriculture sector into a modern, viable and dynamic venture will be led by the MOA, the Ministry of Plantation Industries and Commodities (MPIC) and the Ministry of Rural and Regional Development (KKLW). The MOA will be responsible for the modernisation of the food subsector focusing on programmes such as training, marketing, credit, skills development and dissemination of knowledge on modern agriculture to farmers, fishermen and livestock rearers as well programmes to develop entrepreneur farmers in the agro-based industries. The MPIC will facilitate the development of agricultural industrial commodities through the transfer of new technologies to smallholders and R&D on product diversification. Efforts towards developing smallholders and improving the standard of living of the rural population will be undertaken by the KKLW, mainly through capacity building as well as poverty eradication programmes.

3.80 In line with the new emphasis on agriculture and its contribution to economic growth, a total allocation of RM11.4 billion will be provided to implement various agricultural programmes and projects, as shown in *Table 3-12*. This represents an additional amount of RM4.7 billion or 70.0 per cent higher than the allocation provided in the previous Plan. A total of RM4.4 billion will be allocated for the modernisation of agriculture, mainly for projects in the regional development areas, as well as replanting and land consolidation and rehabilitation programmes while another RM2.6 billion for support services and RM1.5 billion for agricultural irrigation programmes.

V. CONCLUSION

3.81 During the Eighth Plan period, the agriculture sector achieved a higher rate of growth than targeted and contributed towards economic growth and export earnings. There was increased involvement of the private sector in large-scale commercial food production and agro-based industry. During the Ninth Plan period, the development of the agriculture sector will be intensified to serve as the third engine of growth. The emphasis will be on *New Agriculture*, entailing

TABLE 3-12

**DEVELOPMENT EXPENDITURE AND ALLOCATION FOR AGRICULTURE,
2001-2010**
(RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|--|----------------------------|---------------------------|
| Modernisation of Agriculture | 2,689.6 | 4,368.6 |
| IADPs | 497.4 | 605.3 |
| Replanting Scheme | 650.2 | 1,150.8 |
| Land Consolidation and Rehabilitation Programmes | 482.1 | 857.6 |
| Projects under RDAs ¹ | 1,059.9 | 1,754.9 |
| Forestry | 199.6 | 251.5 |
| Fishery | 663.8 | 798.8 |
| Livestock | 202.8 | 519.8 |
| Support Services | 1,305.8 | 2,558.0 |
| R&D | 529.7 | 614.0 |
| Marketing | 172.1 | 392.7 |
| Training | 480.9 | 551.3 |
| Credit | 123.1 | 1,000.0 |
| Irrigation for Agriculture | 780.00 | 1,458.1 |
| Entrepreneur Development ² | | 511.9 |
| Agro-Based Development | | 361.8 |
| Others ³ | 366.3 | 606.5 |
| Total | 6,207.9 | 11,435.0 |

Source: Ministry of Finance and Economic Planning Unit

Notes: ¹ Agricultural related projects in regional development authorities (RDAs) areas.

² Entrepreneur development were assumed under the various programmes during the 8MP.

³ Includes physical infrastructure, buildings, facilities and ICT components as well as poverty eradication programmes.

large-scale commercial farming and participation in high quality and value adding activities leading to enhanced productivity and higher incomes. Target specific policies and strategies will be implemented to expedite the transformation of the agriculture sector into a modern, dynamic and competitive sector including with respect to agro-based processing activities and agricultural entrepreneur development.



UPSCALING MANUFACTURING AND RELATED SERVICES

4

I. INTRODUCTION

4.01 The transformation of the manufacturing sector, and sustaining its competitiveness, remains among the major factors in determining the pace of economic activity in the country. During the Eighth Plan period, the manufacturing sector continued to contribute substantially to output growth, exports and employment creation despite the global economic slowdown in the early years of the Plan period, and an increasingly competitive international environment. Continuous policy improvements and initiatives were put in place to strengthen the sector in the light of greater competitiveness and integration of the world economy. These initiatives contributed towards providing a more conducive investment environment for both foreign and domestic investments, including the small and medium enterprises (SMEs).

4.02 For the Ninth Plan period, in meeting a more challenging and competitive global environment, a crucial goal will be to upscale the manufacturing sector towards higher value added activities and upgrade capacity in the provision of related services. The focus will be on transforming industrial businesses and complementary services, especially SMEs, into strong knowledge-intensive and value-creating entities. The promotion of technology- and innovation-driven strategies will be given increased priority. Greater emphasis will be placed on promoting investment in new areas of growth as well as reinforcing innovation capability and capacity to augment productivity and competitiveness. Of equal importance will be the promotion of greater industrial integration and international collaboration to further benefit from the increasing global deployment of production and services networks.

II. PROGRESS, 2001-2005

Performance by Industry

4.03 The manufacturing sector registered an average annual growth rate of 4.1 per cent during the Eighth Plan period. This was despite the contraction of the manufacturing sector by 5.9 per cent in 2001, and the downturn in the

electrical and electronics (E&E) industry. The manufacturing sector contributed 31.4 per cent to gross domestic product (GDP), 80.5 per cent to total exports and 28.7 per cent to total employment in 2005, as shown in *Table 4-1*.

TABLE 4-1

MAJOR INDICATORS OF THE MANUFACTURING SECTOR, 2000-2010

| <i>Indicator</i> | <i>2000</i> | <i>2005</i> | <i>2010</i> | <i>8MP</i> | <i>9MP</i> |
|--|-------------|-------------|-------------|------------|------------|
| Manufacturing Value Added (RM million in 1987 Prices) | 67,250 | 82,394 | 113,717 | 361,816* | 497,716* |
| Annual Growth Rate (%) | 18.3 | 4.9 | 7.5 | 4.1 | 6.7 |
| Share to GDP (%) | 31.9 | 31.4 | 32.4 | 30.8 | 31.8 |
| Share to Total Exports (%) | 85.2 | 80.5 | 83.4 | 82.4 | 82.5 |
| Share to Total Employment (%) | 27.7 | 28.7 | 30.0 | 27.6 | 29.4 |

Source: Economic Planning Unit

Note: * Cumulative figure.

4.04 The resource-based industries registered an average annual growth of 5.0 per cent compared with 3.3 per cent for the non-resource-based industries, as shown in *Table 4-2*. The growth in the resource-based industries was contributed by rubber processing and products which grew at an average annual rate of 9.7 per cent, followed by industrial chemicals including fertilizers and plastic products at 8.3 per cent and vegetables, animal oils and fats at 7.6 per cent. In the non-resource-based industries, the main contributors to growth were transport equipment, which grew at an average annual rate of 7.5 per cent, followed by metal products at 7.1 per cent.

4.05 In terms of share to total manufacturing value added, the non-resource-based industries maintained the larger share at 54.2 per cent, with the *electronics industry* contributing 28.0 per cent. Despite a negative growth of 24.8 per cent in 2001, the electronics industry recorded an average growth of 3.0 per cent per annum during the Plan period. This was largely attributed to the sustained demand for semiconductors and other electronic components, especially from the United States of America (USA) and the Asia Pacific countries.

4.06 The structural changes in the E&E industry indicated a discerning trend towards high value added and high-technology projects as well as employment of highly skilled human resource. The capital investment per employee ratio increased from RM235,989 in 2001 to RM291,519 in 2005 while the managerial, technical and supervisory ratio rose from 20.2 per cent to 25.3 per cent for the same period.

TABLE 4-2

VALUE ADDED OF THE MANUFACTURING SECTOR, 2000-2010

| Industry | RM million in 1987 Prices | | | % of Total | | | Average Annual Growth Rate (%) | |
|---|---------------------------|---------------|----------------|--------------|--------------|--------------|--------------------------------|------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | 9MP |
| Resource-Based | 28,210 | 35,990 | 48,152 | 41.9 | 43.7 | 42.3 | 5.0 | 6.0 |
| Vegetable, Animal Oils & Fats | 2,526 | 3,639 | 5,614 | 3.8 | 4.4 | 4.9 | 7.6 | 9.1 |
| Other Food Processing, Beverages & Tobacco | 4,010 | 4,790 | 6,333 | 6.0 | 5.8 | 5.6 | 3.6 | 5.7 |
| Wood Products including Furniture | 2,934 | 2,972 | 3,761 | 4.4 | 3.6 | 3.3 | 0.3 | 4.8 |
| Paper & Paper Products, Printing & Publishing | 2,293 | 2,640 | 3,275 | 3.4 | 3.2 | 2.9 | 2.9 | 4.4 |
| Industrial Chemicals including Fertilizers & Plastic Products | 6,763 | 10,082 | 14,304 | 10.1 | 12.2 | 12.6 | 8.3 | 7.2 |
| Petroleum Products including Crude Oil Refineries & Coal | 4,521 | 5,254 | 7,501 | 6.7 | 6.4 | 6.6 | 3.1 | 7.4 |
| Rubber Processing & Products | 1,821 | 2,887 | 3,238 | 2.7 | 3.5 | 2.8 | 9.7 | 2.3 |
| Non-Metallic Mineral Products | 3,342 | 3,726 | 4,126 | 5.0 | 4.5 | 3.6 | 2.2 | 2.1 |
| Non-Resource-Based | 37,878 | 44,662 | 63,035 | 56.3 | 54.2 | 55.4 | 3.3 | 7.1 |
| Textiles, Wearing Apparel & Leather | 2,324 | 1,818 | 2,010 | 3.5 | 2.2 | 1.8 | -4.8 | 2.0 |
| Basic Metal Industry | 594 | 675 | 852 | 0.9 | 0.8 | 0.7 | 2.6 | 4.8 |
| Metal Products | 2,879 | 4,060 | 6,589 | 4.3 | 4.9 | 5.8 | 7.1 | 10.2 |
| Manufacture of Machinery except Electrical | 3,063 | 3,447 | 3,480 | 4.6 | 4.2 | 3.1 | 2.4 | 0.2 |
| Electronics | 19,863 | 23,043 | 33,399 | 29.5 | 28.0 | 29.4 | 3.0 | 7.7 |
| Electrical Machinery | 1,738 | 952 | 1,161 | 2.6 | 1.2 | 1.0 | -11.3 | 4.1 |
| Transport Equipment | 7,417 | 10,667 | 15,544 | 11.0 | 12.9 | 13.7 | 7.5 | 7.8 |
| Others | 1,162 | 1,742 | 2,530 | 1.7 | 2.1 | 2.2 | 8.4 | 7.7 |
| Total | 67,250 | 82,394 | 113,717 | 100.0 | 100.0 | 100.0 | 4.1 | 6.7 |
| % to GDP | | | | 31.9 | 31.4 | 32.4 | | |

Source: Economic Planning Unit

4.07 The *transport equipment subsector*, with growth emanating largely from the automotive industry, increased its contribution to total manufacturing value added from 11.0 per cent in 2000 to 12.9 per cent in 2005. The total installed production capacity of motor vehicles increased by 55.0 per cent from 572,000 units in 2000 to 891,000 units in 2005. There were parallel developments in the automotive components and parts industry with an increasing number of Malaysian companies participating in domestic and global supply chains. The *metal products industry* expanded at an average rate of 7.1 per cent per annum during the Plan period, maintaining its share in total manufacturing value added at 4.9 per cent.

Exports of Manufactured Goods

4.08 Exports of manufactured goods grew at an average rate of 6.2 per cent per annum despite the downturn in the electronics industry. Its share to total gross exports was sustained at more than 80.0 per cent. In terms of growth, the export of resource-based products grew at a much higher rate of 11.8 per cent per annum compared with the non-resource-based exports which grew at an average rate of 4.7 per cent, as shown in *Table 4-3*. The higher growth

TABLE 4-3

EXPORTS OF MANUFACTURED GOODS, 2000-2010

| Industry | RM million | | | % of Total | | | Average Annual Growth Rate (%) | |
|----------------------------------|----------------|----------------|----------------|--------------|--------------|--------------|--------------------------------|-------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | 9MP |
| Resource-Based | 44,321 | 77,280 | 122,625 | 13.9 | 18.0 | 18.3 | 11.8 | 9.7 |
| Food | 4,509 | 8,488 | 14,627 | 1.4 | 2.0 | 2.2 | 13.5 | 11.5 |
| Beverages & Tobacco | 1,207 | 1,701 | 2,406 | 0.4 | 0.4 | 0.4 | 7.1 | 7.2 |
| Wood Products | 6,801 | 8,860 | 12,503 | 2.1 | 2.1 | 1.9 | 5.4 | 7.1 |
| Paper & Paper Products | 1,397 | 2,073 | 2,913 | 0.4 | 0.5 | 0.4 | 8.2 | 7.0 |
| Petroleum Products | 8,131 | 16,729 | 26,342 | 2.6 | 3.9 | 3.9 | 15.5 | 9.5 |
| Chemical & Chemical Products | 15,011 | 29,718 | 48,678 | 4.7 | 6.9 | 7.3 | 14.6 | 10.4 |
| Rubber Products | 4,695 | 6,777 | 11,261 | 1.5 | 1.6 | 1.7 | 7.6 | 10.7 |
| Non-Metallic Mineral Products | 2,571 | 2,934 | 3,895 | 0.8 | 0.7 | 0.6 | 2.7 | 5.8 |
| Non-Resource-Based | 252,383 | 317,449 | 491,515 | 79.4 | 73.8 | 73.3 | 4.7 | 9.1 |
| Textiles, Clothing & Footwear | 10,433 | 10,520 | 13,715 | 3.3 | 2.4 | 2.0 | 0.1 | 5.4 |
| Manufactures of Metal | 8,618 | 17,157 | 27,678 | 2.7 | 4.0 | 4.1 | 14.8 | 10.0 |
| Electrical & Electronic Products | 230,429 | 282,779 | 439,626 | 72.5 | 65.8 | 65.5 | 4.2 | 9.2 |
| Transport Equipment | 2,903 | 6,993 | 10,496 | 0.9 | 1.6 | 1.6 | 19.2 | 8.5 |
| Others | 21,205 | 35,144 | 56,627 | 6.7 | 8.2 | 8.4 | 10.6 | 10.0 |
| Total | 317,908 | 429,873 | 670,767 | 100.0 | 100.0 | 100.0 | 6.2 | 9.3 |
| Total (USD) ¹ | 83,660 | 113,124 | 176,518 | | | | | |
| % of Total Gross Exports | 85.2 | 80.5 | 83.4 | | | | | |

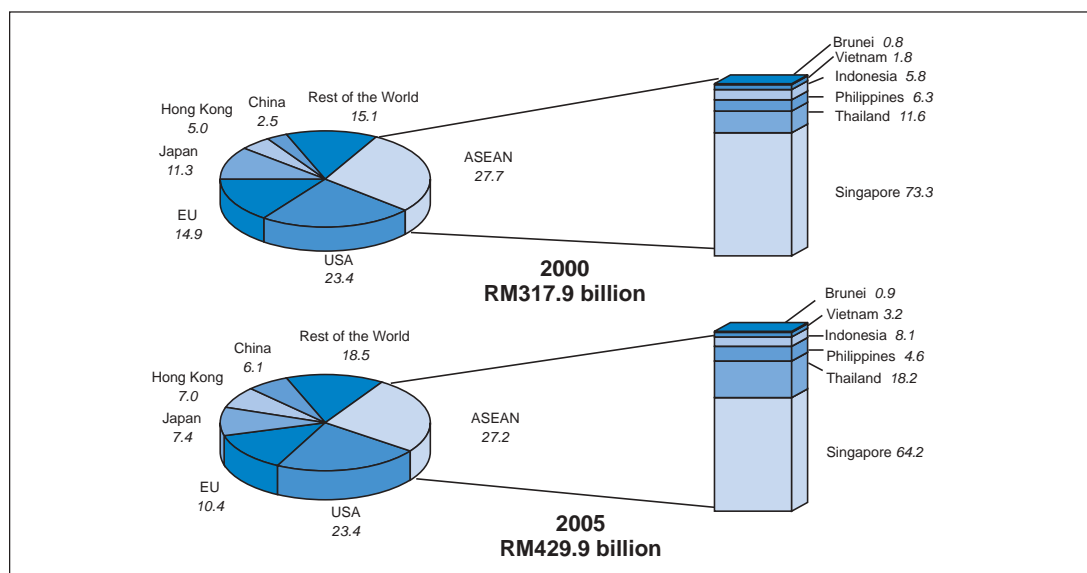
Source: Economic Planning Unit

Note: ¹ Based on the exchange rate of RM3.80 to USD1

in exports of resource-based products indicated the further diversification and expansion of the country's export base as well as growing external demand. In terms of share, the E&E products maintained its position as the largest contributor to total exports.

4.09 The major markets for manufactured goods were the Association of South-East Asian Nations (ASEAN), followed by the USA, the European Union (EU), Japan, Hong Kong and People's Republic of China (China), as shown in *Chart 4-1*. The main exports included E&E products, chemical and chemical products and machinery, appliances and parts. Greater diversification of Malaysia's export markets was seen with inroads made into China, West Asia, South Asia as well as the new markets of Central and Latin America and Eastern Europe.

CHART 4-1
MAJOR EXPORT DESTINATIONS FOR MANUFACTURED PRODUCTS, 2000-2005 (%)



Source: Department of Statistics

4.10 Recognising the importance of branding in the marketing as well as customer acceptance of goods in major export markets, assistance was made available to develop and promote Malaysian brands. This included the provision of grant assistance for brand development as well as double deduction for expenses incurred in the promotion of Malaysian brands overseas. A fund totalling RM200 million was established under the Malaysia External Trade Development Corporation (MATRADE) to provide matching grants for the purpose of developing and upgrading local brands for overseas markets.

Investment in the Manufacturing Sector

4.11 A total of 4,812 manufacturing projects amounting to RM132.6 billion was approved, as shown in *Table 4-4*. New projects accounted for RM82.4 billion or 62.0 per cent of total investments and the remainder for the expansion and diversification of existing projects. The non-resource-based sector continued to attract high levels of investment, particularly the E&E industry, followed by basic metal and transport equipment. About 72.0 per cent of the approved projects commenced production while another 25.0 per cent were in various stages of implementation. The main sources of foreign investment were the USA, Germany and Japan.

4.12 During the Plan period, a number of policy measures and incentives were introduced to enhance the business and investment climate. These included the liberalisation of equity in the manufacturing sector whereby foreign companies were allowed to hold 100 per cent equity in new projects as well as in expansion and diversification projects. The Government also liberalised the policy on the employment of expatriates and introduced customised pre-packaged incentives to attract quality projects in strategic areas.

4.13 Manufacturing related services (MRS) were promoted to facilitate the development of essential support activities for the manufacturing sector. With the country's strong infostructure and infrastructure, a well-educated and multilingual work force, large foreign companies and many multinational corporations (MNCs) found Malaysia to be an attractive place to locate their regional centres for business support activities and services. During the Plan period, 1,052 regional establishments were approved, which included 67 Operational Headquarters (OHQs), 182 International Procurement Centres (IPCs), 29 Regional Distribution Centres (RDCs), 579 Representative Offices and 195 Regional Offices (ROs).

4.14 The banking sector remained an important source of funds to the manufacturing sector, accounting for 10.3 per cent of the total approved loans from banking and financial institutions during the Plan period. Loans were extended mainly to industries producing wood and wood products, iron and steel products, electrical machinery appliances as well as food, beverages and tobacco.

Employment in the Manufacturing Sector

4.15 The manufacturing sector accounted for about one third of total employment and 27.6 per cent of total jobs created during the Plan period. Total employment in the sector grew at an average annual rate of 4.1 per cent increasing from

TABLE 4-4

APPROVED MANUFACTURING PROJECTS BY INDUSTRY, 2001-2005

| Industry | Number of Projects | Capital Investment | | | | | | | |
|-----------------------------------|--------------------|--------------------|---------------|----------------|-------------------------|-------------|------------------------|--------------|--------------|
| | | RM million | | | % of Total By Ownership | | % of Total By Industry | | |
| | | Domestic | Foreign | Total | Domestic | Foreign | Domestic | Foreign | Total |
| Resource-Based | 1,948 | 25,612 | 23,903 | 49,516 | 51.7 | 48.3 | 46.2 | 31.0 | 37.3 |
| Food Manufacturing | 369 | 3,469 | 2,303 | 5,772 | 60.1 | 39.9 | 6.3 | 3.0 | 4.4 |
| Beverages & Tobacco | 26 | 142 | 470 | 612 | 23.2 | 76.8 | 0.3 | 0.6 | 0.5 |
| Wood & Wood Products | 193 | 2,267 | 943 | 3,210 | 70.6 | 29.4 | 4.1 | 1.2 | 2.4 |
| Furniture & Fixtures | 233 | 1,363 | 297 | 1,659 | 82.1 | 17.9 | 2.5 | 0.4 | 1.3 |
| Paper, Printing & Publishing | 123 | 6,418 | 4,850 | 11,268 | 57.0 | 43.0 | 11.6 | 6.3 | 8.5 |
| Chemicals & Chemical Products | 288 | 5,004 | 3,025 | 8,029 | 62.3 | 37.7 | 9.0 | 3.9 | 6.1 |
| Petroleum Products | 61 | 1,787 | 6,289 | 8,076 | 22.1 | 77.9 | 3.2 | 8.2 | 6.1 |
| Natural Gas | 2 | 50 | 0 | 50 | 100.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Rubber Products | 144 | 1,442 | 963 | 2,405 | 60.0 | 40.0 | 2.6 | 1.2 | 1.8 |
| Plastic Products | 358 | 2,050 | 1,760 | 3,810 | 53.8 | 46.2 | 3.7 | 2.3 | 2.9 |
| Non-Metallic Mineral Products | 151 | 1,620 | 3,005 | 4,625 | 35.0 | 65.0 | 2.9 | 3.9 | 3.5 |
| Non-Resource-Based | 2,771 | 29,303 | 53,068 | 82,371 | 35.6 | 64.4 | 52.8 | 68.8 | 62.1 |
| Textiles & Textile Products | 178 | 1,171 | 947 | 2,117 | 55.3 | 44.7 | 2.1 | 1.2 | 1.6 |
| Leather & Leather Products | 12 | 57 | 17 | 74 | 76.8 | 23.2 | 0.1 | 0.0 | 0.1 |
| Basic Metal Products | 163 | 9,308 | 5,502 | 14,810 | 62.8 | 37.2 | 16.8 | 7.1 | 11.2 |
| Fabricated Metal Products | 487 | 2,059 | 2,177 | 4,236 | 48.6 | 51.4 | 3.7 | 2.8 | 3.2 |
| Machinery Manufacturing | 443 | 1,961 | 1,535 | 3,496 | 56.1 | 43.9 | 3.5 | 2.0 | 2.6 |
| Electronics & Electrical Products | 1,051 | 8,084 | 35,290 | 43,374 | 18.6 | 81.4 | 14.6 | 45.7 | 32.7 |
| Transport Equipment | 353 | 6,157 | 5,388 | 11,545 | 53.3 | 46.7 | 11.1 | 7.0 | 8.7 |
| Scientific & Measuring Equipment | 84 | 506 | 2,212 | 2,718 | 18.6 | 81.4 | 0.9 | 2.9 | 2.0 |
| Others | 93 | 559 | 181 | 740 | 75.5 | 24.5 | 1.0 | 0.2 | 0.6 |
| Total | 4,812 | 55,474 | 77,152 | 132,626 | 41.8 | 58.2 | 100.0 | 100.0 | 100.0 |

Source: Malaysian Industrial Development Authority (MIDA)

2.6 million in 2000 to 3.1 million in 2005, as shown in *Table 4-5*. The employment in non-resource-based industries grew at 4.3 per cent per annum, creating 308,900 new jobs compared with resource-based industries at 3.7 per cent, accounting for 237,100 new jobs. Employment creation in the non-resource-based industries was mainly attributed to the expansion in the E&E, transport equipment as well as basic metal and metal products industries.

4.16 The on-going transformation of the manufacturing sector to high value added and knowledge-intensive industries raised the demand for human resource with tertiary qualification as well as vocational and technical training. On the supply side, various training, vocational and educational institutions expanded their capacity. The state skills development centres (SDCs) and youth skills training centres as well as other advanced skills institutions provided technical skills-upgrading courses at basic, intermediate and advanced levels. The SDCs worked closely with polytechnics as well as the private sector to ensure relevancy and marketability of the skill sets acquired.

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Development of Small and Medium Enterprises

4.17 The Eighth Plan emphasised the importance of SMEs in enhancing the dynamism and competitiveness of the manufacturing sector. Based on the Census of Establishments and Enterprises 2005, SMEs in the manufacturing sector, totalling 33,113 establishments, contributed 29.0 per cent of total manufacturing output, 31.0 per cent of value added and 44.0 per cent of employment. While overall performance improved, there were still areas of concern such as access to export markets, inadequate technological capability and low adoption of enabling technologies.

4.18 Considerable attention was given to the provision of industrial infrastructure and amenities to facilitate the expansion of SME activities. A total of RM652.2 million was provided for the establishment and expansion of SME industrial parks, comprising factory units and incubator facilities at key locations throughout the country.

4.19 Various programmes were undertaken to develop Bumiputera entrepreneurs as part of the efforts to create a viable and competitive Bumiputera Commercial and Industrial Community (BCIC). Government agencies and a number of government-linked companies (GLCs) assisted in the development of ancillary and supporting industries through their own vendor programmes, which contributed to the development of many competent and competitive Bumiputera SMEs. During the Plan period, anchor companies, including *Perusahaan Otomobil*

Nasional Berhad (PROTON), PetroliaM Nasional Berhad (PETRONAS), Tenaga Nasional Berhad (TNB), and a number of MNCs, created more than 200 first-tier vendor companies, involved in manufacturing and related activities.

4.20 A number of training programmes for SMEs were implemented to improve their resource planning, management capability, financial management and human resource development as well as upgrading marketing and technical skills. Various grant and loan schemes were provided for business planning, product and quality improvement as well as marketing and promotion and the adoption of information and communications technology (ICT) processes.

4.21 To ensure adequate funding for SMEs, the Government expanded funds, covering soft loans and grants to facilitate the establishment of new and upgrading of existing businesses. In addition, the SME Bank was established in 2005 to provide comprehensive financing packages to meet the varied financial needs of SMEs. In terms of venture capital, the Malaysia Venture Capital Management Bhd. (MAVCAP) and the Malaysia Technology Development Corporation (MTDC) continued to provide early stage financing to potential start-up companies involved in high-technology activities.

Industrial Technology and R&D

4.22 Research and development (R&D) continued to be an important contributor towards industrial innovation and competitiveness. Various funding schemes were provided for R&D initiatives by the public and private sectors in areas such as advanced manufacturing, advanced materials, biotechnology, environmental technology, electronics, ICT and photonics. More than RM830 million was expended under the Intensification of Research in Priority Areas (IRPA) for direct public sector involvement in R&D, whereas a total of RM430 million was provided to enhance private sector R&D through the Industry Research and Development Grant Scheme (IGS), the Multimedia Super Corridor (MSC) R&D Grant Scheme (MGS) and Demonstrator Applications Grant Scheme (DAGS). In addition to the Commercialisation of Research and Development Fund (CRDF), the double deduction for R&D as well as special incentives for researchers and companies to commercialise research findings were introduced.

III. PROSPECTS, 2006-2010

4.23 The Ninth Plan period will be more challenging to the industrial development process, in the face of an increasingly globalised and competitive world economic environment. Concomitant with this is the global trend towards greater

concentration of major growth and high-technology industries, especially the automotive, biotechnology and E&E industries, among key global players. This increased industrial consolidation and a more dynamic global environment will continue to generate more intense competition for investment opportunities worldwide. As such, Malaysian companies too will need to identify and build upon niche products and services for specific markets. Among others, Malaysian industry must forge and intensify strategic integration with foreign affiliates, including joint ventures, mergers and acquisitions in designated high value added and high-technology industrial activities and related services. These will provide a wider platform for Malaysian industries to generate greater inter-sectoral and intra-sectoral linkages as well as integrate into regional and global networks of production, investment and services.

Growth Prospects of the Manufacturing Sector

4.24 During the Ninth Plan period, the prime focus will be to ensure robust and sustainable growth as well as competitiveness of the manufacturing sector. The sector is targeted to grow at an average rate of 6.7 per cent per annum. The impetus for overall growth of, and investment in, the sector is expected to emanate largely from technology- and innovation-driven industries, which will in turn contribute to greater exports, income and employment generating opportunities.

4.25 With the relatively higher growth rate, the share of manufacturing to GDP is projected to increase from 30.8 per cent for the Eighth Plan to 31.8 per cent in the Ninth Plan. This will require substantial investment in new and emerging manufacturing activities as well as MRS. Apart from attracting foreign investment, there is also a need to accelerate growth in domestic private investment. The private sector and GLCs in particular, will be encouraged to take up new investment opportunities, build up indigenous capability to utilise advanced technology as well as develop niche products and services that will generate new demand and expand markets.

4.26 The promotion of foreign investment will continue to be a priority as opportunities arise from greater intra-regional trade and investment in response to further regional and global liberalisation. In this regard, promotional efforts will be intensified to leverage on Malaysia's good track record in macroeconomic management, advanced infrastructure and the favourable foreign investment environment to attract more quality investments, particularly in knowledge-based and technology-intensive industries.

4.27 The policy thrust of the Ninth Plan period is to intensify the development of the resource-based industries, with the aim to optimise and value add to the utilisation of the country's natural resources. The further expansion of downstream activities, encompassing petrochemicals, pulp and paper, rubber,

wood and palm oil products as well as the food industries, will contribute towards the manufacture of higher value added products as well as promote greater inter-industry and inter-sectoral linkages.

4.28 The growth of the manufacturing sector will continue to be export-led, with the export of manufactured goods expected to expand by 9.3 per cent per annum during the Ninth Plan. The share of manufactured exports to total exports is expected to expand from 80.5 per cent in 2005 to 83.4 per cent in 2010. The share of resource-based exports is anticipated to increase further, particularly with the renewed focus on the development of agro-based industries arising from new technology infusion from biotechnology as well as new product development emanating from production of *halal* products and services. The non-resource-based products will continue to lead overall manufacturing exports, especially E&E products.

4.29 In line with the changes in global and regional developments as well as the on-going restructuring of the domestic industry, the Third Industrial Master Plan (IMP3) will provide the overall development framework for the manufacturing sector and detailed subsector plans for the period 2006-2020. Notwithstanding this, the policy thrusts of the Ninth Plan to accelerate industrial upgrading and sustain competitiveness will include the following:

- ❑ *strengthening strategic integration with the global economy, particularly through international collaboration in high value added and high-technology industries;*
- ❑ *promoting new sources of industrial growth and wealth creation;*
- ❑ *building up an efficient and competitive related services industry to enhance the performance of the manufacturing sector;*
- ❑ *providing more focused incentives for high value added industries;*
- ❑ *enhancing Bumiputera participation in manufacturing;*
- ❑ *developing innovation-driven SMEs to compete in global markets;*
- ❑ *promoting cross border investments to benefit from increasing global deployment of production and marketing activities; and*
- ❑ *enhancing the supply and quality of skilled human resources required for technology and industrial upgrading.*

Strengthening Strategic Integration with the Global Economy

4.30 During the Ninth Plan period, Malaysia will step up efforts to enhance its global position as a trading nation as well as raise the level of competitiveness of its manufacturing sector. In this regard, efforts will be undertaken to expand the scope and coverage of its regional arrangements such as free trade agreements (FTAs) and economic partnership agreements (EPAs) to ensure greater access to markets, trade and investment opportunities. As substantive outbound and inter-regional investments intensify, contributed largely by competition as well as integration of global production and marketing networks worldwide, Malaysian firms will also need to be proactive and seek new investment opportunities locally and abroad. Focus must be given to the development of soft infrastructure, including raising the quality of human capital, R&D capability as well as management system.

4.31 In the rapidly changing global environment and the increasing trend towards growing strategic alliances and networking among a number of international players, it will become imperative for Malaysian investors to form greater partnerships with foreign affiliates, as well as venture out on their own, to make inroads into targeted growth areas both at home and abroad. This will enable Malaysian industries to become a crucial part of the international economic chain and produce goods and services that create new demand and market opportunities. In this regard, initiatives to facilitate industries to meet these new challenges will include:

- facilitating investment in new sources of industrial growth and wealth creation, that require extensive global partnering to reap economies of scale, expand exports and increase access to markets;
- promoting the expansion of foreign direct investment (FDI) in the country as well as facilitating joint ventures and strategic alliances between Malaysian firms and MNCs;
- assisting domestic industries to enhance core competencies, especially in ICT design and engineering skills as well as management and technical expertise to benefit from regional and international production networks;
- developing and pursuing high standards of product quality and service performance to sustain market share and create new market opportunities; and
- building the necessary infrastructure and facilities including dedicated industrial parks in specific locations that have the potential to attract investment.

4.32 These efforts will expand domestic investments and anchor strong global Malaysian companies in selected industries to strengthen the country's position in the international value chain. Simultaneously, the integration with global players will provide for capacity and capability building as well as extensive multiplier effects and spin-offs in the domestic economy.

Promoting New Sources of Industrial Growth

4.33 While building upon established clusters of industries to produce next generation products, efforts will be made to enhance the development of new sources of growth, largely science-based and innovation-based activities, especially biotechnology and ICT industries to diversify and broaden the manufacturing base. With competitive pressures, it will be vital to harness technology and innovation for improved and new product development and related services to cater for existing and potential markets. Among the key factors, will be to expand existing and create new mechanisms for public-private sector collaboration and build a critical mass of innovating firms. This will, among others, require augmenting capabilities in technology development and management, usage of knowledge-intensive applications, networking and accelerating industrial skills upgrading.

4.34 During the Ninth Plan, an essential component of industrial policy will be to reinforce efforts towards the manufacture of higher value added resource-based products. The established industrial clusters, largely the petrochemicals, and agro-based subsectors, are expected to identify new and build specific competencies. The development strategies will include encouraging manufacturers to produce high quality niche products at competitive prices and expand into regional and global markets.

4.35 Advanced manufacturing technology will continue to enhance overall industrial productivity and competitiveness as well as facilitate strategic development of high-technology industries. The new sources of growth in advanced manufacturing include robotics, smart sensors, intelligent software, high-technology packaging, automation and nano-processing. In this regard, R&D will be intensified and application in key areas will be undertaken.

4.36 The shift into high-technology industrial activities will increase the demand for new and advanced materials made from petrochemical products. In this regard, measures will be undertaken to further develop the *petrochemical industry*, by expanding the capacity of feedstock and the range of downstream products to meet increasing domestic and global demand. Moving along and up the value chain, linkages that enhance the growth prospects of petroleum and gas

resources will be further strengthened. Products along the value chain that have growth prospects include those petrochemical-based products that are inputs to the parts and component industries in the E&E and automotive subsectors.

4.37 The expansion of existing and new petrochemical industries in the Kertih-Gebeng and Pasir Gudang-Tanjung Langsat corridor will further enhance growth-creating activities along and up the value chain. In this context, an important offshoot will be the establishment of extended facilities, including ancillary support activities and related services, located in the Kertih-Gebeng vicinity to cater for downstream activities.

4.38 To accelerate the development of the country's nascent biotechnology industry, increased efforts will be undertaken to generate new investment opportunities for local entrepreneurs as well as attract world class biotechnology companies to Malaysia. Customised fiscal and non-fiscal incentives will be provided to enhance collaborative R&D, special skills development as well as global partnerships. A global marketing strategy will be formulated to build brand recognition for Malaysian biotechnology products and applications as well as generate new businesses through strategic alliances and joint ventures.

4.39 The *electronics products industry* will continue to be the main subsector for industrial growth and innovation during the Ninth Plan period with its value added expected to grow at an average annual rate of 7.7 per cent. The global shift towards extensive application of electronics is expected to continue unabated across all industries and services and especially with new developments in the ICT industries. This will be particularly significant in areas of automation, miniaturisation, digitisation and in various multimedia applications. While the contribution of MNCs in the E&E industry will remain significant, local investments as well as technological capabilities in existing and new E&E activities will be further enhanced. These will leverage on developments within the cybercities of Bayan Lepas, Pulau Pinang and Kulim Hi-Tech Park in Kedah.

4.40 MNCs in the E&E industry are expected to continue to source parts and components locally as well as outsource some of their non-core activities, thus contributing to higher value added activities. Domestic manufacturers will be encouraged to focus on improving the sophistication level of their products, in terms of quality, functionality and design. With increased collaboration among local firms, research institutions and participating MNCs, the Government will continue to facilitate the development of relevant skill sets and expertise, technology know-how and R&D to move the local E&E industry further up the value chain.

4.41 During the Plan period, shared services and outsourcing (SSO) will be positioned as a major new source of growth. The worldwide market for SSO is estimated at US\$600 billion by 2008, more than half of which is expected to be implemented through third-party outsourcing or joint ventures. Considering that Malaysia has an edge in global SSO, increasing emphasis will be given to attracting more global players as well as encouraging the participation of the local industry in potential markets. Towards this end, international promotion and marketing will be intensified, focusing on attracting large-scale centres from energy, finance, logistics, manufacturing and healthcare sectors.

4.42 A major strategy includes attracting local companies to undertake high end SSO-related services such as marketing, project management, product development and supply chain management. At the same time, domestic demand of SSO would also be stimulated in order to help the local outsourcing industry reach its critical mass. In order to further strengthen the SSO cluster, assistance such as access to funds for joint ventures as well as mergers and acquisitions will be made available. This in turn will enable local outsourcing firms to acquire world-class competencies, access to greater offshore markets and upscale operational size. Further, the legal framework for the intellectual property rights protection will be strengthened to provide greater trust in outsourcing.

4.43 To expand the range of new products and appliances in the industry, greater emphasis will be placed on the utilisation and application of new and advanced materials. Local research as well as design capacity and capability will be further expanded with a view to developing new and improved components in nanoelectronics and nanomaterials for microelectronics devices and various other industrial applications.

4.44 An area with tremendous growth prospects is the ICT-related manufacturing and services industry, focusing on creativity and digital content development. This includes computer animation, digital games, mobile applications and services, interactive television and digital archiving. As such, various incentives will be considered to stimulate and diversify the design, functionality as well as production of cost-effective fixed-line and mobile solutions and applications for both the local and global markets.

4.45 In order to promote the automotive industry as a competitive subsector, the Government will launch the National Automotive Policy (NAP) in 2006. The NAP will provide clear and strategic directions to develop a resilient and vibrant automotive and components industry. Policies will be geared towards enabling industry players to achieve economies of scale, improve overall cost-effectiveness, enhance industrial linkages and increase export focus. The Government will provide appropriate fiscal and financial incentives to support these policies that will in turn enable the automotive industry to move up the value chain and

expand into higher value added products and services. Among the measures include the development of existing and new automotive clusters, the build up of technical, engineering and R&D capabilities as well as the establishment of a special RM500 million Automotive Development Fund.

4.46 During the Ninth Plan, greater efforts will be undertaken in the *machinery and equipment (M&E) industry* to enhance domestic capability to design and fabricate machines and tools for the mechanisation and automation needs of the economy through the provision of incentives and financing schemes. Promotional efforts will be intensified to attract foreign high-technology and specialised M&E manufacturers to set up base in Malaysia. Existing incentives for regional establishments will be improved while, new incentive packages will be considered, including the setting up of machinery parks within free zone facilities, with a view to making Malaysia a centre for M&E activities in the region.

4.47 The successful establishment of the M&E industry will depend mainly on the ability of the local engineering industry to supply parts, components and modules as well as the availability of highly qualified technical human resource. M&E manufacturers worldwide are turning to global outsourcing for machinery components and modules. Thus, increased efforts will be made to encourage local companies in the engineering support industry to upgrade their technology and production capabilities especially to participate in extensive outsourcing activities.

4.48 As part of the strategy to promote knowledge-based and high-technology industries, the *aerospace industry* will be further developed. Leveraging on the existing market niche in the manufacturing of small aircrafts, parts and components as well as maintenance, repair and overhaul (MRO), increased technical collaborations between local and global manufacturers will be continued in order to develop world class standards and quality in the industry. Apart from this, the implementation of the National Satellite Programme will be further intensified as part of the process to build up local capabilities and production technologies as well as improve R&D and design work. The National Space Policy will be formulated to provide strategic directions to enhance the development of the local aerospace industry and identify development of potential investment opportunities.

4.49 New developments in the *defence industry* are expected to spur the growth of other industries including aerospace, automotive and ICT industries involving the design, engineering and manufacture of a wide range of products and components. To enhance the capability of local manufacturers, increased joint ventures and collaboration with foreign partners will be encouraged. Initiatives will be undertaken to utilise available facilities such as the Sultan Abdul Aziz Shah Airport in Subang, Selangor for MRO activities for military and commercial aircrafts, particularly for the Asia Pacific region.

4.50 There are vast investment opportunities arising from high value added, technology-intensive activities in the marine industry that remain untapped. These include the building of ships, boats, vessels, ferries and trawlers; maintenance, repairs and overhaul; fabricating of leisure crafts, yachts and buoys; as well as heavy engineering works such as construction and fabrication of offshore equipment. The Government will continue to provide various fiscal and financial incentives to boost the development of the shipping industry.

4.51 The *handicraft industry*, including *batik* and *songket* as well as traditional and costume jewellery products, will be further developed. The private sector is expected to take on a more active role in modernising the handicraft industry, improving product design and quality, as well as intensifying marketing and promotion. *Perbadanan Kemajuan Kraftangan Malaysia*, the *Institut Kraftangan Negara* and other relevant agencies will continue to provide enterprising individuals and firms with the necessary technical, business and other support services. R&D activities will be intensified in the production of specialised fibres as alternative raw materials in high value added *batik* and *songket* making. Efforts will also be undertaken to promote the usage of *batik* and *songket* in the high-end fashion and design industry, both in local and international markets.

Services Support for the Manufacturing Sector

4.52 In order for the country to continue to maximise growth opportunities from manufacturing, focus will be given to the expansion of supplementary business and services industries. The availability, quality and functionality of the essential support services will provide the platform for a multitude of forward and backward linkages further contributing to the value added economic activities. The wide range of activities will have to commensurate with the growing and varied demands of increasingly complex production, processes, as well as distribution, marketing and R&D operations in the manufacturing sector. Among others, it will be necessary to build up the requisite infrastructure, infostructure and core competencies in key areas such as integrated transport and logistics, marketing and distribution, R&D and innovation as well as specialised engineering and product design. Towards this end, the strategic initiatives will include:

- attracting more OHQs, RDCs, IPCs and ROs so that high value added activities in the supply chain such as R&D, design and product development as well as management, distribution and logistics support can be conducted in Malaysia;
- encouraging investments in integrated global transport, logistics links and distribution centres to build capability and participation in the whole spectrum of businesses that support and complement manufacturing activities and services up and along the value chain;

- facilitating contract manufacturers to become own design manufacturers (ODM) and own brand manufacturers (OBM) that target domestic and global operations;
- strengthening the development of information hardware, promoting electronic documentation, encouraging e-commerce and improving the Internet environment;
- creating a conducive environment for the accumulation and dissemination of new knowledge and reinforcing the protection of intellectual property rights;
- strengthening domestic R&D, technical and engineering capabilities to reap the benefits of innovation and knowledge applications, and where appropriate, to collaborate with world class large corporations and research establishments;
- enhancing capacity building by creating a critical mass of expertise in technology upgrading at research institutions and industrial training institutions as well as encouraging MNCs to relocate their training institutions or product development centres to Malaysia;
- facilitating provision of essential infrastructure in strategic locations that attract quality investments in MRS industry; and
- ensuring adequate capacity to build up standards and accreditation, product testing and quality control activities benchmarked against international requirements.

4.53 The increasing trend of outsourcing of core as well as non-core activities by large companies, especially MNCs, will open up greater investment opportunities in the provision of support services. Malaysian companies, particularly SMEs, will be encouraged to seek new and improved investment opportunities, especially in supply chain management and integrated logistics activities and services. For this purpose, a Services Sector Development Fund for SMEs will be set up to assist potential entrepreneurs upgrade their technical and professional skills. In addition, relevant agencies, especially the Ministry of International Trade and Industry (MITI) and Malaysian Industrial Development Authority (MIDA) will be able to provide full institutional support to the MRS industry when the MITI and the Agencies Trade and Industry Information Exchange (MATRIIX) programme is fully operational as a one stop service centre to promote trade facilitation services and assist in resolving operational problems.

Branding

4.54 To sustain demand for Malaysian brands, efforts will be intensified to ensure quality and specialisation as well as consistency with changing lifestyles of discerning consumers. Various efforts including the provision of incentives

and grants for brand development as well as targeted marketing and promotion will be continued. Increased focus will also be on enhancing awareness of the industry players, particularly SMEs, on new and emerging aspects such as innovation, acculturation, advertising and the rapidly changing medium of communications in order to strengthen local brands and build market share. The presence of local and foreign hypermarkets and large retail outlets provides an additional avenue for domestic firms, especially SMEs, to market their products and brands overseas.

Enhancing Bumiputera Participation

4.55 During the Ninth Plan, the Government will continue to accord high priority to the creation of a strong and viable BCIC. Public enterprises and trust agencies as well as GLCs will intensify efforts to facilitate greater Bumiputera investment in existing and, more importantly, new areas of wealth creation, technology transfer and skills development. The GLCs in particular will be encouraged to leverage on their experience and expertise to build a larger pool of Bumiputera entrepreneurs capable of going global.

4.56 In the light of the enhanced role and dynamism of the industrial sector during the Ninth Plan and beyond, there are increasingly good prospects for greater Bumiputera involvement. Efforts will be directed at encouraging Bumiputera entrepreneurs to invest in a wide range of manufacturing activities to further widen and diversify their base. Greater emphasis will be given to facilitating investment in new areas of growth such as biotechnology, ICT, creative industries including digital content, high-end electronics, specialised automotive parts and components, and high-value resource-based industries as well as the provision of professional services.

4.57 Increased efforts will be undertaken to create Bumiputera technopreneurs through collaboration with research institutions and the larger technology-based enterprises. This will be with a view to fostering and creating an innovative Bumiputera entrepreneurial community participating in the development of potential technologies for commercialisation and wealth creation. Priority will also be given to the nurturing of Bumiputera enterprises as partners to tap into new and diverse opportunities arising from outsourcing by MNCs and GLCs. Programmes to improve product development and branding, quality improvement as well as R&D and marketing capability will be expanded.

4.58 Greater focus will continue to be given to the development of Bumiputera SMEs, as their advancement is an integral part of the broader strategy of building the BCIC. Apart from ensuring coordinated efforts in the mobilisation and utilisation of resources and expertise for the development of Bumiputera SMEs, emphasis will be placed on the promotion of efficient and competitive enterprises able to withstand the rigours of the market. Towards this end, the

capacity and capability of Bumiputera SMEs will be further developed. Among others, the role of the *Institut Keusahawanan Negara* as a centre for coordinated entrepreneurial and professional training will be enhanced. Apart from this, access to technology, finance and markets as well as strategic locations and enterprising businesses will be improved.

Providing More Focused Incentives for High Value Added Industries

4.59 The Government will increase its efforts to promote investment in high value added and knowledge-intensive industries. In this context, the pre-packaged or customised incentives for specific industries, particularly in new growth areas, will be further improved. These customised benefits will cover areas such as R&D and technology transfer, job creation, expansion of new businesses and linkages as well as intellectual property creation, especially in E&E, digital content and biotechnology industries. In addition, existing companies will also be encouraged to expand and diversify into high-end industries as well as move into related services.

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4.60 As a major effort to promote investments in new growth areas, a RM600 million Strategic Investment Fund will be established under the existing pre-packaged incentive scheme. The fund will be utilised to attract quality investments in projects which are knowledge-intensive, labour saving and have high-technology content involving R&D, intellectual property (IP) development as well as human capital enhancement.

4.61 Taking cognisance of the increasing technology and knowledge content in manufacturing industries, priority will be accorded to incentives to upgrade skills that promote intensive knowledge applications in production processes and related services, especially among SMEs. In this regard, industrial skills upgrading will focus, among others, on ICT integration and utilisation of bioinformatics that infuse the knowledge content into industries as well as e-management and virtual engineering services for high-end design activities. For these purposes, a total of RM463 million will be provided.

4.62 The MRS industry will continue to be an important area of investment opportunities, particularly for SMEs. Within the manufacturing sector, the MRS will form the new backbone of rapidly changing integrated production systems, which cut across geographical and spatial distances. Increased resources, including incentives, will be made available to promote the development of supporting infrastructure such as business services, transport, communications and logistics, as well as training funds to enhance the requisite technical skills. For SMEs in particular, soft loans amounting to RM220 million will be allocated, among others, for the purchase of new machinery and equipment required to participate in the expanding MRS sector.

4.63 As part of the efforts to ensure a strong and efficient industrial structure, measures will also include the establishment of an Automation Fund as well as the re-establishment of the Industrial Adjustment Fund (IAF). The Automation Fund will be dedicated to modernising and automating manufacturing processes with a view to improving efficiency, quality and the utilisation of labour-saving technologies. The IAF will assist industries, facing intense competition from the liberalisation measures under ASEAN Free Trade Area (AFTA) and FTAs, to rationalise and streamline their operations.

4.64 Measures will continue to be taken to improve the business environment to attract new investments and promote the growth of existing companies. Further initiatives will include measures to reduce cost of doing business through improved mechanisms and processes, provide for integrated business planning and financing programmes to stimulate industrial investment as well as review investment-related laws and regulations that may impede development. Public-private sector dialogues and deliberations will be encouraged to ensure expeditious resolution of problems and issues.

Innovation-Driven SMEs

4.65 The strategy will be to focus on creating high performance and resilient SMEs, equipped with strong technical and innovation capability as well as managerial and business skills to realise new job opportunities and improved market access. This will be with the view to strengthening the capacity and capability of domestic SMEs to produce innovative as well as quality products and services at competitive costs and integrate into the international supply chain.

4.66 Inter-firm linkages among and between SMEs as well as with large domestic companies, including GLCs and foreign entities, will be further strengthened to enable SMEs to become more competitive, innovative and reliable suppliers for global outsourcing networks thereby facilitating entry into new export markets. In this regard, existing programmes will be intensified and new ones initiated to further develop advanced professional and managerial skills among SMEs. These measures, aimed at the internationalisation of operations and businesses, will in turn add value to products and services as well as generate new market opportunities for the SMEs.

4.67 Another strategy will be building a platform for enterprise start-ups and incubation that will create the pool of new and innovation-driven entrepreneurs needed to sprout new businesses and services. Towards this end, the Government will promote the setting up of technology incubators for the purpose of nurturing new firms and entrepreneurs as well as expanding capacity for innovations and related services.

4.68 Efforts will be undertaken to assist SMEs to further develop technical skills, especially in generating innovation and creating economic value from knowledge applications. The Small and Medium Industries Development Corporation (SMIDEC), along with other agencies and the private sector, will review the on-going and devise new training and apprenticeship programmes to incorporate knowledge management plans and strategies as well as knowledge-based applications and practices among SMEs.

4.69 On-going entrepreneurship programmes, including advisory and outreach services, will be expanded to equip SMEs with new and improved management and business practices and methods in production, quality improvement, marketing and distribution in order to raise productivity, efficiency and profit levels. New schemes, including increased automation, business coaching as well as provision of technical skills to assist SMEs to develop, commercialise and market innovative ideas will also be implemented.

4.70 Increased funding initiatives will be undertaken to support the development of SMEs. To complement the efforts of commercial banks as well as development financial institutions, the SME Bank will devise new approaches, and the provision of more integrated assistance packages to SMEs involving both financial, including cash-flow based funding, and related business support services. In addition, increased venture capital will be made available to finance start-up technology companies, especially to promote the commercialisation of potential research findings and the sprouting of innovative products and services.

4.71 In terms of institutional coordination, the National SME Development Council provides the strategic framework for more focused and coordinated inter-agency efforts on SME development. Emphasis will be aligned towards strengthening the requisite financial and non-financial infrastructure, including skills upgrading as well as enhancing access to financing.

4.72 The Government will continue with the provision of industrial sites at more competitive rates for SMEs. During the Ninth Plan, a total of RM927.5 million will be provided as soft loans to state economic development corporations and regional development authorities to develop industrial sites and special SME parks, including agriculture and *halal* centres. In addition, an allocation of RM833 million will be provided to build business premises and provide office space at strategic locations.

4.73 The development of *rural industries* will continue to be an important vehicle towards increasing the income and living standards of the rural population. The focus will be on the provision of a more broad-based programme with greater emphasis on higher employment creation and better utilisation of existing and new infrastructure. Efforts will be undertaken to further improve provision of basic infrastructure and amenities. Measures will also be directed at providing

more integrated development programmes for potential entrepreneurs that will include marketing and distribution as well as upgrading business management capabilities.

Promoting Cross Border Investment

4.74 With increasing globalisation and regionalisation, more Malaysian entrepreneurs are investing overseas in countries such as China, India, the Middle East and a number of African countries as well as ASEAN countries. Net flow of Malaysian direct investment abroad increased from RM7.7 billion in 2000 to RM11.4 billion in 2005 mainly in plantations, oil and gas, telecommunications, the construction sector as well as MRS. Among the factors driving investments abroad, include increasing domestic competition, maturity of local markets and higher growth opportunities overseas.

4.75 During the Ninth Plan period, more Malaysian companies are expected to avail themselves of the investment opportunities arising from regional agreements and the various bilateral FTAs as well as the global trend in outsourcing. The Government will continue to encourage and support Malaysia's overseas investments, which can result in economic benefits to the country. This will include accessing new and larger markets, maintaining market share and sourcing raw material inputs and components for the growth of domestic industries as well as diversifying into non-traditional businesses. Given the rising trend in cross border investments by Malaysians, it is imperative to have strong institutional back-up to support the country's outward investment drive which will fuel further economic growth. In this regard, the existing Cross Border Investment Division in MIDA will be expanded to spearhead the promotion and coordination of cross border investments in manufacturing, and MRS.

Skilled Human Resource Development

4.76 During the Plan period, employment in the manufacturing sector is targeted to grow at an average rate of 2.8 per cent per annum, as shown in *Table 4-5*. Labour productivity as measured by value added per employee is expected to increase at an average of 3.8 per cent per annum largely due to the wider applications of knowledge-intensive and labour saving technologies as well as quality improvement programmes. The employment in the resource-based industries is expected to grow at an average rate of 3.7 per cent per annum, creating 279,700 new jobs. These include employment opportunities created in the chemicals, food processing as well as rubber products industries. The employment creation in the food processing industry will be largely due to the new emphasis on agriculture and agro-based industries as well as spin-off companies expected to be generated by agro-biotechnology. The rubber processing and products industries, which is expected to sustain its position

TABLE 4-5

EMPLOYMENT IN THE MANUFACTURING SECTOR BY INDUSTRY, 2000-2010

| Industry | Number ('000 Persons) | | | % of Total | | | Average Annual Growth Rate (%) | |
|---|-----------------------|----------------|----------------|--------------|--------------|--------------|--------------------------------|------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | 9MP |
| Resource-Based | 1,186.6 | 1,423.7 | 1,703.4 | 46.2 | 45.4 | 47.3 | 3.7 | 3.7 |
| Food Processing, Beverages & Tobacco | 237.7 | 298.9 | 346.5 | 9.3 | 9.5 | 9.6 | 4.7 | 3.0 |
| Wood Products including Furniture | 352.7 | 373.8 | 405.8 | 13.7 | 11.9 | 11.3 | 1.2 | 1.7 |
| Paper & Paper Products, Printing & Publishing | 121.6 | 137.7 | 156.3 | 4.7 | 4.4 | 4.3 | 2.5 | 2.6 |
| Chemicals, Fertilizers, Plastics & Petroleum Products | 238.1 | 327.0 | 477.6 | 9.3 | 10.4 | 13.3 | 6.5 | 7.9 |
| Rubber Processing & Products | 132.0 | 171.5 | 201.6 | 5.1 | 5.5 | 5.6 | 5.4 | 3.3 |
| Non-Metallic Mineral Products | 104.5 | 114.9 | 115.6 | 4.1 | 3.7 | 3.2 | 1.9 | 0.1 |
| Non-Resource-Based | 1,319.4 | 1,628.3 | 1,798.3 | 51.4 | 52.0 | 50.1 | 4.3 | 2.0 |
| Textiles & Textile Products | 215.8 | 214.8 | 192.3 | 8.4 | 6.9 | 5.3 | -0.1 | -2.2 |
| Basic Metal & Metal Products | 193.8 | 282.8 | 340.0 | 7.6 | 9.0 | 9.5 | 7.9 | 3.8 |
| Machinery & Equipment | 161.4 | 162.6 | 178.1 | 6.3 | 5.2 | 5.0 | 0.1 | 1.8 |
| Electrical & Electronic Products | 647.1 | 840.8 | 943.6 | 25.2 | 26.8 | 26.3 | 5.4 | 2.3 |
| Transport Equipment | 101.3 | 127.4 | 144.3 | 3.9 | 4.1 | 4.0 | 4.7 | 2.5 |
| Others | 61.6 | 80.0 | 93.0 | 2.4 | 2.6 | 2.6 | 5.4 | 3.0 |
| TOTAL | 2,565.8 | 3,132.1 | 3,594.7 | 100.0 | 100.0 | 100.0 | 4.1 | 2.8 |

Source: Economic Planning Unit

as a global market leader in latex products, coupled with the increase in market share in industrial rubber goods, is expected to register an average rate of employment at 3.3 per cent per annum.

4.77 The employment in the non-resource-based industries is projected to grow at an average rate of 2.0 per cent per annum, creating 170,000 new jobs. The non-resource-based industries that are expected to register net employment creation are the basic metal and metal products, transport equipment, E&E products as well as the M&E industries. There is anticipated to be an increasing demand for production engineers, mould and die engineers and metallurgists as well as skilled technical human resource in robotics and sensor technologies, advanced materials, nanotechnology and mechatronics.

4.78 Entry into new and emerging industrialised areas will require increased upgrading of current skill sets and technical expertise. Quality training will be emphasised at the various institutes of learning and skills development centres to ensure that knowledge, skills and expertise remain relevant to meet market requirements and to face the increasingly competitive environment. Among others, the human resource development programme on science and technology will be targeted towards developing a core group of research scientists and engineers to meet the requirements for high-end industrial development, particularly in key technology areas.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

4.79 In terms of institutional support for the development of the industrial sector, MITI will continue to be the lead agency driving the expansion of manufacturing activities and related services. These efforts will be complemented by other key ministries and agencies, including the Ministry of Entrepreneur and Cooperative Development, Ministry of Science, Technology and Innovation, MIDA, MATRADE and SMIDEC. These various agencies will provide the lead for specific programmes such as intensifying Bumiputera participation in commerce and industry, accelerating development of new biotechnology and ICT industries, coordinating and promoting investment and marketing activities as well as developing innovation-driven SMEs.

4.80 The development allocation to support MRS during the Ninth Plan is as shown in *Table 4-6*. The focus will be on accelerating industrial technology development, upgrading industrial infrastructure and promoting advanced skills

TABLE 4-6
**DEVELOPMENT EXPENDITURE AND ALLOCATION FOR
MANUFACTURING AND RELATED SERVICES, 2001-2010**
(RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|---|----------------------------|---------------------------|
| Development of Industrial Infrastructure* | 476.2 | 2,705.8 |
| SME Development | 1,561.6 | 2,160.2 |
| Investment Funds | 85.6 | 1,590.0 |
| Training and Consultancy Services | 534.3 | 1,332.0 |
| Total | 2,657.7 | 7,788.0 |

Source: Economic Planning Unit

Note : * Including industrial estates, SME parks, infrastructure upgrading and maintenance.

development. Support programmes to strengthen SMEs in particular, will include technical training and apprenticeship, marketing and promotion as well as the provision of outreach services such as business development and consultancy.

V. CONCLUSION

4.81 The Eighth Plan laid a firm foundation for the manufacturing sector to contribute further to high value added and knowledge-content industries and promote economic growth. In order to foster the on-going transformation of the manufacturing sector more vigorously and sustain its competitiveness, the Ninth Plan will provide for a more vibrant enabling environment for FDI and domestic investment to move the sector up along the entire value chain. The challenge will be to reinforce established, as well as develop new and emerging industrial clusters to generate more investment, income and job opportunities. For the future expansion and deepening of manufacturing and related services, the Government will continue to assist the private sector by providing a range of support services, including customised incentives and funding. This will be with a view to building up R&D, technical and managerial core competencies and development of IPs for the expansion of high-value products and brands with export potential. A principal thrust in the industrialisation programme will be the development of a competitive, innovative and technologically strong SME sector. Of equal importance will be for domestic firms to work within global and regional structures in order to develop economic integration and strategic partnerships with international businesses as well as sustain growth and competitiveness of the industrial sector.



MAINSTREAMING INFORMATION AND COMMUNICATIONS TECHNOLOGY

5

I. INTRODUCTION

5.01 During the Eighth Plan, concerted efforts were undertaken to provide a stronger platform for the country's transition towards a knowledge-based economy. Increasingly central to this effort was the promotion of information and communications technology (ICT) as a strategic driver to support and contribute directly to the growth of the economy as well as enhance the quality of life of the population. Substantial investments were made to provide for the communications infrastructure to increase accessibility, as well as to improve the requisite institutional and legal environment. Increasing emphasis was placed on raising the level of ICT usage in the various sectors of the economy, between urban and rural areas and among different segments of society.

5.02 For the Ninth Plan period, advancements in the global digital environment are expected to have a significant impact on the positioning of Malaysia as a competitive knowledge-based economy. With ICT as a key determinant in the development process to move the economy up the value chain, efforts will be intensified to mainstream ubiquitous access to ICT services and facilities and, equally important, to promote the wider adoption and usage in all aspects of everyday life. The pervasive ICT environment will enable Malaysians to have more equitable access to, and participation in, the new and emerging knowledge-driven economic opportunities. Measures will be undertaken to enhance ICT-related skills and competencies as well as infostructure expansion for improved broadband connections for advanced multimedia applications, local content development, greater e-commerce adoption and improved information security.

II. PROGRESS, 2001-2005

5.03 For the Eighth Plan, investment by both the public and private sectors was directed at building the essential ICT infrastructure. This was part of the efforts to establish speedy and efficient network of facilities and services in

order to encourage greater diffusion of ICT in the economy. The Multimedia Super Corridor (MSC) continued to provide the platform and enabling environment to further promote the development of ICT industry. The increased usage of ICT was further enhanced through its wider adoption in commerce, industry, education and health as well as in the mainstream of daily life.

Upgrading and Expanding ICT Infrastructure

5.04 During the Eighth Plan period, priority was given to the promotion of infrastructure expansion in the rural and remote areas so as to broaden access to communications infrastructure. Increased investments were undertaken to enhance accessibility to ICT infrastructure, in terms of basic telephony, public payphones and Internet services, particularly to underserved areas, through Government allocations as well as the Universal Service Provision (USP) Fund contributed by the industry. The USP programme enabled a considerable number of districts as well as rural schools, clinics and libraries to access fixed lines, public payphones and Internet.

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5.05 In order to accelerate infrastructure deployment and improve ICT penetration to the general public, including rural and underserved areas, the industry leveraged on wired and wireless technologies to provide broadband services throughout the country. These efforts were part of the overall implementation framework contained in the National Broadband Plan (NBP), to provide for planned operationalisation of the broadband nationwide.

5.06 Arising from increased market liberalisation of the telecommunications industry, there was more competitive pricing of available services leading to a significant increase in cellular subscription from 21.8 per 100 population in 2000 to 74.1 in 2005, as shown in *Table 5-1*. The relatively moderate growth in penetration rates of computers and Internet dial-up was supported by various measures to encourage computer ownership.

5.07 To establish a more conducive and responsive policy and regulatory environment for the overall ICT industry, a number of laws and regulations were reviewed and updated to facilitate the implementation of the USP as well as the fixed line and broadband tariff structure. The liberalisation of the licensing regime for the applications service providers (ASP) in 2000, promoted a self-regulatory environment and lifted restrictions on the number of ASP licences issued for Internet access and Voice over Internet Protocol (VoIP) services.

5.08 The Malaysian Information, Communications and Multimedia Services (MyICMS) Blueprint, completed in 2005, proposed guidelines for the orderly and integrated development of the convergence of the three key sectors in the ICT industry, namely, cellular telephony, Internet and broadcasting. The blueprint

TABLE 5-1
SELECTED ICT INDICATORS, 2000-2010

| <i>Indicator</i> | <i>2000</i> | <i>2005</i> | <i>2010^e</i> |
|-------------------------------------|-------------|-------------------|-------------------------|
| Fixed Telephone Lines in Operation | | | |
| Number of Lines (million) | 4.6 | 4.4 | - |
| Penetration Rate (%) ² | 19.7 | 16.6 | - |
| Cellular Phone Subscriptions | | | |
| Number of Subscriptions (million) | 5.0 | 19.5 | 24.4 |
| Penetration Rate (%) ² | 21.8 | 74.1 | 85.0 |
| Personal Computers Installed | | | |
| Number of Units Installed (million) | 2.2 | 5.7 | 11.5 |
| Penetration Rate (%) ² | 9.4 | 21.8 ¹ | 40.0 ³ |
| Internet Dial-up Subscriptions | | | |
| Number of Subscriptions (million) | 1.7 | 3.7 | 10.0 |
| Penetration Rate (%) ² | 7.1 | 13.9 | 35.0 |
| Internet Broadband Subscriptions | | | |
| Number of Subscriptions | - | 490,630 | 3,733,000 |
| Penetration Rate (%) ² | - | 1.9 | 13.0 |

Source: Malaysian Communications and Multimedia Commission and Economic Planning Unit

Notes: ¹ As at October 2005.

² Refers to penetration rate per 100 population.

³ Include Personal Digital Assistant (PDA) besides desktop and laptop PCs.

^e Estimates

was prepared with a view to further expanding the development of innovative ICT services, telecommunications infrastructure and investment in new growth areas, including content development, digital multimedia receivers, VoIP phones, as well as embedded components and devices.

Utilisation of ICT

5.09 Recognising the strategic role of ICT in enhancing productivity and competitiveness, investment in ICT expanded at an average annual growth rate of 4.7 per cent, as shown in *Table 5-2*. The ICT expenditure in the various economic sectors contributed to the extensive build up of improved ICT systems and processes as well as the development of more web-based applications, raising productivity and efficiency levels. The ICT expansion in the Government sector was largely due to increased computerisation and IT infrastructure deployment within various agencies. The Public Sector ICT Strategic Plan, launched in 2003, comprised a number of strategic initiatives and smart partnership programmes to improve linkages among agencies, businesses and the public as well as the development of open source software (OSS). In terms of ICT adoption, the penetration of personal computers (PCs) installed almost doubled from 9.4 per

TABLE 5-2

ICT EXPENDITURE BY SECTOR, 2000-2005

| Sector | RM million | | | % of Total | | | Average Annual Growth Rate (%), 2001-2005 |
|---|---------------|---------------|-------------------|--------------|--------------|--------------|---|
| | 2000 | 2004 | 2005 ^e | 2000 | 2004 | 2005 | |
| Agriculture | 200 | 128 | 138 | 0.8 | 0.4 | 0.4 | -7.2 |
| Mining | 222 | 224 | 234 | 0.9 | 0.7 | 0.7 | 1.1 |
| Manufacturing | 12,188 | 13,652 | 14,367 | 47.5 | 45.6 | 44.6 | 3.3 |
| Utilities | 378 | 430 | 470 | 1.5 | 1.4 | 1.5 | 4.5 |
| Construction | 112 | 126 | 135 | 0.4 | 0.4 | 0.4 | 3.8 |
| Wholesale and Retail Trade | 1,585 | 1,735 | 1,870 | 6.2 | 5.8 | 5.8 | 3.4 |
| Transport and Communications ¹ | 1,221 | 1,581 | 1,770 | 4.8 | 5.3 | 5.5 | 7.7 |
| Finance and Business Services | 1,894 | 2,563 | 2,845 | 7.4 | 8.6 | 8.8 | 8.5 |
| Other Services ² | 140 | 62 | 70 | 0.5 | 0.2 | 0.2 | -12.9 |
| Government | 1,389 | 1,981 | 2,245 | 5.4 | 6.6 | 7.0 | 10.1 |
| Consumer | 6,314 | 7,440 | 8,104 | 24.6 | 24.9 | 25.1 | 5.1 |
| Total | 25,643 | 29,922 | 32,248 | 100.0 | 100.0 | 100.0 | 4.7 |

Source: World Information Technology and Services Alliance (WITSA)

Notes: ¹ Includes telecommunications services.

² Include businesses providing personal, repair, cultural, recreation and entertainment, healthcare, legal, education, social and professional services.

^e Estimates

100 population to 21.8 in 2005 while Internet dial-up subscription penetration increased from 7.1 per 100 population in 2000 to 13.9 in 2005, as shown in *Table 5-1*.

Development of the Multimedia Super Corridor

5.10 The MSC, established in 1996, set the platform to build a competitive cluster of local ICT companies and a sustainable ICT industry. By the end of 2005, a total of 1,421 companies was awarded MSC-status, of which more than 50.0 per cent focused on software development for general enterprise solutions and data warehousing as well as high-end specialised applications and e-commerce. During the Plan period, the MSC entered the second phase of its operationalisation which, among others, involved the conferring of MSC cybercity status to Bayan Lepas in Pulau Pinang and the Kulim Hi-Tech Park in Kedah.

5.11 While the MSC exceeded its first phase target of 500 MSC-status companies, for the period 1996-2003, however with regard to content development and the extent of cutting edge products and services, these have yet to reach expected levels. Notwithstanding this, with the rising demand for offshore shared services and outsourcing (SSO) activities worldwide, increased marketing and promotional

efforts were undertaken to enhance the competitiveness of the MSC as a global SSO destination. By the end of 2005, more than 50 SSO companies were established, providing 12,000 high skill jobs.

Deployment of MSC Applications

5.12 A key component of the MSC development was the implementation, integration and enhancement of a number of multimedia applications. These included applications development, namely, the Electronic Government, Smart School, Government Multipurpose Card and Telehealth, as well as the R&D Cluster, e-Business and Technopreneurship Programme to create the multimedia environment. The MSC applications, using comprehensive computer-based systems, provided the catalytic multimedia environment to generate innovative business opportunities for private sector participation. More than 300 companies were involved in the development of the multimedia applications and their deployment.

5.13 These applications attracted considerable investor interest both at local and international levels. The establishment of MSC business presence in the cities of Jeddah in Saudi Arabia and Dalian in People's Republic of China (China) promoted partnerships with a view to replicate a number of the MSC applications abroad. In order to bring the products to international markets, emphasis was made on standards compliance to ensure interoperability, modularity and scalability of the MSC applications.

Promoting e-Commerce

5.14 As e-commerce presented opportunities for businesses to increase productivity and improve competitiveness, its development was further intensified through the establishment of the requisite infrastructure, which included the setting up, and promotion, of various electronic transaction mechanisms. The involvement of the private sector, primarily the financial institutions and industry associations, was significant in the establishment of financial exchanges for business to business (B2B) and business to consumer (B2C) online transactions.

5.15 A number of action plans under Internet banking services and the MSC e-Business Programme were piloted to further promote the e-mode of communications and transactions through secure B2B and B2C online business transactions, especially for small and medium enterprises (SMEs). In addition, to promote the uptake of e-commerce as well as address concerns relating to consumer protection and security of information, measures were taken to enact new legislation. These included the Electronic Transaction Bill, the Electronic Government Activities Bill and the Personal Data Protection Bill, currently in the early stages of preparation.

Narrowing the Digital Divide

5.16 As part of the endeavours to ensure that all Malaysians share the benefits of a knowledge-based economy, on-going efforts to narrow the digital divide were further intensified. The strategies included the implementation of the infrastructure plan for universal access as well as making available more affordable ICT products and services. For this purpose, initiatives included the establishment of telecentres in underserved areas, tariff revision for telephone and Internet subscription, and the promotion of PC ownership. In addition, to further promote the uptake of ICT facilities and services, efforts were undertaken to develop customised content and online applications.

5.17 Among the measures taken to bridge the digital divide within the rural communities was the establishment of 217 telecentres under the USP and Government programmes. These telecentres, comprising 42 *Pusat Internet Desa*, 39 *Medan InfoDesa*, 58 Community Access Centres and 78 Computer Literacy Classes were set up to increase computer education and empower rural communities to access and utilise information to improve their economic and social well-being. Specific programmes were also initiated to equip people with disabilities, senior citizens, micro-enterprises, single mothers, youth and urban poor to use ICT services. To further increase ICT literacy among households, the One Home One PC project was launched in 2003.

5.18 To establish a more comprehensive and robust plan of action for Bridging the Digital Divide (BDD), a study on a National Strategic Framework for BDD was undertaken. The Framework makes use of a geographical information system (GIS) to map the distribution of ICT throughout the country in conjunction with various demographic and geographical parameters, such as population density, gender and age as well as across states, districts and *mukims*. Early findings show a disparate distribution of Internet and PCs indicating that less than one per cent of the *mukims* have high average index value and these are mainly in the vicinity of major cities. This indicated that while the general access to basic telephony is relatively high, more than 90 per cent of the 927 *mukims* were still at the early stage of using Internet and PCs.

ICT Skills

5.19 As part of the efforts to move the nation towards a knowledge-based work culture, human resource development continued to be a critical aspect of Malaysia's strategy and initiative for ICT. To meet the rising demand for highly skilled computer workers, comprising computer system designers and analysts, computer programmers and computer support technicians, the 48 MSC-status institutions of higher education produced more than 31,000 ICT graduates during the Plan period. Various programmes were initiated to encourage institutions

of higher education as well as other training institutions to work with industries in order to ensure relevancy and marketability of skills acquired.

5.20 Despite the rigorous efforts, the MSC Impact Survey 2005 indicated a shortage of ICT-related personnel in specialised areas indicating a mismatch in the supply of, and demand for practical skill sets required by the industry. Among others, two pilot schemes, namely, the Undergraduate Skills Programme and the MSC Internship Programme for new ICT graduates provided advanced skills training as well as retraining and reskilling to more than 2,000 participants.

5.21 Apart from specific institutional training, continuous industry wide in-service skills upgrading and advanced training also contributed to the enhancement of ICT knowledge and skill levels of the workforce. Under the Human Resource Development Fund (HRDF), RM176 million was disbursed for ICT-related training during the Plan period. This involved the financing of 241,359 training places at 227 training centres nationwide.

Fostering Local Capabilities in Content Development

5.22 The adoption of digital technology to create diverse and original local content for education, entertainment, commerce and industrial activities enabled widespread development of the multimedia content industry for both the local and global markets. The public and private sectors expanded capacity for training in specialised ICT fields such as multimedia, animation and computer graphics as well as interactive software development with the aim to narrow the skills gap for creative content development. Improved incentives such as a licensing fee rebate scheme was introduced to encourage the content applications service providers to develop and promote local content as well as increase collaboration with world class content providers.

5.23 The agenda to develop the creative multimedia cluster as a new area for future growth was strengthened with the launch of the MSC Creative Applications and Development Centre (CADC). Besides working with local companies, the CADC focused on strategic collaboration with institutions of higher education to spawn a number of R&D activities in high value added content development such as visualisation, computer graphics imaging and production design.

e-Learning

5.24 During the Plan period, the increased use of the Internet led to the growth in e-learning as a potential source of online education and training. Apart from the smart school initiatives, a number of institutions of higher education provided increased opportunities for such virtual education. In line with the growing culture with regard to online information sharing, MIMOS developed the

Malaysia Grid for Learning (MyGfL), which serves as a repository and directory for sharing of digital content. A number of e-learning and smart school community projects were also implemented by the Multimedia Development Corporation (MDC). These were essentially private sector-led initiatives to provide the requisite ICT infrastructure, infostructure, and sponsorship of ICT facilities and training in selected schools. E-Learning in schools was further aided with the use of smart school courseware and Internet access via the SchoolNet.

5.25 To ensure more coordinated and coherent development of e-learning initiatives in the public sector, a National e-Learning Consultative Committee (NeLCC) was set up to provide direction and monitor initiatives pertaining to formulation and implementation of strategies and programmes. To ensure more orderly development and adoption of e-learning practices, the NeLCC is to oversee the formulation of the public sector e-learning blueprint.

Information Security

5.26 During the Plan period, various measures were undertaken to address computer abuse and misuse as the economy becomes more connected through networked applications and communications infrastructure. The Government initiated the preparation of a National Information Security Framework to address the requisite legislative, regulatory and technical aspects as well as institutional arrangements to preserve e-Sovereignty, towards increased confidentiality, integrity and availability of the communications network. The National ICT Security and Emergency Response Centre (NISER) provided a suite of services in niche areas of computer forensics, acculturation programmes, policy research, security advisory and assessment of security solutions. The Malaysian Computer Emergency Response Team (MyCERT) provides an independent platform for Internet users to report and seek assistance in dealing with security breaches, misuse and abuse of the Internet.

Funds for ICT Development

5.27 During the Plan period, several sources of funds were made available by the Government to assist companies to adopt ICT in their business processes as well as venture into new ICT-related investment activities. The Malaysia Debt Ventures Berhad (MDV) provided innovative financing facilities for ICT and high growth sectors. By the end of 2005, a total of RM1.1 billion was disbursed to 76 companies. The Malaysia Venture Capital Management Berhad (MAVCAP) disbursed RM82.6 million for seed and direct ventures in information technology, electronics, telecommunications and networking. The Commercialisation of Research and Development Fund (CRDF) managed by the Malaysian Technology Development Corporation (MTDC) as well as the Small and Medium Industries Development Corporation (SMIDEC) launched a number of ICT-related financial schemes to further accelerate the utilisation of ICT, especially by SMEs. The

Demonstrator Application Grant Scheme (DAGS) provided funds for short term projects targeted at creating, developing and promoting new ICT applications for specific users, particularly at the community levels. The DAGS provided funds for a total of 51 projects involving disbursement of RM79.7 million during the Plan period.

Promoting R&D in ICT

5.28 During the Plan period, a total of 192 ICT-related R&D projects was approved under the Intensification of Research in Priority Areas (IRPA) programme amounting to RM46 million. The approved projects included network monitoring, wireless communications, grid computing infrastructure and GIS as well as satellite, sensors and applications for health, business, agriculture and education conducted by a number of institutions of higher education and research institutions. Under the Industry Research and Development Grant Scheme (IGS), a total of 27 ICT-related projects amounting to RM28 million was approved. In the areas of information security, computing, and semiconductor and microelectronics, MIMOS undertook 34 ICT-related R&D projects, of which 30 had potential commercial value.

III. PROSPECTS, 2006-2010

5.29 As concerted efforts continue to be undertaken to strengthen the foundation for a knowledge-based economy, the greater adoption and usage of ICT will become strategically more important. The country will need to increasingly harness ICT to improve productivity and competitiveness as well as progress to high value added and knowledge-intensive economic activities. The Government will build upon and enhance ICT capacity for ubiquitous access, develop core competencies, narrow the digital divide and expand usage of electronic transactions as part of the overall effort to empower the populace to partake in the growing networked economy. Simultaneously, this will allow for the greater expansion of ICT-related industries and services. As such for the Ninth Plan, the focus of ICT development will include:

- ❑ *enhancing Malaysia's position as a global ICT and multimedia hub;*
- ❑ *expanding the communications network to ensure more equitable access to information and services;*
- ❑ *intensifying efforts at bridging the digital divide;*
- ❑ *developing the existing cybercities as well as promoting new cybercentres and MSC multimedia applications;*
- ❑ *fostering new sources of growth in the ICT sector including bioinformatics, a convergence of biotechnology and ICT;*

- ❑ *developing skilled ICT workforce;*
- ❑ *accelerating e-learning acculturation; and*
- ❑ *enhancing information security.*

Enhancing Malaysia's Position as a Global ICT and Multimedia Hub

5.30 During the Ninth Plan period, the country will leverage on the significant progress made in fostering the development of ICT and multimedia industries. Taking into cognisance the increasing competition from other ICT hubs worldwide, efforts will be intensified towards strengthening Malaysia's position as a preferred global location for ICT investment and as a market leader for ICT solutions. Since the provision for a conducive environment, such as reliable infrastructure as well as service availability, affordability, and productivity, is a critical requirement in attracting key players, continuous global benchmarking of Malaysia's position will be important in assessing Malaysia's competitiveness and investment attractiveness internationally. In this regard, the National Information Technology Council (NITC) will continue to be the principal forum to further develop national ICT policy and strategy, coordinate initiatives and monitor implementation.

5.31 The preparation of the National ICT Strategic Roadmap will provide the framework to build new capabilities and technologies vital to improve access and promote investment in ICT-based and knowledge-intensive industries. The Government will continually review the MSC Bill of Guarantees with a view to ensure that its provisions and content remain relevant and competitive to attract potential foreign and local ICT-related investments. The review will consider ways to enhance marketing and branding of the MSC, especially in targeting new markets including the Middle East, China and Europe.

5.32 The implementation of the ICT Strategic Plan for the Public Sector will take into consideration the need for increased interoperability, common standards and guidelines, shared infrastructure, as well as continuous upgrading of ICT skills amongst the Government workforce. The plan will include a one-stop gateway access to wide-ranging applications, including community applications for businesses and citizens, inter- and intra-agency services as well as a knowledge bank and enterprise-wide applications for back-office systems integration.

5.33 Efforts will be intensified to promote domestic R&D institutions and industry players to establish partnerships with international institutions in network technology development. The second phase of the Malaysia Research and Education Network (MyREN) will connect private institutions of higher education, government research institutions and private industry laboratories to further enhance global networking and cooperation in R&D. To facilitate local research communities to establish

linkages with world class research institutions, MyREN will be linked to the International Research Network through the Trans-Eurasia Information Network 2 (TIEN2).

Expanding the Communications Network to Ensure More Equitable Access to Information and Services

5.34 Adequate and reliable ICT infrastructure with extensive capacity to support access and delivery of information will remain a major factor in the support of a knowledge-based economy. A critical component will be the availability of broadband network needed to achieve greater adoption of online multimedia and Internet-based applications. The implementation of the NBP will be accelerated as part of the efforts to ensure rapid expansion and uptake of broadband services to reach 13.0 per cent of the population by 2010, compared to the current 1.9 per cent.

5.35 Apart from increasing access to communications infrastructure, the greater use of broadband services will be promoted through the provision of innovative packages and competitive tariffs. Innovative last-mile technologies that provide alternative connections for homes and businesses such as wireless broadband and broadband over power lines to areas that lack telephone land lines, will be considered. Further downstream, measures will be undertaken to allow service providers to have greater access to infrastructure capacity at satellite and cable landing stations and provide international backhaul and transit services to businesses or third parties. In addition, the provision of Internet exchange in the country will also be further opened up.

5.36 The subscription of cellular telephones in the country is expected to increase from 74.1 per 100 population in 2005 to 85.0 by 2010, largely attributed to convenience, affordability and in keeping with changing lifestyles. To achieve national mobile communications coverage and interoperability, the Third Generation (3G) infrastructure network in terms of service availability, quality and innovative applications, will be expanded in phases. In addition, cooperation amongst mobile operators and local content service providers will be enhanced to ensure extensive provision of mobile Internet to consumers thus further increasing access to Internet-based services such as e-commerce.

5.37 The phased implementation of the MyICMS will further promote the growth of ICT infrastructure, products and services. This will encompass essentially the increased integration of the Internet, mobile telephony and broadcasting services. To ensure optimisation of communications infrastructure investment, services providers will be encouraged to consolidate and share communications facilities as well as coordinate to set up common facilities and interoperable systems for more efficient delivery of services and more affordable broadband

access. Towards this end, the private sector will be encouraged to provide integrated infrastructure, where necessary, to ensure adequate access and connectivity.

5.38 In the light of the rising demand for Internet address space, the Government will consider the need to migrate the Malaysian Internet network from Internet Protocol version 4 (IPv4) to Internet Protocol version 6 (IPv6) protocol technology. A National Consultative Council was set up to study, among others, the implications of establishing the IPv6 network in terms of policy, regulatory environment, investments, timelines, manpower requirements and infrastructure deployment. Radio frequency identification (RFID) technologies will also be used to create ubiquitous network. Under this environment, the RFID through sensory, tagging and tracking functionalities will be used to intensify information usage thus generating new value added activities and services within the ICT industry.

Bridging the Digital Divide

5.39 As part of efforts to prepare the general populations to meet the challenges of a knowledge-based economy, increasing emphasis will be placed on ensuring more equitable access to affordable PCs and online services. The Government will continue to play a crucial role in bridging the digital divide by providing, initiating and nurturing online services nationwide in order to enable Malaysians to access and utilise Internet-based knowledge and information resources as an integral part of everyday life.

5.40 In line with the anticipated demand for increased adoption and usage of networked applications, the number of PCs installed is projected to increase from 21.8 to 40.0 per 100 population by the end of the Plan period. The One Home One PC initiative will be intensified with the expansion of existing schemes such as *PC Gemilang 2* and *PC Mesti Beli* targeting first time buyers and lower income groups. In this regard, factors such as affordability as well as availability of after sales technical support will also be addressed to ensure continuous usage and adoption.

5.41 The recent National BDD Framework Study identified the locations as well as target groups and strategies for the next wave of BDD programmes. The GIS-based findings will facilitate future planning, implementation as well as monitoring of programmes and projects for the purpose of promoting ubiquitous access as well as wider and more intensive adoption and usage of ICT for economic value creation and improvement in the quality of life. In order to realise the full potential of ICTs, the focus will be on increasing computer literacy and equipping potential users with the requisite know-how and skills for teleworking, distance learning as well as general computing and communications. These will be specifically targeted to benefit not only households, families and businesses but also people with disabilities, the poor as well as women and senior citizens.

5.42 With respect to the development of telecentres, several improved modalities will be considered in order to ensure they remain sustainable and value creating. Existing telecentres will be upgraded to Community Knowledge Centres that provide a wider range of economic and social information to communities. The telecentres will become a one-stop centre including accessing e-Government applications, e-learning and as an information resource exchange. To cater to the needs of sparsely populated districts and remote *mukims*, smaller scale telecentres will be introduced, equipped with computers and Internet, through the USP industry programme. To ensure sufficient and reliable supply of electricity, the implementation of rural electrification programme, namely, the Electricity Supply Industry Trust Account, will target similar underserved areas.

5.43 Emphasis will be given to changing the mindset as well as involvement, and commitment of rural communities towards ICT usage and adoption through building awareness, and realising empowerment programmes. Programmes will be initiated to ensure sufficient availability of up-to-date content in *Bahasa Melayu* and other local languages so as to enable the wider usage of ICT applications including e-commerce services. Business entities and community-based organisations, including non-profit organisations and the non-governmental organisations (NGOs), will be encouraged to collaborate and assist communities and target groups to leverage on ICT to generate economic value and improve living standards.

MSC Phase II and Expansion of MSC Multimedia Applications

5.44 The MSC Phase II will build upon the demonstrated efficacy of programme outputs achieved during its Phase I. During the Ninth Plan, the focus will be on the development of existing MSC cybercities as well as, where viable, newly identified MSC cybercentres in Perak, Melaka, Johor and Sarawak. The proposed development is expected to bring in 250 additional global multinational companies (MNCs). The number of MSC-status companies is projected to increase from 1,421 in 2005 to 4,000 by 2010, generating 100,000 jobs nationwide and 1,400 intellectual properties (IPs), as indicated in *Table 5-3*. Several new strategies will be implemented, including the review and enhancement of the MSC Bill of Guarantees, promoting joint R&D between local and foreign ICT entities, extending MSC benefits via the nationwide MSC expansion, and encouraging the production, usage and adoption of domestically-designed and manufactured ICT products and services. Increased efforts will be undertaken to ensure adequate provision of essential services, including broadband and widespread Internet access as well as transport facilities and improved amenities.

5.45 Cyberjaya will be further developed as a thriving National ICT Hub, with a pro-business environment promoting competition and synergy among related industries and services. Various services including transportation and infrastructural

TABLE 5-3

SELECTED MSC INDICATORS, 2001-2010

| Category | 2001 | 2005 | 2010 ^e |
|--|--------|---------------------|-------------------|
| MSC-status Company (number) ¹ | 621 | 1,421 | 4,000 |
| - Locally Owned | 410 | 1,033 | - |
| - Foreign Owned | 198 | 349 | - |
| - Joint-venture (50-50) | 13 | 39 | - |
| Job Creation (number) ¹ | 14,438 | 27,288 ² | 100,000 |
| - Knowledge Workers | 12,169 | 24,252 ² | - |
| - Others | 2,269 | 3,036 ² | - |
| Investment (RM billion) | 3.16 | 5.11 ² | 12 |
| Revenue (RM billion) | - | 7.21 ² | 69 |
| Exports (RM billion) | - | 1.57 ² | 2.5 |
| R&D Expenditure (RM million) | - | 670 ² | 1,000 |
| IPs Registered (number) | - | 119 ² | 1,400 |

Source : Multimedia Development Corporation and Economic Planning Unit

Notes : ¹ Cumulative figure.

² As at December 2004.

^e Estimates

amenities will continue to be enhanced to ensure Cyberjaya is more accessible and conducive for work and leisure. In addition, making Cyberjaya a wireless broadband city will provide the wider platform to test-bed innovative applications among the growing ICT-savvy workforce and consumers.

5.46 The MDC will increase its capacity and capability to function as an ICT investment promotion agency to attract new, and retain existing, local and foreign investments especially within the cybercities and cybercentres. In this regard, strategic marketing and promotional programmes in collaboration with the private sector will be vigorously pursued, to promote Malaysia as a dynamic and competitive ICT investment destination in this part of the region. Among others, in order to penetrate global markets, the MDC will work towards forming strategic alliances and joint-ventures among leading foreign MSC-status companies and Malaysian enterprises to participate in SSO as well as creating new growth-generating activities.

5.47 Building on past achievements, the next wave of the MSC Applications deployment will further catalyse the Government's plans towards utilising ICT as a platform to promote access to efficient, user-friendly and timely information and services as well as provide opportunities for high value added economic activities and job creation. Towards this end, the lead agencies will intensify

efforts to expand the multimedia applications taking into account changes in the business and working environment as well as increased monitoring and impact assessment of programmes and projects.

5.48 The MDC will also be geared towards providing a wide range of consultancy and technical services to guide lead agencies to accelerate the implementation of the MSC multimedia applications. In this regard, a new applications centre will be established to generate and test-bed new technologies, keep pace with technology advancements and build up core competencies. For this purpose, the MDC will optimise resources available and leverage on existing infrastructural facilities and expertise to generate new products and services from the MSC Applications deployment, both for local and overseas markets.

5.49 The *e-Government* Programme will enhance the public delivery system through the provision of integrated and efficient ICT solutions to ensure easier and speedier access to Government services, especially by rural communities. With regard to the e-Services project, more Government services will be introduced and made accessible from a single Government portal. In addition, considering that there is an increasing demand for Malaysia's e-Government solutions overseas, efforts will be focused on integrating the various Government applications to ensure compliance with global standards through international benchmarking.

5.50 The *Government Multipurpose Card* (GMPC) will continue to be developed as the common platform to incorporate additional features for more convenient usage and improved security. New applications for the GMPC will be developed to increase the usage of *MyKad* with the focus on integrating and standardising applications.

5.51 During the Ninth Plan period, the *Smart School* applications will be further strengthened to provide more comprehensive coverage. Towards this end, the deployment of web-enabled smart school applications will be accelerated. This is to ensure continuous access to the latest online content and e-learning applications by teachers and students. The SchoolNet will provide a cost effective means of deploying widespread smart school courseware.

5.52 *Telehealth* will continue to leverage on wireless and high-speed communication networks, inter-linking various medical institutions across geographical and spatial boundaries. This is with a view towards increasing health information sharing, optimising specialist resources and facilitating data management. Private medical institutions will be encouraged to participate and collaborate with Government hospitals in the implementation of the Life Health Plan (LHP) services, which will contribute to improved national health planning and execution.

5.53 Under the *Technopreneur Development Programme* more incubators will be established to develop competitive ICT SMEs. This will be undertaken in collaboration with selected MNCs and government-linked companies (GLCs), as well as the academia and R&D institutions. The mode of assistance will go beyond the provision of matching funds to include the provision of a wide range of mentoring assistance and technology risk assessment services. For this purpose, pre-seed, seed and early stage financing will be made available.

5.54 The R&D Cluster initiative during the Plan period will emphasise the creation of an innovative research community in the MSC. The MDC will play a key role in identifying and encouraging leading local and international technology companies to establish world class research centres within the existing cybercities and proposed cybercentres. Emphasis will be given to the promotion of collaboration among foreign and local companies, research institutions and universities to increase commercialisation of R&D and creation of spin-off companies.

New Sources of Growth in ICT

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5.55 The emphasis on ICT infrastructural development as well as application usage and adoption will provide the private sector with extensive investment and employment opportunities. Among the new sources of growth within the major segments of the ICT sector, include digital content development, e-commerce, SSO and bioinformatics. The aim is to increase the number of new companies as well as specialists capable of producing customised technological solutions in niche areas. Particular emphasis will also be given to the promotion and usage of local products and services.

Digital Content Development

5.56 The digital content industry, which includes creative computer animation, digital games, edutainment programmes, mobile applications and services, interactive television, digital archiving, digital publishing as well as multi-industry and multimedia applications, will be further promoted and developed as a new growth area. To further promote the industry, ICT-related activities focusing on creativity and technology innovations will be encouraged through the introduction of new and improved incentives. This will be with the aim to attract international world class content developers, broadcasting companies as well as global design and production houses to set up operations in the existing cybercities and potential cybercentres.

5.57 Considering that the ICT content industry is an aggregation of diverse disciplines including architecture, design, music, film making, publishing, advertising and graphics, the focus will be on nurturing human creativity as an economic resource, linking entrepreneurs, technology and innovation. In this context, a

special RM150 million content fund will be established to support local digital content development for improved communications, information, edutainment and commerce.

5.58 The Government will work closely with relevant ICT-related industries, involved in promoting and nurturing creative content developers, to further enhance the effectiveness of existing incubator programmes. Improved support mechanisms will be introduced to enhance capacity and capability for innovative multimedia products and services as well as knowledge applications technologies, both for the local and overseas markets. Focus will also be given to building key competencies through accreditation programmes with local and international content industry associations. The designation of Digital Media Zone in Cyberjaya as a digital content development hub and the setting up of Creative Zones in newly designated cybercentres are expected to add to the sustainable pool of digital content providers. These zones will leverage on existing infrastructure and generate specialised technologies required for content development.

5.59 The convergence of broadcasting television and the Internet will provide an alternative network to deliver digital information and content. The coming onstream of digital television (DTV) services will serve as an alternative conduit for extensive content value creation and diffusion. The services will be offered through terrestrial transmission beginning with the Klang Valley before being extended to other areas. The adoption of these convergent technologies will enable more interactive information diffusion and acquisition.

5.60 During the Ninth Plan period, there is expected to be increasing uptake of mobile computing by the working population. This is likely to boost demand for new and improved content applications by consumers as well as businesses, thus providing a range of opportunities for potential content designers, engineers and developers.

5.61 In order to further promote growth of the local content industry, the relevant regulations need to effectively prescribe the requirements for local content, particularly in broadcasting. Licensing and regulations pertaining to content creation will be reviewed to increase coordination in application and approval procedures among a number of agencies and reduce any constraints to developing new and improved local content. Government assistance in the form of grants, tax rebates and funds will be further explored to assist the growth of local talents and proliferation of creative industries.

5.62 At the same time, the legal framework for intellectual property registration (IPR), particularly patents, trademarks and copyrights for ICT-related products and services will continue to be reviewed with the aim to combat piracy and promote greater innovation among potential content creators. Efforts will also

be made to streamline various content regulations among different ministries and agencies involved in developing, promoting and regulating the content industry.

e-Commerce

5.63 Special focus will continue to be given towards providing and encouraging the wider use of e-commerce as an alternative way of doing business. While the Government will continue to play a catalytic role in promoting e-commerce, the private sector and in particular the industry associations will be encouraged to spearhead initiatives, leveraging on the existing networked environment to access online information on products and services as well as improve effectiveness and efficiency of operations along the supply chain, including real-time pricing. These initiatives are expected to pave the way for e-commerce to be a major mode of transaction in the economy, while at the same time generating new and innovative business opportunities.

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5.64 As proposed in phase 2 of the study on National e-Commerce Strategic Directions, the focus will be on the establishment of a wide array of B2B and B2C e-commerce and networking applications. The solutions will support the industry supply chain management and logistics networks within several sectors, primarily agriculture, tourism, construction, manufacturing related services (MRS), manufacturing and retail. The various on-going and new programmes will be encouraged to leverage on the networked environment to facilitate end-to-end delivery as well as access to local and global markets.

Shared Services and Outsourcing

5.65 In order to sustain the growth of SSO activities, a holistic approach will be taken to promote a pro-business environment. Efforts will be made to build upon the existing comparative advantages by improving the requisite infrastructural facilities and services, as well as building up the requisite skill sets to attract SSO businesses to Malaysia. At the same time, investment incentives will be continuously reviewed with the objective of ensuring that the available fiscal incentives remain relevant and effective. The provision of customised incentives as well as venture capital financing particularly for the promotion of R&D and product innovation will also be emphasised.

Bioinformatics

5.66 Bioinformatics represents a potential new growth area for Malaysia to build upon, taking into account the country's strong ICT foundation. The National Biotechnology Policy placed emphasis on development of bioinformatics, which is the convergence of biotechnology and ICT, to support the country's nascent biotechnology industry. The global bioinformatics market is estimated at US\$1.4

billion and is expected to grow at an average annual rate of 15.8 per cent, to reach nearly US\$3 billion by 2010, reflecting the immense potential of bioinformatics.

5.67 Initiatives recommended for the advancement of bioinformatics and grid computing will be with a view to undertaking research to support product and process development for the agriculture, healthcare and industrial sectors. In addition, a bioinformatics benchmarking centre will be established to facilitate the benchmarking of bioinformatics applications in line with accepted global standards and practices. These initiatives will leverage on existing R&D facilities including the MyREN network.

Skilled ICT Workforce

5.68 As ICT becomes increasingly pervasive, the demand for high quality, skilled and creative ICT personnel will expand rapidly to enable the use of existing, and development of new, technologies as well as maintain the competitive edge of Malaysia's ICT products and services in the world market. The total ICT workforce is expected to increase at a rate of 10.4 per cent per annum from 183,204 in 2005 to reach 300,000 by 2010. To meet the increasing demand for highly skilled ICT human resources, related education, training and skills development programmes will be stepped up. This will require expanded formal, professional and technical training at various levels as well as on-the-job training of specific skills, especially by ICT-related industries and services.

5.69 ICT education and training programmes will be intensified and expanded to cover schools, pre-university levels as well as institutions of higher education. Among others, development of core skills in multi-disciplinary fields such as software development in life sciences and knowledge applications will be encouraged. Local institutions of higher education will be given the flexibility of a 10 per cent pre-approved curriculum so that they can periodically develop the topical courses in collaboration with the industry. Industry experts will be encouraged to teach these courses and incentives will be given to industries that support such initiatives. Post-graduate studies and specialisation in core areas of ICT such as in software development, semiconductor and chip design, digital content development, information security and bioinformatics, will be encouraged.

5.70 During the Ninth Plan, measures will continue to be undertaken to increase employability of ICT graduates through collaborative efforts of the Government and industry. Apart from the on-going programmes, another initiative will be the MSC Professional Development Programme. This programme will be conducted in cooperation with MSC companies to develop highly skilled ICT specialists and ICT-related management personnel that are highly demanded, especially those in new and emerging technology areas. An ICT Development Institute will be established to match the capacity of training institutions with industry requirements

especially in terms of facilitating the marketability of skills acquired by ICT graduates.

Accelerating e-Learning Acculturation

5.71 With increasing digitisation of the economy, computer and web-based education and training is expected to become more pervasive. In this regard, in promoting lifelong learning, e-learning programmes in businesses and Government agencies will be enhanced during the Plan period. The promotion of e-learning initiatives in the formal education process, which includes schools, universities and other training institutions, will continue to be given high priority to cater for the anticipated rise in demand for e-learning applications and content. Similar initiatives within informal processes will be promoted to equip rural communities, senior citizens and people with disabilities with the basic tools to increase usage of ICT to improve socio-economic well-being.

5.72 The private sector will also be encouraged to provide a conducive environment for e-learning as work cultures change, leading to demand for knowledge sharing and knowledge applications at the workplace. New and improved incentives will be considered to expand e-learning capacity and capability as digital acculturation impacts upon the performance and ability of the workforce to innovate and contribute to the design and usage of knowledge applications, which in turn will further enhance productivity and competitiveness. The National Vocational Training Council will provide a blueprint, incorporating content, standards, systems and accreditation processes to implement e-training programmes.

5.73 The Public Sector e-Learning Blueprint, in the final stages of completion, will provide the details on the guidelines, modalities, standards and resources required to promote an e-learning culture among the Government workforce. The implementation of the blueprint will be a crucial requirement to support future ICT usage and adoption as well as knowledge management in the public sector.

Enhancing Information Security

5.74 During the Plan period, efforts will be intensified to improve information security in order to enhance confidentiality, integrity and availability of online information systems. In this regard, the National Information Security Framework Study, initiated by the Government, will provide more comprehensive guidelines on information security management, mechanisms for institutional networking and coordination as well as strategies for specialised intellectual capital development. This is with the aim to enhancing the integrity of networked systems, increasing trust and confidence in online mechanisms and improving quality of services, among others, through compliance with information security

management standards and best practices. In particular, these aspects will be of specific importance to agencies operating critical national information infrastructure.

5.75 Recognising the importance of security assurance of ICT products and solutions, measures will be undertaken to provide information security assessment based on international standards and certification. For this purpose, a number of evaluation laboratory facilities will be established to undertake risk assessment and security evaluation of local products with a view to facilitating market entry and consumer acceptance. To further reduce online fraud and security breaches, capacity building measures and support structures within relevant agencies will be enhanced to ensure that the existing cyberlaws and related regulations remain relevant and enforceable.

5.76 During the Ninth Plan, while focusing on a wider outreach of online computing among the general populace, priority will continue to be accorded to the ethical usage of ICT. The Government will further strengthen existing guidelines on the responsible usage of the Internet, especially among home users and schools. NISER will promote awareness programmes to increase the level of competency in safe computing, particularly on measures requiring immediate corrective action. These efforts will be further fortified through initiatives by Internet service providers to provide filtering options for Internet subscribers.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

5.77 During the Ninth Plan period, the various computerisation programmes will be driven by the relevant ministries and agencies. For the BDD infrastructure development programme, the Ministry of Energy, Water and Communications will continue to take the lead in telecommunications infrastructure development as well as support and upgrade the telecentres and SchoolNet in close collaboration with the Ministry of Rural and Regional Development and the Ministry of Education. The MSC Multimedia Applications will be deployed by key implementing agencies, namely, the Malaysian Administrative Modernisation and Management Planning Unit, Ministry of Education, Ministry of Health and Ministry of Home Affairs. The Ministry of Science, Technology and Innovation, together with MDC will lead MSC developments and promotions, while MIMOS will take the lead in ICT R&D.

5.78 A total of RM12.9 billion will be allocated for ICT-related programmes and projects as shown in *Table 5-4*. A major portion of this allocation will be for the computerisation of Government ministries and agencies as well as BDD initiatives largely for the supply and maintenance of computers and Internet access. Specific funding will be made available to promote ICT content and entrepreneurship development.

TABLE 5-4

DEVELOPMENT EXPENDITURE AND ALLOCATION FOR ICT-RELATED PROGRAMMES, 2001-2010
(RM million)

| <i>Programmes</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|---|----------------------------|---------------------------|
| Computerisation of Government Agencies | 2,125.0 | 5,734.2 |
| Bridging the Digital Divide | 2,433.1 | 3,710.2 |
| School | 2,145.1 | 3,279.2 |
| Communications Infrastructure Service Provision Programme | 254.0 | 150.0 ¹ |
| Telecentres | 18.1 | 101.0 |
| ICT Training / Services | 15.9 | 180.0 |
| ICT Funding | 1,125.6 | 1,493.0 |
| MSC Multimedia Applications | 1,153.1 | 1,100.5 |
| e-Government | 537.7 | 572.7 |
| Smart School | 363.9 | 169.8 |
| Telehealth | 91.8 | 60.0 |
| Government Multipurpose Card | 159.7 | 298.0 |
| MSC Development | 320.8 | 377.0 |
| ICT Research and Development | 727.5 | 474.0 |
| Total | 7,885.1 | 12,888.9 |

Source: Economic Planning Unit

Note: ¹ A larger proportion will be provided through the USP contributed by the industry.

V. CONCLUSION

5.79 During the Eighth Plan period, Malaysia made significant progress in increasing the information and knowledge content in all sectors of the economy as well as ensuring that the ensuing benefits accrued to all segments of society including the rural communities. In moving forward towards a knowledge-based economy, the country will leverage on the networked environment alongside the next wave of the MSC expansion including the development of cybercities and where feasible, cybercentres. This is with a view to harnessing ICT as a new source of growth and wealth creation, and sustaining Malaysia's position as a competitive global multimedia hub destination particularly in SSO. Further initiatives will be undertaken to attract investments in existing and new areas. These will include provision of improved incentives, review of investment-related laws and regulations, with a view to provide a more conducive environment for investment as well as making available adequate funding.

5.80 These strategic initiatives will be complemented by parallel efforts in nurturing human resources, building local content, strengthening IPR protection, enhancing information security and increasing e-enabled activities among the general populace. At the same time, the necessary infrastructure, infostructure and pro-business environment will be strengthened to provide greater access to ICT advancements as well as more opportunities to participate in the global digital economy.

BIOTECHNOLOGY FOR WEALTH CREATION

6

I. INTRODUCTION

6.01 During the Eighth Plan period, efforts were focused on laying the foundation towards building a competitive biotechnology industry. Human resource development was accorded due emphasis to create skilled workers for biotechnology-related fields. Research and development (R&D) in biotechnology gained prominence and was conducted in accordance with priority areas. Efforts were also directed at enhancing technological infrastructure and facilities to foster innovation and industry development. A significant milestone was achieved with the launching of the National Biotechnology Policy (NBP) in 2005, which provided a comprehensive framework to guide biotechnology development efforts in the country.

6.02 Biotechnology is poised to drive the next wave of knowledge-based industries that will contribute to growth and wealth creation, new investment and employment opportunities as well as deliver social and environmental benefits. For the Ninth Plan period, concerted efforts will be geared towards the implementation of the NBP, with the active participation of the private sector. An enabling institutional, regulatory and financial framework will be developed to promote biotechnology as a major driver of sustained economic growth. Human capital development will be intensified to meet the industry's skill needs and nurture entrepreneurship. The biotechnology infrastructure will be strengthened with the establishment of centres of excellence. A new approach, namely, 'BioNexus' which leverages on the strengths of existing institutions along with parallel developments in industries, will be adopted.

II. PROGRESS, 2001-2005

6.03 Biotechnology was identified as a key technology that could drive and support the nation to evolve into a knowledge-based economy. During the Plan period, the emphasis was on building the capacity and capability of human resource as well as research institutions. The NBP, launched in 2005, provided for a more integrated framework of industry development, outlining a comprehensive set of goals, priorities and strategies. It underscored the need for human resource

development, regulatory and institutional changes as well as fiscal and financial incentives. It also outlined a 15-year implementation horizon to chart the strategic directions of the biotechnology industry. To drive implementation, the Malaysian Biotechnology Corporation was established in 2005 to act as the lead agency in facilitating the development of Malaysia's biotechnology industry.

Human Resource Development

6.04 The quality and skills of human resources is vital to the success of biotechnology. Recognising this, various programmes were implemented to produce a pool of talent and expertise in biotechnology and biotechnology-related fields. During the Plan period, institutions of higher education produced more than 4,000 graduates with Bachelors, Masters and Ph.D degrees, covering a wide range of biotechnology specialisations such as molecular biology, plant biotechnology, bioprocess engineering, bioinformatics and marine biotechnology. The National Science Fellowship (NSF) Programme provided scholarships to 156 Masters and Ph.D students in biotechnology-related fields. The in-service training programme for human resource development in science and technology also provided scholarships to serving officers in research institutions and universities to pursue post-graduate degrees in biotechnology. Despite efforts in manpower development, gaps continued to persist between demand for, and supply of biotechnology skills, as the creation of new employment opportunities in the sector still lagged behind.

Research and Development

6.05 The Biotechnology R&D Grant Scheme established in 2001 under the National Biotechnology Directorate approved a total of RM95.3 million for 47 biotechnology research projects, as shown in *Table 6-1*. Of this total, 11 projects were classified as ready for commercialisation. In terms of intellectual capital, these R&D projects generated 27 patents filed in Malaysia and one internationally filed patent.

Infrastructure and Facilities

6.06 During the Plan period, measures were taken to provide the necessary technological infrastructure and facilities to support biotechnology-related activities. Amongst others, three special laboratories were set up, covering agro-biotechnology at the Malaysian Agricultural Research and Development Institute (MARDI), genomics and molecular biology at the *Universiti Kebangsaan Malaysia* (UKM) as well as pharmaceuticals and nutraceuticals at the *Universiti Putra Malaysia* (UPM). These laboratories provided specialised facilities for the advancement of the country's R&D in biotechnology and its applications as well as training ground for R&D personnel.

TABLE 6-1

PUBLIC R&D PROJECTS ON BIOTECHNOLOGY, 2001-2005

| <i>Focus Area</i> | <i>No. of Projects</i> | <i>Grant Approved (RM million)</i> |
|-----------------------|------------------------|--|
| Genomics & Proteomics | 8 | 17.9 |
| Plant | 4 | 8.6 |
| Animal | 12 | 17.3 |
| Medical | 8 | 18.9 |
| Biopharmacy | 5 | 3.2 |
| Environment | 2 | 3.8 |
| Food | 4 | 6.4 |
| Natural Products | 4 | 19.2 |
| Total | 47 | 95.3 |

Source: Ministry of Science, Technology and Innovation

6.07 The Biotechnology Standardisation and Quality Control Centre (BIOSTAQ) for herbal products in Kulim Hi-Tech Park began operations in August 2004. The centre provided services related to standardisation and quality control of natural products. These services, using advanced technologies, included analysis of microbial and heavy metals, gravimetric testing, extractive value analysis as well as toxicity and purity testing.

6.08 As part of efforts to develop a Malaysian biotechnology community, the National Biotechnology and Bioinformatics Network (NBBNet) was set up in 2001. It was initiated to promote closer collaboration and networking among research institutions, universities and industry. It also hosted databases and information on local genetic resources and major R&D activities.

Regulatory Framework

6.09 Recognising the importance of a good regulatory environment in developing the biotechnology industry and in ensuring public safety, the Government assumed a proactive role in shaping the regulatory agenda. In this regard, Malaysia ratified and acceded to several international conventions and protocols on the development of the biotechnology industry. Malaysia is party to the Convention on Biological Diversity and ratified the Cartagena Protocol on Biosafety in 2003 to protect the country from potential risks from living modified organisms (LMOs). The Protocol provided separate sets of procedures, namely for LMOs that are to be intentionally introduced into the environment and LMOs that are to be

used directly as food or feed or for processing other food products, in addition to procedures for advanced information agreement and the establishment of a Biosafety Clearing House mechanism.

6.10 The promulgation of the Control of Drugs and Cosmetics Regulation in 1984 provided the foundation for development of a systematic pharmaceutical regulatory system. To maintain standards and safeguard public well-being, measures were undertaken by the National Pharmaceutical Control Bureau (NPCB) to implement a drug and cosmetic registration and licensing scheme which covered pharmaceutical manufacturers, importers and wholesalers as well as clinical trials. NPCB also provided technical assistance to local pharmaceutical manufacturers to upgrade manufacturing standards to levels equivalent to the requirements of Good Manufacturing Practice (GMP) as recommended by the World Health Organisation (WHO) and other relevant organisations.

6.11 With globalisation and trade liberalisation, efforts were made to ensure the competitiveness of the pharmaceutical industry through continuous improvement in standards and quality assurance requirements. In 2002, Malaysia became the 26th member of the Pharmaceutical Inspection Cooperation Scheme (PICS), a cooperative arrangement between international pharmaceutical inspection authorities in the field of GMP. The acceptance of Malaysia into the PICS paved the way for the local pharmaceutical products to be recognised internationally.

Private Sector Participation

6.12 Based on the Census of Establishments and Enterprises 2005, a total of 117 biotechnology-related companies was established as at 2003, generating value added of RM1.4 billion and creating 10,200 jobs. Companies in the services sector comprised 68.4 per cent of the total, followed by manufacturing and agriculture at 23.9 per cent and 7.7 per cent, respectively. The biotechnology-related services companies generated 65.7 per cent of the total value added in biotechnology and were involved in activities such as repackaging, distribution and marketing of biotechnology-related products as well as consultancy services for regulatory and standards compliance. Agro-biotechnology companies were involved mainly in the application of tissue culture and advanced reproductive techniques for the production of improved crops and livestock.

6.13 In consonance with the private sector-led growth policy, efforts were undertaken to attract investments in biotechnology. During the Plan period, a total investment of RM715.5 million involving 30 manufacturing projects was approved in the areas of agriculture, healthcare and industrial biotechnologies with potential employment of 1,441 jobs, as shown in *Table 6-2*. Of the approved projects, 10 companies commenced operations with a total investment of RM110 million generating 364 jobs. These projects included the production of nutritional immunology supplements based on plant materials, monoclonal antibodies,

polypeptide and formulations as well as diagnostic kits. The remaining approved projects are in the process of setting up manufacturing plants.

TABLE 6-2
**APPROVED BIOTECHNOLOGY MANUFACTURING
 PROJECTS, 2001-2005**

| Year | 2001 | 2002 | 2003 | 2004 | 2005 | 8MP |
|----------------------------------|------|------|-------|-------|-------|-------|
| No. of Companies | 2 | 6 | 4 | 11 | 7 | 30 |
| Employment | 56 | 199 | 129 | 519 | 538 | 1,441 |
| Proposed Investment (RM million) | 6.1 | 79.8 | 215.7 | 237.8 | 176.1 | 715.5 |

Source: Ministry of International Trade and Industry

6.14 As part of efforts to encourage private sector participation in the biotechnology industry, incubator facilities were provided by SIRIM Berhad, Technology Park Malaysia as well as Malaysian Technology Development Corporation (MTDC) in collaboration with UPM, UKM, *Universiti Teknologi Malaysia* (UTM) and the Forest Research Institute of Malaysia (FRIM) to nurture new enterprises. The incubatee companies were given access to common user facilities as well as technical assistance in design, prototyping and product development.

6.15 During the Plan period, measures were undertaken to foster closer international collaboration in the field of biotechnology. A number of initiatives contributed towards developing domestic capability in key platform technologies to produce high value added products and generate intellectual property (IP). These included collaborations in research and commercialisation of selected natural products as well as initiatives in the areas of vaccinology, diagnostics and biomaterials.

III. PROSPECTS, 2006-2010

6.16 The biotechnology sector faces a challenging future with increasing global competition. To be competitive, Malaysian biotechnology companies will need to identify and build upon niche products and services in appropriate parts of the global biotechnology value chain. The Ninth Plan will focus on implementing the NBP to develop Malaysia's niches in agriculture biotechnology, healthcare-related biotechnology, industrial biotechnology and bioinformatics. In this regard, the promotion of foreign and domestic investments and close collaboration with foreign entities to access new technology, expertise and markets will be intensified. The BioNexus concept will be employed whereby establishment of biotechnology

companies or projects will be targeted near relevant research institutions and industrial bases to form synergistic linkages amongst these entities and hence, expedite the growth of clusters. Vital to the success of implementation of the NBP will be the follow through of plans, effective implementation of programmes as well as constant monitoring and evaluation of the outcome and impact.

Development Thrusts

6.17 The objective of biotechnology development during the Ninth Plan period will be to harvest its potential as a growing source of wealth creation and enhance applications on biotechnology in various sectors of the economy. The target will be to at least double the number of biotechnology and biotechnology-related companies to 400 by 2010. The emphasis will be on nurturing quality, high value added and knowledge-intensive companies and creating more job opportunities. Towards this end, the strategic thrusts include:

- ❑ *transforming and enhancing value creation in the agriculture sector through biotechnology;*
- ❑ *capitalising on the strengths of biodiversity to commercialise discoveries in health-related products and position Malaysia in the growing biogenetics market;*
- ❑ *nurturing growth opportunities in industrial bioprocessing and biomanufacturing;*
- ❑ *leveraging on the convergence of technologies to grow the nascent bioinformatics industry;*
- ❑ *promoting BioNexus as a unique brand to attract foreign and domestic investments in biotechnology;*
- ❑ *creating an enabling environment with supportive institutional, regulatory and financial framework to facilitate the build up of a strong and diversified biotechnology industry;*
- ❑ *enhancing human capital development to meet national needs; and*
- ❑ *establishing R&D centres of excellence and accelerating technology development, diffusion and commercialisation.*

Biotechnology Development

6.18 As part of efforts to move the economy up the value chain, emphasis will be placed on developing the biotechnology industry. To grow new sources of wealth, measures will be undertaken to strengthen the industry's foundation as well as attract greater private sector participation by investing and establishing businesses in strategic parts of the biotechnology value chain.

Agriculture Biotechnology

6.19 To increase value creation of the agriculture sector, greater efforts will be undertaken to develop national capability in agro-biotechnology. The accumulation of knowledge and expertise developed by institutions such as MARDI, Malaysian Palm Oil Board and the Malaysian Rubber Board will be harnessed and deepened to develop niche areas. New technologies, spearheaded by these institutions as well as the newly designated Malaysian Genome Institute, will include bioinformatics, genetic engineering, functional genomics and proteomics to discover new applications not only in agriculture biotechnology but also in healthcare and industrial biotechnologies.

6.20 Application of biotechnology platform technologies, such as genetic engineering, functional genomics and proteomics will be encouraged to produce agro-biotechnology products that increase plant and livestock productivity as well as improve their agronomic traits. Other agro-biotechnology activities that will be promoted include biopharming, the use of transgenic plants or livestock to produce high-value proteins.

6.21 The National Institute of Agro-biotechnology at MARDI will serve as the centre of excellence for agro-biotechnology R&D, commercialisation and diffusion. The Institute will also develop a synergistic partnership with the Agropolis, which will be established as a centre of excellence for food production and processing. To facilitate the diffusion of modern agricultural technologies and practices, the Agropolis will hold international exhibitions such as the Malaysian Agriculture, Horticulture and Agro-tourism (MAHA) to showcase the country's agricultural businesses and products.

Healthcare Biotechnology

6.22 Biotechnology enables the discovery and development of better healthcare products and treatments. However, given the large investments required to undertake the entire process of discovery to commercialisation, Malaysia must develop niches in strategic areas of the value chain. In line with this, efforts will focus on leveraging the country's extensive biodiversity and local knowledge in traditional/complementary medicine (T/CM) to develop leads for the pharmaceutical and nutraceutical industries. Other niches that will be developed include contract research and development of biogenerics, diagnostics and vaccines, particularly for high-incidence diseases.

6.23 The National Institute of Pharmaceuticals and Nutraceuticals (NIPN) and the National Institute of Natural Products, Vaccines and Biologicals (NINPVB) will be set up as centres of R&D excellence in the field of healthcare-related biotechnology. The NIPN will focus on the optimal utilisation of natural bio-resources from plant, marine and microbial origins for use in nutraceuticals, cosmeceuticals and phytopharmaceuticals. The NINPVB will implement

programmes to promote herbal medicine by harnessing local knowledge in T/CM and to increase the production of vaccines. In addition, a Bioproducts Validation Centre will also be established in Johor to validate herbal, nutraceutical and phytopharmaceutical product claims for the purpose of regulatory registration and quality assurance.

Industrial Biotechnology

6.24 The country's strength in manufacturing and processing industries offers a wide range of opportunities for the development of industrial biotechnology. The identified areas of growth include the development of biocatalysts such as enzymes for food and feed preparations, cleaning products, textile processing and other industrial processes. Bioprocessing is another growth area which can be applied in the production of biomaterials such as bioplastics, biofuel, specialty chemicals such as cosmetics ingredients and electronic chemicals. The third growth area is contract biomanufacturing.

6.25 As part of the efforts to promote biomanufacturing, a current good manufacturing practice (cGMP) facility, designed in accordance to international guidelines and standards, will be completed and be fully operational by June 2006. This facility will pave the way for Malaysia to become a player in active pharmaceutical ingredient contract manufacturing. The multi-product facility will be used for the production of a full range of biopharmaceuticals based on mammalian and human cell culture.

6.26 High crude oil prices coupled with the need to find renewable energy to replace depleting fossil fuel has presented biofuel as viable area of growth. The demand for biodegradable fuels including palm diesel by developed countries is expected to reach 10.5 million tonnes by 2007. Malaysia, with 3.9 million hectares of oil palm plantation and more than 360 palm oil mills has the capacity and capability to meet the increasing global demand for biofuel. In line with the National Biofuel Policy, which was announced in August 2005, various strategies will be undertaken to increase the use of biofuel as an alternative to petroleum-based diesel.

Bioinformatics

6.27 With vast amounts of data and information being generated due to advances in myriad of technologies, there arises a need to organise and manage information. The convergence of ICT and biotechnology, commonly known as bioinformatics, provides an important support function to gather, store, classify, analyse and distribute biological information derived from gene sequencing as well as functional analysis of research projects. In addition to being a new source of growth, bioinformatics is making a significant contribution towards discoveries and product development. Strategic initiatives will be rolled out for bioinformatics and grid computing to support the country's biotechnology development.

6.28 The existing strength and wealth of ICT platforms in research institutions including MIMOS, universities and the Multimedia Super Corridor (MSC) will be optimally utilised to accelerate the development of the bioinformatics subsector. Grid computing will be adopted as a means to reduce the cost of investment in R&D through the sharing of facilities. In this regard, the second phase of the Malaysian Research and Education Network (MyREN) will be initiated to enhance connectivity among the various universities and research institutions as well as industry and international linkages to increase research collaboration efforts.

Building a Malaysian Brand

6.29 Concerted efforts will be undertaken towards making Malaysia a preferred destination for investments in biotechnology. The Malaysian Biotechnology Corporation will focus on attracting investment, sourcing partnership opportunities as well as supporting local biotechnology entrepreneurs in setting up their businesses. Towards this end, the brand “BioNexus” will be promoted to market Malaysia’s biotechnology initiative to investors and potential partners. To strengthen the brand, an attractive package of incentives will be offered to domestic and foreign BioNexus-status companies.

Creating an Enabling Environment

6.30 With the biotechnology policy framework in place, focus will be on creating an enabling environment to provide the essential building blocks to develop the biotechnology industry. This will require a multi-prong approach in addressing the critical success factors such as conducive regulatory framework, adequate financing infrastructure, human capital development and R&D capabilities.

Regulatory Framework

6.31 Recognising the necessity of a conducive regulatory framework for the development of biotechnology, the Government is in the process of formulating and enacting a number of legislations. These include the Biosafety Bill and the Access and Benefit Sharing (ABS) Bill. The ABS Bill seeks to ensure fair and equitable sharing of benefits from the use of Malaysia’s biological resources and protect against biopiracy. It requires parties that wish to conduct research, export or sell local biodiversity resources to apply for specific permits for such activities.

6.32 To foster innovation and safeguard investments in biotechnology, efforts will be intensified to improve the IP policy and management framework. A comparative study on the best practices of IP policy and management will be conducted to identify areas for improvement in IP regulations and processes. Guidelines on IP sharing for researchers in public research institutions and in business collaborations as well as for local and foreign ventures will be introduced. Related standards such as good laboratory practice (GLP) and cGMP will be enhanced to attract outsourcing of clinical trials and contract manufacturing.

6.33 To increase the stock of intellectual capital, appropriate incentives for IP registration of inventions and discoveries will be provided. A resource and referral centre will also be established to offer technical advice on issues such as IP and regulatory compliance. Capacity building and awareness programmes will be conducted to encourage researchers to patent their findings and products. In this regard, a comprehensive IP guide and management manual will be developed. Efforts will also be targeted at developing an adequate number of IP-related human resource including patent specialists, technology evaluators, lawyers and examiners.

Financial Infrastructure

6.34 Biotechnology projects are confronted with issues such as high risk, long gestation period, substantial upfront investment and stringent regulatory compliance. In order to transform the nascent biotechnology industry into a vibrant one, access to financing across the entire value chain will be a critical factor for success. Towards this end, a comprehensive funding structure and financial incentives will be put in place to address the gaps in financing. Increasing emphasis will be placed on R&D and commercialisation, strategic technology acquisition, business and entrepreneurship development as well as the building of the requisite infrastructure. In this regard, the public sector will complement private sector financing and investment efforts, with an allocation of RM2.0 billion, which include a number of programmes to improve access to financing by the private sector.

6.35 Funding for R&D in biotechnology will be provided through existing sources as well as new funds such as the ScienceFund and TechnoFund. To support commercialisation of research findings, applications for matching grants can be made via the Commercialisation of R&D Fund (CRDF) under the Malaysian Technology Development Corporation (MTDC). To complement these sources, a dedicated Biotechnology Commercialisation Fund with an allocation of RM100 million will be set up to provide matching grants to R&D companies or companies conducting in-house R&D.

6.36 Early stage financing can be accessed through MTDC's newly established Malaysian Life Sciences Fund. Soft loans will be made available for international business development, especially those that require intensive technology and product evaluation, due diligence as well as complex registration and approval processes prior to entry into international markets. Funds will also be channelled through commercial banks, financial institutions and venture capital entities to make available sufficient resources for enterprising firms, consortia or individuals intending to venture into the biotechnology sector.

Human Capital Development

6.37 In view of the high reliance of biotechnology on intellectual capital and knowledge-intensive applications, measures will be intensified to enhance human

capital development. The human resource development programmes will be fine-tuned and new ones introduced to meet the skill requirements of activities along the entire biotechnology value chain. The institutions of higher education will enhance undergraduate and post-graduate courses in order to expand scientific and specialised skills, especially in the fields of genomics, microbiology, bioprocessing as well as in related engineering and business fields. The colleges and skills development training centres will concentrate on matching the demand for technical human resource such as biotechnology research assistants, GMP personnel and technicians in biomanufacturing, metrology and quality control.

6.38 To create greater synergy and collaboration between the research institutions, universities and the industry, measures will be undertaken to create highly dynamic and motivated R&D personnel. A mechanism to facilitate IP ownership and IP sharing among various stakeholders will be put in place. Avenues will be provided to enable the participation of public sector scientists and researchers in private sector biotechnology projects and clinical trials. The National Brain Gain Programme will be implemented to enhance domestic technology capacity and capability as well as fill the gaps in skills and expertise. To address the issue of brain drain and attract overseas talent, the remuneration and reward system will be reviewed and made more attractive and performance-driven.

6.39 In order to commercialise R&D and create new spin-off companies, measures will be undertaken to nurture a critical mass of biotechnology entrepreneurs. A biotechnology entrepreneur development programme, with an initial allocation of RM50 million, will be implemented to develop core competencies in business negotiations, technology and financial due diligence, preparation of viable business plans and business management. Efforts will also be directed at disseminating information on business opportunities, sources of funding and incentives for the biotechnology industry.

R&D and Technology Acquisition

6.40 The knowledge- and technology-intensive nature of biotechnology compels an urgent need to invest in R&D programmes and, more importantly, in subsequent commercialisation to generate economic gains. For the Ninth Plan, R&D programmes will cover a range of research areas including improvement of productivity in agriculture and animal husbandry, medical diagnostics and pharmaceuticals. Increased resources will be made available to develop domestic R&D capacity and capability in a number of research institutions and universities. In downstream commercialisation and marketability of potential products, collaboration with the industry will be enhanced through a variety of modalities such as joint-ventures, sharing of high-technology facilities and specialists as well as equity participation. Research scientists and engineers from research institutions and universities will be given opportunities to participate in and, develop new ventures as well as manage and market IPs.

6.41 To boost research productivity and shorten the time required to bring products to market, the acquisition of platform technologies will be given emphasis. In this regard, the strategic acquisition of biotechnology-related IP and technologies in key areas will be adopted to fast-track developments. For this purpose, a special RM100 million fund for biotechnology acquisition will be established. Potential acquisition will undergo a stringent process of due diligence and will be licensed to selected companies or research institutions. International collaboration will also be enhanced to facilitate technology transfer and expertise as well as improve access to a wider pool of knowledge.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

6.42 The Biotechnology Implementation Council will set the overall policy direction, oversee the implementation of the nation's biotechnology initiatives and provide the forum to ensure inter-ministerial coordination. The Ministry of Science, Technology and Innovation in collaboration with the relevant ministries will formulate strategies and implement programmes to harness biotechnology as a new source of growth and wealth creation. Key ministries, including the Ministry of Agriculture and Agro-based Industry, Ministry of International Trade and Industry, Ministry of Health and Ministry of Plantation Industries and Commodities will facilitate the development of niche areas in agriculture, industrial and healthcare biotechnologies. The Malaysian Biotechnology Corporation will work in close partnership with the relevant ministries and stakeholders to attract

TABLE 6-3
**DEVELOPMENT EXPENDITURE AND ALLOCATION FOR BIOTECHNOLOGY,
2001-2010**
(RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|---|----------------------------|---------------------------|
| Research and Development (R & D) | 190.0 | 463.0 |
| Biotechnology R&D Initiatives | 190.0 | 363.0 |
| Biotechnology Commercialisation Fund | – | 100.0 |
| Biotechnology Acquisition Programme | – | 100.0 |
| Biotechnology Business Development | 216.8 | 529.8 |
| Technology & IP Management | 69.9 | 100.0 |
| Entrepreneurship Development | – | 50.0 |
| Agro-biotechnology Projects | 46.9 | 79.8 |
| Institutional Support and Equity | 100.0 | 300.0 |
| Biotechnology Infrastructure | 167.6 | 928.5 |
| Total | 574.4 | 2,021.3 |

Source: Economic Planning Unit

investment and increase private sector participation in the biotechnology industry. The Ministry of Higher Education will be responsible for ensuring that an adequate and qualified supply of human resource in biotechnology and biotechnology-related fields is developed.

6.43 For the Ninth Plan period, an allocation of RM2.0 billion will be provided for biotechnology development, as shown in *Table 6-3*. Of this total, 45.9 per cent will cater for physical infrastructure development while the remaining 54.1 per cent will be allocated for soft infrastructure development including R&D and commercialisation as well as business development programmes.

V. CONCLUSION

6.44 During the Eighth Plan period, measures were undertaken to provide the requisite technology infrastructure as well as develop domestic capacity and capability in biotechnology. The NBP was launched to provide a comprehensive framework for the sustainable development of the biotechnology industry. For the Ninth Plan period, the focus will be on implementing the strategic thrusts of the NBP to generate new sources of growth in agriculture, healthcare and industrial biotechnologies as well as bioinformatics. To attract private sector investment in biotechnology, among others, a package of customised incentives including matching grants for R&D will be made available to BioNexus-status companies. Centres of excellence in biotechnology will be established to provide shared facilities and the necessary technical expertise and R&D support to the emerging industry.

6.45 Programmes will be implemented to harness the nation's biodiversity and build upon existing capabilities and capacity to create economic value, especially through high-technology and knowledge-intensive activities. Efforts will be undertaken to accelerate the development of the biotechnology industry through the implementation of R&D, technology acquisition and commercialisation programmes in collaboration with the private sector. Emphasis will be placed on human resource development and the provision of adequate financing. Measures will also be undertaken to provide a supportive institutional and regulatory environment including an enhanced IP system to attract investment and encourage innovation. The prime objective will be to develop a competitive and leading biotechnology industry for increased employment and wealth creation as well as enhancement of the social well-being of the people, further contributing towards moving the economy up the value chain as highlighted in the first thrust of the National Mission.



VIBRANT FINANCIAL SERVICES

7

I. INTRODUCTION

7.01 Following soon after the Asian financial crisis, the Eighth Plan period recorded notable achievements in terms of restructuring and strengthening the domestic financial system. The consolidation of domestic banking institutions contributed to the development of strong domestic banking groups, providing a wider range of competitive, innovative and customised financial products and services. The phased implementation of the 10-year Financial Sector Master Plan (FSMP) and Capital Market Master Plan (CMP) strengthened the resilience and competitiveness of the banking system and the capital market.

7.02 During the Ninth Plan period, the financial services sector will continue to play an important role in driving the growth of the economy, both as a strategic sector as well as a mobiliser of funds for investment. While the FSMP and the CMP will provide the framework for the gradual liberalisation of the sector, efforts will focus on maintaining financial stability and enhancing the capability of financial institutions to meet increasing competition in a more globalised operating environment.

II. PROGRESS, 2001-2005

7.03 The financial services sector grew at an average rate of 8.1 per cent per annum with its share to gross domestic product (GDP) increasing from 12.7 per cent in 2000 to 15.1 per cent in 2005. Employment in the sector grew at an average rate of 7.9 per cent per annum, representing 6.8 per cent of total employment in 2005. A total of 232,100 jobs was created in the sector equivalent to 14.3 per cent of total net jobs created in the economy during the Plan period.

Financial System

7.04 Total funds available in the financial system, comprising both bank and non-bank institutions in 2005, amounted to RM1,908.5 billion with the major portion originating from the private sector, as shown in *Table 7-1*. In terms of its use, the largest component was loans and advances followed by the holdings of securities. During the Plan period, efforts were undertaken to develop a more diversified financial infrastructure and create new financial instruments that would meet the financing requirements of various businesses.

TABLE 7-1
SOURCES AND USES OF FUNDS OF THE FINANCIAL SYSTEM,
2000-2005

| Item | RM million | | % of Total | | Average Annual Growth Rate (%), 2001-2005 |
|--|--------------------|--------------------|--------------|--------------|---|
| | 2000 | 2005 | 2000 | 2005 | |
| Sources of Funds | | | | | |
| Capital, reserves and profit | 120,990.7 | 176,332.3 | 9.6 | 9.2 | 7.8 |
| Demand deposits | 83,205.3 | 135,944.1 | 6.6 | 7.1 | 10.3 |
| Other deposits of which: | 503,079.1 | 786,255.2 | 39.8 | 41.2 | 9.3 |
| <i>Private sector</i> | 339,770.3 | 508,958.5 | 26.9 | 26.7 | 8.4 |
| Insurance, provident and pension funds | 236,640.1 | 374,114.0 | 18.7 | 19.6 | 9.6 |
| Others ¹ | 319,271.1 | 435,843.2 | 25.3 | 22.9 | 6.4 |
| Total | 1,263,186.3 | 1,908,488.8 | 100.0 | 100.0 | 8.6 |
| Uses of Funds | | | | | |
| Deposits with other financial institutions | 183,470.2 | 255,983.0 | 14.5 | 13.4 | 6.9 |
| Loans and advances | 512,543.9 | 721,655.2 | 40.6 | 37.8 | 7.1 |
| Securities | 298,033.1 | 468,040.8 | 23.6 | 24.5 | 9.4 |
| Others ² | 269,139.1 | 462,809.8 | 21.3 | 24.3 | 11.5 |
| Total | 1,263,186.3 | 1,908,488.8 | 100.0 | 100.0 | 8.6 |

Source: Bank Negara Malaysia

Notes: ¹ Include currency, borrowings, funds from other domestic and foreign financial institutions, and other liabilities.

² Include currency, gold and forex reserves and other assets.

7.05 The FSMP and CMP were launched in 2001 to chart an orderly development of the financial sector and capital market, respectively, over a ten-year period to sustain the growth momentum and efficient financial intermediation to meet the needs of a rapidly growing economy. The first phase of the FSMP,

2001-2003, focused on measures to strengthen the capability and capacity of domestic financial institutions. The second phase, beginning 2004, emphasises the promotion of greater competition towards further enhancing the efficiency of the financial system.

7.06 Enhancing Corporate Governance. Initiatives were taken to further enhance corporate governance in the financial services sector. This included the revision and issuance of guidelines to prescribe broad principles, minimum standards and specific requirements for corporate governance, particularly with respect to improved financial disclosure, accounting standards and internal control, which also enabled benchmarking with international best practices. In addition, for the capital market, listing requirements were revamped, whistle blowing provisions were introduced and the range of sanctions for breach of requirements was expanded.

7.07 Strengthening Regulatory Framework. The regulatory and supervisory framework was strengthened to ensure continued stability. In the banking and insurance sectors, risk management practices were enhanced and prudential regulations were reviewed to ensure they remained effective while promoting competition and innovation. Supervisory activities were also strengthened with the introduction of the Informal Enforcement Actions Framework for banks, and as well as the issuance of new-risk based supervisory framework for Islamic banks. The enactment of the Anti-Money Laundering Act, 2001 provided a comprehensive framework for the prevention, detection and prosecution of money laundering. In the capital market, the conversion from merit-based to disclosure-based regulation coupled with the implementation of pre-emptive financial surveillance of public listed companies contributed to improvement in investor protection and efficiency in fund raising.

7.08 Consumer Education and Protection. During the Plan period, efforts to strengthen consumer protection included increased disclosure requirement by financial institutions on fees and charges, and changes in terms and conditions of financial products. In the banking sector, the Malaysia Deposit Insurance Corporation was established to provide explicit deposit protection to depositors. For the insurance industry, guidelines on provision of proper advice practices by insurance businesses were introduced.

Banking System

7.09 The institutional arrangements that were put in place in 1998 to resolve emerging vulnerabilities in the banking sector during the Asian financial crisis have been effective in preserving stability in the banking system. The key institutions, namely, *Pengurusan Danaharta Nasional Berhad (Danaharta)*, *Danamodal Nasional Berhad (Danamodal)* and the Corporate Debt Restructuring

Committee (CDRC) essentially achieved their objectives, placing the banking sector on a stronger footing. During the Eighth Plan, the banking system remained resilient, recording improvement in asset quality and sustaining high capitalisation. Following consolidation and rationalisation, the number of domestic banking institutions decreased from 54 to 10 banking groups. The completion of the consolidation exercise enabled domestic banking groups to refocus on further improving productivity and competitiveness as well as benefit from economies of scale.

7.10 *Assets and Liabilities.* Total assets of the banking system expanded at an average annual rate of 7.8 per cent to RM959.4 billion as at end of 2005, as shown in *Table 7-2*. Loans and advances rose at an average annual rate of 7.1 per cent. In terms of liabilities, deposits grew 8.1 per cent per annum, with businesses and corporations accounting for the bulk of new deposits. The net non-performing loans (NPLs) ratio, based on the 6-month and 3-month classifications, improved from 6.5 per cent and 9.9 per cent at the end of 2000 to 4.6 per cent and 5.8 per cent at the end of 2005, respectively. The risk-weighted capital ratio (RWCR) also increased from 12.5 per cent to 13.1 per cent during the same period.

7.11 *Bank Lending.* The banking system continued to be the main provider of funds for the economy. Lending activities were strong, covering a broad range of economic sectors and customer segments. As at end of 2005, 26.7 per cent of total lending was for the purchase of residential property and 6.6 per cent for consumption credit. Lending to business expanded moderately as large corporations sourced financing from the bond market. The small and medium enterprises (SMEs) benefited from the change in lending strategies with outstanding loans to SMEs expanding at an average annual rate of 6.4 per cent between 2001 and 2005, accounting for 42.6 per cent of loans to businesses. Lending to SMEs was diversified with almost two-thirds being channeled to the distributive trade, manufacturing and construction sectors.

7.12 *Enhancing Capability.* During the Plan period, various initiatives were undertaken to build the capacity and capability of domestic banking institutions. This included the industry-wide benchmarking exercise, enabling cross-selling of products and services as well as developing alternative delivery channels such as Internet banking. This was complemented by initiatives to promote efficiency, innovation and dynamism within the financial sector. In addition, the banking sector commenced preparations for the adoption of the New Basel Capital Accord (Basel II), which is targeted for implementation in 2008 for those adopting the Standardised Approach, and 2010 for those adopting the Internal Ratings Based (IRB) Approach.

TABLE 7-2
TOTAL ASSETS, DEPOSITS AND LOANS OF THE BANKING SYSTEM, 2000-2005
 (RM million)

| Institution | Total Assets | | | Total Deposits | | | Total Loans and Advances ¹ | | | |
|------------------------------|----------------|--------------|----------------|----------------|--------------|----------------|---------------------------------------|--------------|----------------|--|
| | 2000 | % | 2005 | 2000 | % | 2005 | 2000 | % | 2005 | Average Annual Growth Rate (%) 2001-2005 |
| Commercial Bank ² | 512,715 | 77.8 | 885,909 | 362,991 | 77.1 | 645,699 | 303,367 | 76.5 | 526,771 | 11.7 |
| Finance Companies | 109,410 | 16.6 | 26,879 | 82,649 | 17.6 | 16,030 | 75,950 | 19.1 | 22,547 | -21.6 |
| Merchant Banks | 36,876 | 5.6 | 46,612 | 24,764 | 5.3 | 31,696 | 17,359 | 4.4 | 8,748 | -12.8 |
| Total | 659,001 | 100.0 | 959,400 | 470,404 | 100.0 | 693,425 | 396,676 | 100.0 | 558,066 | 7.1 |

Source: Bank Negara Malaysia

Notes: ¹ Include housing loans sold to Cagamas Berhad.

² Include Islamic banks.

Islamic Financial System

7.13 *Islamic Banking.* The Islamic banking industry grew at an average annual rate of 18.9 per cent in terms of its assets, as shown in *Table 7-3*. The total assets of the Islamic banking sector accounted for 11.3 per cent of total assets in the banking system as at end of 2005, compared with 6.9 per cent in 2000. Total deposits from Islamic banking institutions increased more than double during the same period accounting for 11.7 per cent of total banking sector deposits. In view of the rapid development and steady performance of the Islamic banking industry, the liberalisation of the Islamic banking sector was brought forward from 2007 to 2004 with the issuance of new Islamic bank licences to three leading foreign Islamic financial institutions. As at end of 2005, seven domestic banking groups were granted approval to establish an Islamic

TABLE 7-3
PERFORMANCE OF ISLAMIC BANKING SYSTEM,
2000-2005

| Indicator | RM million | | Average Annual Growth Rate (%), 2001-2005 |
|-------------------|---------------|----------------|---|
| | 2000 | 2005 | |
| Assets | | | |
| Islamic Banks | 14,029 | 43,433 | 25.4 |
| Commercial Banks | 20,094 | 59,698 | 24.3 |
| Finance Companies | 7,150 | 1,254 | -29.4 |
| Merchant Banks | 1,507 | 1,466 | -0.6 |
| Discount Houses | 4,288 | 5,973 | 6.9 |
| Total | 47,068 | 111,824 | 18.9 |
| Deposits | | | |
| Islamic Banks | 11,304 | 35,625 | 25.8 |
| Commercial Banks | 16,091 | 42,775 | 21.6 |
| Finance Companies | 5,393 | 684 | -33.8 |
| Merchant Banks | 867 | 797 | -1.7 |
| Discount Houses | 2,268 | 3,993 | 12.0 |
| Total | 35,923 | 83,874 | 18.5 |
| Financing | | | |
| Islamic Banks | 6,426 | 20,627 | 26.3 |
| Commercial Banks | 8,606 | 45,398 | 39.5 |
| Finance Companies | 5,090 | 1,071 | -26.8 |
| Merchant Banks | 769 | 268 | -19.0 |
| Total | 20,891 | 67,364 | 26.4 |

Source: Bank Negara Malaysia

subsidiary under their commercial banking arm. The number of full fledged Islamic banks increased from two in 2000 to six in 2005. Following the consolidation of the banking system, the number of conventional banking institutions participating in the Islamic Banking Scheme (IBS) was reduced correspondingly. The number of finance companies participating in the IBS was reduced from 14 in 2000 to one as at the end of 2005. During the same period, IBS merchant banks refocused their business operations to fee-based activities from financing portfolios, which no longer required them to maintain dedicated Islamic banking.

7.14 *Takaful*. Total assets of the *takaful* fund expanded by an average annual rate of 25.0 per cent between 2001 and 2005. Islamic private debt securities, investment accounts and the Islamic money market accounted for majority of the *takaful* fund assets. Market share of the *takaful* industry in terms of assets rose from 3.7 per cent at the end of 2000 to 6.7 per cent at the end of 2005. Total combined net contribution income grew at an average annual rate of 20.6 per cent during the same period, increasing its market share to 6.2 per cent from 2.5 per cent in 2000. To improve the financial resilience and enhance the underwriting capacity of *takaful* operators, a higher minimum paid-up capital requirement of RM100 million was imposed on *takaful* operators with effect from end of December 2004.

Development Financial Institutions

7.15 The development financial institutions (DFIs) continued to provide financing to identified strategic activities including agriculture, infrastructure development and export-oriented and high-technology industries as well as to SMEs and for the development of Bumiputera entrepreneurs. Financing provided by the DFIs increased from RM22.0 billion at the end of 2000 to RM47.5 billion in 2005. Measures were announced in 2005 to restructure DFIs towards greater focus in financing SMEs, strategic industries and Malaysian companies going overseas. Towards this end, the SME Bank was established, focused on providing financial facilities as well as advisory services to SMEs, towards enhancing their competitiveness in domestic and international markets. *Bank Pembangunan Malaysia Berhad*, in turn would focus on financing capital intensive and high-technology industries, maritime and infrastructure. In addition, the Export-Import Bank of Malaysia Berhad and the Malaysia Export Credit Insurance Berhad were merged.

Insurance Industry

7.16 The insurance industry sustained its growth momentum during the Plan period. Total premium income increased at a rate of 11.1 per cent per annum between 2001 and 2005 to reach RM23.6 billion, mainly due to strong demand for investment-linked and endowment insurance products and the successful

penetration by domestic insurers of bancassurance as an alternative distribution channel. Total assets of the insurance industry grew at an average annual rate of 13.8 per cent over the same period to RM96.7 billion. The allocation of insurance fund assets to corporate and debt securities increased from 41.2 per cent to 49.9 per cent between 2001 and 2005, thereby promoting a more diversified institutional investor base for the capital market. The financial position of insurers strengthened following the increase in minimum statutory capital requirement in 2001 from RM50 million to RM100 million. The higher capital requirement also spurred the consolidation of the insurance industry, which saw the completion of a total of 16 mergers, involving 29 insurers.

Capital Market

7.17 The CMP, launched in February 2001, envisaged the establishment of an internationally competitive capital market providing an efficient conduit for the mobilisation and allocation of funds, supported by a facilitative and strong regulatory framework. During the Plan period, implementation of the CMP was aimed at strengthening domestic capacity, developing strategic and nascent sectors of the capital market as well as promoting gradual liberalisation. By the end of 2005, 65 per cent of the recommendations was implemented. A market friendly regulatory framework combined with strong market infrastructure catalysed the rapid growth of the Ringgit denominated bond market. This in turn, contributed towards a more resilient financial system by addressing the pre-crisis overreliance on the banking system as a mobiliser of funds.

7.18 *Fund Raising Activity.* Between 2001 and 2005, funds raised by the capital market amounted to RM416.1 billion, an increase of 89.0 per cent compared with the period 1996-2000. As at end of 2005, the bond market accounted for 90.0 per cent of total funds raised, facilitated by initiatives to enhance issuance efficiency and product innovation. The first exchange-traded fund, ASEAN Bond Fund Index was listed on *Bursa Malaysia* in July 2005.

7.19 *Enhancing Efficiency of Market Institutions.* To enhance the strategic positioning of the capital market as well as increase liquidity, and widen access to investments and products through a single market place, the Kuala Lumpur Options and Financial Futures Exchange Berhad (KLOFFE) and the Commodity and Monetary Exchange of Malaysia (COMMEX) were merged in June 2001. This was followed by the merger of the Malaysian Exchange of Securities Dealing and Automated Quotation Berhad (MESDAQ) with the Kuala Lumpur Stock Exchange (KLSE) in March 2002. In addition, *Bursa Malaysia* formerly known as KLSE was demutualised in 2004 and subsequently listed in March 2005. In conjunction with this, the Capital Market Development Fund was established to promote growth and innovation in the capital market.

7.20 Enhancing Stock Market Liquidity and Efficiency. The Government implemented several initiatives to enhance liquidity in the stock market. In 2003, board lots were reduced to 100 shares and free float was increased by reducing moratoriums on promoter's shareholdings. The Government also unveiled a 10-year transformation programme for government-linked companies (GLCs) in 2005 to make them attractive to investors while Budget 2006 introduced a facilitative tax and regulatory regime to promote mergers and acquisitions.

7.21 Building Competitive Intermediaries. Following consolidation, the number of locally-owned stockbroking companies (SBCs) was reduced from 60 to 32 at the end of 2005. Six SBCs emerged as Universal Brokers. Progressive deregulation was also undertaken, allowing for the setting up of branches and expansion in the scope of activities. A framework was also introduced to facilitate the creation of investment banks. In addition, five global stockbrokers established operations in Malaysia.

7.22 Islamic Capital Market. Malaysia's Islamic capital market continued to register strong growth. As at October 2005, a total of 857 or 85 per cent of total listings on *Bursa Malaysia* were *Syariah*-approved counters. The Securities Commission (SC) released the Guidelines on the Offering of Islamic Securities and extended its *Syariah* compliance review process to pre-initial public offering (IPO) securities. To enhance the international profile of Malaysia's Islamic capital market, the Government launched the world's first sovereign Islamic bond in June 2002.

7.23 Venture Capital. The venture capital industry continued to grow at a steady rate of 10.6 per cent per annum with the number of funds and investee companies increasing from 31 and 159 in 2000 to 48 and 380 in 2005, respectively. The largest source of venture capital funds was the Government followed by private corporations. The major portion of investments was in information and communications technology (ICT) followed by manufacturing and biotechnology.

7.24 Investment Management Industry. The unit trust industry grew at a rapid pace with the number of funds launched rising from 127 in 2000 to 340 with a net asset value of RM98.5 billion as at end of 2005. During the same period, the number of *Syariah*-based funds increased from 17 to 83 with the net asset value increasing five-fold to RM8.5 billion. The first *Syariah* index fund was introduced in January 2002. The Real Estate Investment Trusts (REITs) funds were launched in 2004. Exchange-traded funds and open-ended investment funds were introduced in June 2005.

7.25 Provident and Pension Funds. The role of the provident and pension funds (PPFs) in mobilising long-term savings became increasingly significant. Total assets of PPFs expanded by 34.3 per cent to RM291.3 billion

in 2004. Employees Provident Fund (EPF) accounted for 82.5 per cent of total PPFs assets. The asset allocation of PPFs was increasingly diversified to tap growing opportunities in the capital market with the share of investments in private debt securities and loans at 13.6 per cent and 16.3 per cent, respectively.

7.26 *Derivatives Market.* The derivatives market provided more hedging instruments to meet the growing needs of investors to manage and diversify financial risks. In tandem with the rapid development of the domestic bond market, the 3-year, 5-year and 10-year Malaysian Government Securities (MGS) Futures Contracts were introduced in 2002 and 2003. The Palm Oil Kernel Futures (FPKO) Contract was launched in 2004. Equity ownership of futures broking firms was liberalised while futures brokers and futures fund managers were allowed to invest in a wider range of futures contracts in overseas markets.

Labuan International Offshore Financial Centre

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7.27 Increased efforts were undertaken to promote Labuan as an International Offshore Financial Centre (IOFC). During the Plan period, 2,431 new offshore companies were established in Labuan, bringing the total to 5,152 since Labuan was launched as an IOFC in October 1990. The offshore companies incorporated in Labuan, originated from 93 countries of which 53 per cent were from the Association of South-East Asian Nations (ASEAN) and the Pacific region, 16 per cent from the Far East, 15 per cent from the Americas, 14 per cent from Europe and 2 per cent from the Middle East. Islamic banking and finance continued to be developed as a strategic niche market segment for Labuan. At the end of 2005, there were six Islamic banks, including two foreign Islamic banks established on the island. With regard to the Islamic capital market, six Islamic instruments were listed on the Labuan International Financial Exchange (LFX) with a market capitalisation of US\$2.1 billion. In the area of *takaful*, Labuan offered general and family *takaful*, *re-takaful*, *takaful* management and underwriting services.

Co-operatives

7.28 More than 60 per cent of the co-operatives focused on providing consumer credit with the balance for small loans to activities in transportation, construction and housing. The size, membership and assets of co-operatives are, as shown in *Table 7-4*. The National Co-operative Policy (NCP), 2002-2010, was launched in 2002 to provide for the orderly re-development of co-operatives. The Malaysia Co-operative Commission (MCC) was approved to replace the present Department of Co-operatives Development of Malaysia to effectively regulate and supervise the co-operative sector and to realise its full potential.

TABLE 7-4

PERFORMANCE OF CO-OPERATIVES¹, 2000-2005

| <i>Indicator</i> | <i>2000</i> | <i>2005</i> | <i>Average Annual Growth Rate (%), 2001-2005</i> |
|-------------------------------|-------------|-------------|--|
| No. of Co-operatives | 4,154 | 4,771 | 2.8 |
| Membership (million) | 4.5 | 5.5 | 4.1 |
| Amount of Shares (RM billion) | 4.2 | 6.3 | 8.3 |
| Total Assets (RM billion) | 15.8 | 26.2 | 10.6 |

Source: Department of Co-operatives Development

Note: ¹ Co-operatives registered with the Department of Co-operatives Development.

III. PROSPECTS, 2006-2010

7.29 During the Ninth Plan period, the financial services sector is expected to grow at an average annual rate of 7.0 per cent per annum, with its share of GDP increasing to 15.8 per cent by 2010. Employment in the sector is expected to expand at an average rate of 2.5 per cent per annum. The FSMP and CMP will continue to provide the framework for the development of the financial services sector.

7.30 Efforts will also be taken to equip human resource in the sector with the necessary skills and expertise and promote a culture of continuous learning. Clear policy guidelines and practices will be introduced with respect to talent management to produce professional and well-trained employees. To meet the increased demand for expertise in Islamic finance globally, Malaysia will establish the International Centre for Education in Islamic Finance (INCEIF), which is designed to act as a professional certification body and a training institute for post-graduates. In meeting the demand for specialised expertise in the capital market, increased efforts will be focused on expanding the pool of talent, creating centres of intellectual excellence and accelerating capacity building. Particular attention will also be given to augmenting the supply of skilled Bumiputera participants in the capital market.

7.31 Initiatives to empower consumers through the provision of appropriate information will be further intensified so that consumers can take responsibility for their own financial decisions. Measures to promote greater consumer awareness and activism will be further enhanced through more targeted consumer education programmes and by strengthening the overall consumer protection infrastructure. In addition, the regulatory and supervisory framework will be further strengthened to provide better protection for consumers and enhance supervision and oversight.

For the *takaful* industry in particular, consumer protection will be strengthened by setting up a *takaful* guarantee scheme fund, which will serve as the final safety net in the event of failure of a *takaful* operator.

7.32 The overall thrust under the Ninth Plan will be to develop a more robust financial services sector to support socio-economic development and capitalise on new growth and wealth creating opportunities. The key strategies will be:

- ❑ *building an internationally competitive financial services sector, through progressive liberalisation;*
- ❑ *promoting competitive domestic financial institutions and nurturing their expansion into regional markets;*
- ❑ *improving the delivery system of the regulatory framework and enhancing enforcement;*
- ❑ *developing Malaysia as an international centre for Islamic banking and finance, as well as initiating niche capital market specialisations at regional and global levels;*
- ❑ *focusing DFIs towards development of competitive and globally oriented SMEs;*
- ❑ *promoting Labuan as a unique IOFC, especially for innovative Islamic financial products and services; and*
- ❑ *mobilising resources and improving the capability of co-operatives as an alternative source of financing.*

Banking System

7.33 The Ninth Plan coincides with the implementation of the second half of Phase II and Phase III of the FSMP. Phase III aims to bring about greater integration of domestic financial system with the global environment. The recommendations of the FSMP will be implemented in a systematic manner, driven by the need to remain practical and guided by the consultative process. Existing regulatory framework will be reviewed with the objective of achieving a balance between promoting innovation and market development, and safeguarding financial stability through prudential requirements. The regulatory burden will be reduced to achieve competitive equality within the financial sector. Gradual liberalisation measures, including the possibility of introducing new foreign competition, will be properly sequenced to ensure it brings maximum benefits while preserving overall financial stability.

7.34 *Improving Efficiency.* Domestic banking groups will be encouraged to provide complete and integrated financial solutions to their customers and achieve cost efficiency through group rationalisation. The emphasis will be on enhancing the role of financial holding company in pursuing group strategies that promote greater risk and income diversification, synergy creation and enhanced branding. The greater use of ICT will also be promoted to enhance risk management capabilities, to improve service delivery, and provide seamless and customised services. Competitive pressure will accelerate adoption of international best practices and standards towards strengthening the level of professionalism and encourage banking institutions to continually differentiate themselves through product and service offerings.

7.35 *Expanding to Regional Markets.* With significant opportunities emerging from regional integration and economic cooperation, financial institutions will be encouraged to increase effective presence in new and competitive regional markets to support intra-regional trade and investment whilst giving support to local entrepreneurs abroad. For this purpose, banking institutions will need to be prepared with the necessary resources and expertise to compete effectively.

7.36 *Improving Access to Financing for SMEs.* Banking institutions will continue to be one of the main providers of funds to SMEs with the Government complementing them in the form of special funds and financing packages. The Government schemes will include financing for micro enterprises and SMEs involved in agriculture and agro-based industries in the emerging growth areas of biotechnology and ICT. The newly established SME Bank will further enhance its role in mobilising and providing alternative sources of funding as well as facilitating access to related non-financial services. Among others, the SME Bank will guarantee loans granted to SMEs by other banking institutions as well as facilitate securitisation of SME loans, enabling them to also tap the capital market. To encourage greater participation of SMEs in export markets, new trade-financing arrangements covering pre-shipment and post-shipment financing will be introduced. Measures will also be taken to improve dissemination of information of various financing schemes as well as consultancy and advisory support services.

7.37 *Venture Capital Funds for Agriculture.* The two venture capital funds of RM150 million each for the agriculture sector, established by Bank Negara Malaysia (BNM) to support the Government's objective of realising the potential of the agriculture sector as a third engine of economic growth, will focus on creating and developing integrated agricultural businesses. The targeted areas for investments are integrated farming and fisheries as well as biotechnology-related ventures.

Islamic Financial System

7.38 The Islamic banking industry will continue to expand in parallel with conventional banking. By 2010, the Islamic banking industry is expected to constitute 20 per cent of the overall banking and insurance market. To elevate the domestic Islamic financial system and further integrate it with the international financial infrastructure, strategic initiatives will continue to be undertaken to strengthen Malaysia's position as a global Islamic financial hub. The move is expected to strengthen financial, trade and investment ties as well as linkages between Malaysia and other countries.

7.39 *Developing into a Global Islamic Financial Hub.* Capitalising on the strength and experience that Malaysia has garnered over the years, the hub will serve as a platform for origination, issuance and trading of Islamic capital market and treasury instruments, for fund and wealth management, offshore Islamic financial services market as well as *takaful* and *retakaful* business. This will be complemented by the formation of centres of excellence for education, training, consultancy and research in Islamic banking and finance. Malaysia will also have the presence of a strong and diversified range of Islamic financial institutions that are able to offer a comprehensive and broad array of Islamic financial products and services. Other initiatives will include nurturing Malaysian Islamic financial institutions to venture abroad, promoting a strong Malaysian brand globally, establishing an effective and efficient delivery system, fostering strategic alliances with other financial centres and establishing monetary policy conduct for the Islamic financial system. Concerted efforts will be directed at providing the requisite regulatory and prudential framework to facilitate the development of a sound and efficient Islamic financial system.

7.40 *Takaful.* The *takaful* industry will be developed to form an integral part of the financial system by 2010. During the Plan period, the main objective is to develop a number of strong and highly capitalised *takaful* operators offering a complete range of *takaful* products and services. Steps will be undertaken to enhance the ability of *takaful* players to capitalise on the unique features of *takaful*. This will include measures to ensure the availability of well-trained, high-caliber individuals and management teams with the required expertise, especially in terms of *Syariah* compliance and product development. Additional *takaful* licences will be granted to eligible parties to generate greater competition and further expand *takaful* businesses to enable the industry to achieve the target of 20 per cent market share of the total insurance industry.

7.41 Malaysian *takaful* operators will also be encouraged to increase their global presence either through equity participation or through management expertise with their foreign counterparts. With the formation of the Malaysian

Takaful Association, industry efforts towards enhancing market conduct and strengthening customer protection will be effectively and efficiently implemented. Alternative distribution channels such as *bancatakaful*, financial advisers and Internet will be further developed. Professionalism of the agency force will be enhanced to ensure better customer service.

7.42 In order to protect the interest and increase the confidence of the public in the *takaful* industry, the regulatory and supervisory initiatives will focus on strengthening its financial soundness and sustainability. Regulatory regimes on solvency and capital adequacy, which are the cornerstones of prudential supervision, will be improved upon. Future regulatory and supervisory efforts will also be directed at strengthening governance practices and cultivating greater risk management culture within the *takaful* industry. Enhancement to the legal framework, particularly those related to consumer protection will be undertaken. Realising the potential of *re-takaful* (Islamic re-insurance) to fulfil the needs of *takaful* operators, emphasis will be placed on measures to enhance the *re-takaful* industry. This will include strengthening the ASEAN *Re-takaful* International Ltd. (ARIL) to enhance its capacity and capability so as to position itself as an important *re-takaful* operator in the region.

Development Financial Institutions

7.43 DFIs will continue to complement banking institutions in providing financing, especially in priority and new growth areas. To ensure that DFIs are able to continuously perform their mandated functions in an effective and efficient manner, the restructuring and rationalisation of the four DFIs that was initiated during the Eighth Plan period will be followed through by increasing the capital base as well as upgrading management capabilities and corporate governance. DFIs are also expected to play a greater role in providing other non-financial services including serving as reference points and data centre for credit information and the development of a credit scoring system for targeted sectors. In addition, institutional arrangements of selected DFIs will be strengthened to enable them to provide sustainable micro financing schemes premised on international best practices.

Insurance Industry

7.44 Significant opportunities for growth in the insurance industry are expected to result primarily from changing demographics in terms of an expanding ageing population with increasing wealth levels and rising awareness of the need for, and benefits of, insurance. The industry will, therefore, need to position itself, both financially and in terms of its reputation to meet the increasing demand for insurance. Efforts will continue to be undertaken to enhance capacity building.

This will include monitoring and where appropriate, driving initiatives by the industry in the area of developing human resource capability to ensure that industry standards are continuously raised in tandem with the expectations of increasingly sophisticated consumers and financial markets. Greater focus will be given to strengthening the role of market discipline to foster an environment of improved customer service as well as high standards of integrity and professionalism. This will be achieved by increasing education and awareness among the consumers, promoting greater transparency in the conduct of insurance business and continuously raising the level of professionalism.

7.45 Improving Risk Management. Continued focus will be given to strengthening the financial risk management capabilities of insurers to support the implementation of a risk-based capital framework. This will be complemented by the on-going development of the capital market, which will expand investment avenues for insurers to improve their asset-liability management.

7.46 Liberalisation. Further deregulatory and liberalisation measures will be introduced. This will include greater flexibility accorded to foreign insurers to establish branch offices, the progressive deregulation of pricing for tariff-rated insurance products, greater investment management flexibility, and removal of limits on management expenses. It will also ensure continuing improvements in disclosure standards to promote greater market discipline in the more deregulated environment. Consistent with the deregulatory measures, the prudential framework will continue to be adjusted to establish principles of sound financial and business practices. In addition, to promote greater international integration, new licences will be issued and greater opportunities will be provided to internationally-reputed insurers to acquire equity interests in, or forge strategic alliances with domestic players, both in the direct insurance as well as re-insurance sectors.

Capital Market

7.47 During the Plan period, the third phase of the CMP will be implemented. It will focus on enhancing international competitiveness and leveraging on the foundation built during the first and second phases. Initiatives will centre on further broadening and deepening the capital market, promoting the regional and international profile of the Malaysian capital market and identifying new growth opportunities. The broad strategic thrusts to achieve these objectives involve enhancing Malaysia's position as a premier market, ensuring sufficient supply of financing to nurture new sources of growth, enhancing liquidity and transparency in the secondary bond market and positioning Malaysia as a global hub for Islamic capital market. At the same time, the focus will be on enhancing the role of the investment management industry in mobilising savings and accelerating the pace of development of the derivatives market as well as increasing the use of technology and connectivity across market segments, enhancing the delivery of regulatory services and developing human capital to build a world-class market.

7.48 *Positioning Malaysia as a Premier Capital Market.* To position Malaysia as a premier market, initiatives will be taken to improve its attractiveness as a destination for listing, a hub for intermediation and a host to high-quality and innovative companies that are committed to good governance. In this regard, measures will be introduced to enhance the quality of the market framework to ensure that Malaysia's capital market is attractive to issuers, intermediaries and investors. Efforts will be focused on building more high quality and competitive public listed Malaysian companies that will be able to attract an increasing share of domestic and global investors and capital. This will also be complemented by measures to transform listed GLCs towards a new level of performance and resilience.

7.49 *Financing New Sources of Growth.* Continuous efforts will be made to strengthen the role of the capital market in providing appropriate access to funding at reasonable costs including for SMEs. In this regard, the capital market will effectively complement traditional sources of funding for SMEs by facilitating the introduction of innovative financing instruments for knowledge-intensive as well as technology-intensive start-up enterprises with intangible collateral such as ideas, knowledge and expertise as their principal assets to source funds from the capital market.

7.50 *Enhancing Liquidity and Transparency in the Secondary Bond Market.* Initiatives will focus on further deepening and broadening the secondary bond market by expanding product range and structures, particularly with a view to lengthening tenures and broadening risk spectrums. In addition, initiatives will be undertaken to further improve secondary market liquidity by enhancing the trading infrastructure, broadening market access and expanding the number and representation of participants in the bond market. In tandem with this, the regulatory framework including the requirements for information disclosure will be reviewed. Efforts will also be geared towards further liberalisation of the existing regulatory framework to promote product innovation. In line with this, initiatives will be identified to make available a wider spectrum of asset classes and innovative instruments structured on *Syariah* as well as conventional principles. The Government will also promote the integration of Asian bond markets.

7.51 *Positioning Malaysia as a Global Hub for Islamic Capital Market Products and Services.* Efforts will be intensified to enhance Malaysia's position as a key provider of Islamic capital market products and services by strengthening the role of Islamic institutions in the domestic intermediation process, particularly in terms of mobilising savings and fostering an enabling environment for innovation. Increasing emphasis will be placed on enhancing the linkages between domestic institutions and other Islamic capital market centres towards building a global Islamic capital market network through sharing product knowledge, distribution channels and other resources. The promotion of greater cross border trade and investment linkages is also expected to contribute substantially to the expansion of Malaysia's Islamic capital market.

7.52 *Enhancing the Role of Investment Management Industry.* Further initiatives will be implemented to accelerate the growth and development of the investment management industry and expand the range of cost-effective products to enhance its role in mobilising savings and meeting the varied demands of savers. This will be complemented by initiatives to ensure comprehensive regulation for the maintenance of high professional standards as well as high levels of investor protection and corporate governance. Greater investor awareness and knowledge of financial planning, wealth management and available financial products will be created. Steps will also be taken to improve information disclosure and performance measurements to aid investor understanding of the risks and returns on their investments.

7.53 *Accelerating the Pace of Development of the Derivatives Market.* The derivatives market will continue to serve as an alternative avenue for investment as well as for cost-effective hedging and risk management facilities. In this regard, efforts will be geared towards product innovation to spur the growth of the derivatives market and increase the breath and depth of the capital market. Priority will be placed on building institutional capacity to undertake product innovation and the regulatory framework will be strengthened to support the development of innovative financial instruments. Guidelines will be provided to allow fund managers to use derivatives in portfolio management. The implementation of the new common trading platform for the derivatives markets will also facilitate the introduction of new products, trading algorithms and auction mechanisms. The new platform will offer enhancements in terms of its ability to integrate order execution between the various market segments on a single platform, which will increase trading velocity by encouraging greater participation by intermediaries and investors. This combined with increasing foreign participation in the Malaysian capital market will have a substantial impact on the liquidity and vibrancy of the derivatives market.

7.54 *Enhancing the Delivery of Regulatory Services.* The regulatory framework and processes will be streamlined through consolidation of licensing requirements while turn-around times for corporate and other approvals will be further shortened. Efforts will also focus on further streamlining regulation with the aim of encouraging business efficiency and cost-effectiveness while ensuring a strong framework for enforcement of good corporate governance. In this regard, regulators will seek to enhance their delivery of service to the public in a seamless and efficient manner and initiatives will be implemented to ensure more timely and effective enforcement. Efforts will be focused on ensuring efficient regulatory coverage and parity in addressing issues of investor protection and market integrity.

7.55 With increasing sophistication of the Malaysian capital market, it will need to strengthen the mechanisms and capacity for self-discipline among listed companies, as well as increasingly rely on market regulation to enable greater

precision, flexibility and timeliness in serving investors and public interest. For the purpose of self-discipline, self-regulatory organisations will be encouraged to monitor business conduct and ethical behaviour among market participants.

7.56 The SC will further enhance its role as a surveillance and enforcement agency. This includes strengthening its risk management capacity and capability, and further enhancing its pro-active and pre-emptive approach to surveillance and enforcement. It will continue to leverage on cooperation with other international capital market regulators, particularly in the identification and prosecution of cross border securities and corporate offences.

7.57 *Increasing the Use of ICT Across Market Segments.* As many aspects of capital market development will be continuously driven by advancement in information and technology platforms, technological initiatives taken by *Bursa Malaysia* to introduce integrated trading platforms as well as the clearing and the settlement systems will be continued. This will be complemented by establishing higher levels of straight-through-processing linking domestic and global payment systems. At the business level, deregulatory measures will be pursued to create a facilitative environment to leverage technology for trade execution, information and service delivery to customers.

Provident and Pension Funds

7.58 Taking into cognisance the social and demographic changes such as higher life expectancy, an ageing population and changing priorities, new strategies will be considered to provide adequate replacement income, ensure long-term sustainability of PPFs, maximise returns and expand coverage as well as safeguard the interests of contributors. Towards this end, a more holistic approach will be adopted to enhance the PPFs so as to assist retirees to ensure that they have sufficient financial assurance. The PPFs will also serve as a platform to mobilise domestic savings in a more effective manner to spur financial market development to support economic growth. In tandem with overall efforts to supplement the national pensions system and provide for greater competition and diversity in institutional management of private funds, steps will be taken to expedite the development of the private pensions industry.

Labuan International Offshore Financial Centre

7.59 To enhance the competitiveness of Labuan as an IOFC, increased promotional activities will be undertaken. In line with increasing global demand for financial services, emphasis will be directed at attracting investors and institutions from the Asia Pacific, Middle East as well as the European Union to set up base in Labuan. Improved incentives will be considered to encourage international institutions to issue financial papers, undertake listing and trade on the LFX.

7.60 The Government will also continue to identify various strategic initiatives to develop Labuan into a unique offshore financial centre. In this regard, the major areas of focus will include the further development of Islamic and conventional financial services related to the capital market, fund management, trade financing as well as *takaful*, *re-takaful* and cash *wakaf*. Increasing emphasis will be placed on strengthening the available legislation and guidelines, particularly related to Islamic financial services. To facilitate the further expansion of Labuan IOFC, the legal framework will be continuously improved to ensure it remains relevant, up to date with global requirements, and reinforces the supervisory powers of the Labuan Offshore Financial Service Authority (LOFSA) as well as maintains Labuan's reputation and competitiveness as an IOFC.

Co-operatives

7.61 In order to enhance access to financing through co-operatives, the industry will be strengthened with priority accorded to improvement in their financial capacity and operational capability. Towards this end, the newly formed MCC will play a significant role in spearheading the implementation of the NCP that focuses on a more holistic approach in the development of co-operatives. The focus will be on ensuring the stability and soundness of financial and management operations of co-operatives. Among others, this will include the mandatory registration, regulation and supervision of all co-operatives including those which were previously under the *Lembaga Pertubuhan Peladang* and *Lembaga Kemajuan Ikan Malaysia*.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

7.62 The Ministry of Finance, BNM and SC will continue to lead new developments in the financial services sector. The development expenditure and allocation to support the financial services sector for the Ninth Plan is, as shown in *Table 7-5*. The focus will be on providing adequate funding for the development of priority segments of the economy including SMEs and new growth areas such as ICT and biotechnology.

TABLE 7-5

DEVELOPMENT EXPENDITURE AND ALLOCATION FOR FINANCE, 2001-2010 (RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|--|----------------------------|---------------------------|
| Venture Capital | 690.0 | 1,600.0 |
| Small and Medium Enterprises Development | 1,412.2 | 1,100.0 |
| Government Equity | 4,520.2 | 1,200.0 |
| Dana Hartanah | – | 2,000.0 |
| Others | 468.0 | 480.0 |
| Total | 7,090.4 | 6,380.0 |

Source: Economic Planning Unit

V. CONCLUSION

7.63 The Eighth Plan period witnessed the consolidation and strengthening of the financial sector after the Asian financial crisis, following the initiatives undertaken by *Danaharta*, *Danamodal* and the CDRC. The banking system, following its rationalisation, refocused on further improving productivity and competitiveness benefiting from economies of scale. The capital market also underwent rapid development, increasing its prominence as an alternative source of financing. The thrusts under the Ninth Plan will be geared towards establishing an internationally competitive and efficient financial services sector alongside encouraging domestic financial institutions to expand abroad. Key initiatives will include improving access to financing for all sectors, especially SMEs, developing the necessary human capital, promoting greater innovation of financial products and services as well as providing a market-friendly regulatory framework with strong enforcement. The Islamic financial system will be further developed to tap its potential and serve as a new source of growth, leveraging on Malaysia's position as a modern and rapidly developing Islamic country. Progressive liberalisation will continue to be undertaken to bring maximum benefits to the sector and the economy while ensuring overall financial stability. The completion of the implementation of the FSMP and CMP by the end of the Ninth Plan period will place Malaysia as an emerging advanced financial market.



REALISING TOURISM POTENTIAL

8

I. INTRODUCTION

8.01 The tourism industry remained strong despite the economic slowdown in the first half of the Eighth Malaysia Plan period. The industry continued to be a key foreign exchange earner, contributing to growth, investment and employment as well as strengthening the services account of the balance of payments. The resilience of the industry was largely attributed to the active participation of both the public and private sectors in undertaking vigorous promotion and marketing, diversifying target markets, as well as improving competitiveness of tourism products and services to sustain interest among tourists to visit Malaysia.

8.02 During the Ninth Malaysia Plan period, concerted efforts will be geared towards realising the full potential of the tourism industry in order to enhance its contribution to the services sector in particular, and the economy in general. The prime focus will be to enhance the country's position as a leading global tourist destination as well as promote domestic tourism. As tourism activity generates high multiplier effects across many sectors, it will provide a wider platform for greater inter- and intra-sectoral linkages. More coordinated efforts will be undertaken to mobilise and channel resources to upgrade the requisite tourism infrastructure and facilities as well as to develop more innovative tourism products and services. High priority will continue to be accorded to achieve more sustainable tourism development.

II. PROGRESS, 2001-2005

8.03 During the Eighth Plan period, the tourism industry performed favourably as reflected in the growth of tourist arrivals and tourist receipts. The share of tourism revenue in total earnings of the services account of the balance of payments increased from 32.7 per cent in 2000 to 43.0 per cent in 2005. Taking into account the inflow of foreign tourists and outflow of local residents travelling abroad, the net contribution by tourism improved from RM11.2 billion to RM18.1

billion for the same period. The development in tourism also contributed positively to the expansion of activities in other subsectors, particularly the hotel, travel and tour industry, retail and restaurants as well as transport.

Tourist Arrivals

8.04 During the Plan period, tourist arrivals increased at an average rate of 10.0 per cent per annum, surpassing the target of 6.9 per cent. The positive growth was sustained throughout the period, with the exception of 2003 when the number of tourist arrivals was adversely affected, particularly by the outbreak of Severe Acute Respiratory Syndrome (SARS), as well as geopolitical uncertainties worldwide. As travel confidence worldwide resumed, tourist arrivals rebounded in the second half of the Plan period to reach 16.4 million in 2005, mainly attributed to intra-regional tourism flows, as shown in *Table 8-1*. Tourists from the Association of South-East Asian Nations (ASEAN) continued to account for more than 70.0 per cent of total arrivals during the Plan period.

Tourist Receipts and Expenditure

8.05 In tandem with the increase in tourist arrivals, foreign exchange earnings from tourism increased at an average annual growth rate of 12.4 per cent, from RM17.3 billion in 2000 to RM31.0 billion in 2005, as shown in *Table 8-1*. ASEAN countries remained the main contributors with a share of 68.7 per cent of total tourist receipts, followed by People's Republic of China (China) at 5.1 per cent, with United Kingdom (UK) and Australia at 2.5 and 2.3 per cent, respectively. In terms of tourist expenditure pattern, accommodation remained the highest component, comprising 33.1 per cent of the total expenditure, followed by shopping at 24.0 per cent, with food and beverages at 17.4 per cent in 2005.

Domestic Tourism

8.06 Domestic tourism continued to be an important component of the industry during the Plan period. The number of domestic tourism trips increased by 30.1 per cent from 12.3 million in 2000 to 16.0 million in 2005. The number of domestic hotel guests more than doubled from 13.6 million in 2000 to 29.0 million in 2005. This was in tandem with rising household incomes, improved quality of life and regular travel becoming increasingly a part of the Malaysian lifestyle. Another trend contributing to domestic tourism was the rising number of corporate retreats, family recreation and youth camps held at various tourist destinations around the country.

8.07 The introduction of low-cost carriers (LCCs) which provided for more affordable air travel to various local destinations, especially Sabah and Sarawak, further contributed to the growth of local travel and tour. The implementation of the five-day work week for the public sector, beginning July 2005, also provided a boost to domestic tourism.

TABLE 8-1
SELECTED TOURISM INDICATORS, 2000-2010

| <i>Indicator</i> | <i>2000</i> | <i>2005</i> | <i>2010</i> |
|--|-------------|-------------|-------------|
| Number of Tourist Arrivals (million) | 10.2 | 16.4 | 24.6 |
| By Country of Origin (%) | | | |
| ASEAN | 70.4 | 76.8 | 65.0 |
| China | 4.2 | 3.8 | 6.1 |
| Japan | 4.5 | 1.9 | 2.2 |
| Australia | 2.3 | 1.5 | 2.7 |
| United Kingdom | 2.3 | 1.5 | 2.8 |
| Taiwan | 2.1 | 1.3 | 2.7 |
| India | 1.3 | 1.2 | 1.8 |
| West Asia | 0.5 | 1.0 | 2.7 |
| Others | 12.4 | 11.0 | 14.0 |
| Total Tourist Receipts ¹ (RM billion) | 17.3 | 31.0 | 59.4 |
| Per Capita Expenditure (RM) | 1,696 | 1,890 | 2,417 |
| Average Length of Stay (nights) | 5.8 | 7.2 | 8.7 |
| Number of Hotels | 1,492 | 2,256 | 3,218 |
| Number of Hotel Rooms | 124,413 | 170,873 | 247,008 |
| Average Occupancy Rate of Hotel (%) | 59.2 | 63.5 | 66.4 |
| Employment | 390,600 | 451,000 | 520,700 |

Source: Economic Planning Unit and Ministry of Tourism

Note: ¹ Tourist receipts exclude excursionist receipts.

Hotel Occupancy

8.08 The strong growth in international arrivals and domestic tourism contributed to a higher average hotel occupancy rate, which increased from 59.2 per cent in 2000 to 63.5 per cent in 2005. During peak seasons, the average occupancy rate in key destinations, namely, Wilayah Persekutuan Kuala Lumpur, Kota Kinabalu and Melaka, was more than 80 per cent. Hotels in the tourist resorts of Genting Highlands in Pahang and Langkawi in Kedah had all year round occupancy rates of above 80 per cent and 60 per cent, respectively. The other popular destinations, including Johor Bahru in Johor and Kuching in Sarawak, had average occupancy rates of between 50 to 60 per cent throughout the Plan period.

Investment

8.09 The growth potential of the tourism industry continued to attract a substantial amount of private sector investment. The number of hotels expanded by 51.2 per cent from 1,492 in 2000 to 2,256 in 2005, while the supply of hotel rooms rose by 37.3 per cent from 124,413 in 2000 to 170,873 in 2005. Travel and tour agencies increased substantially from 1,021 in 2000 to 2,383 in 2005, largely in major gateways such as Wilayah Persekutuan Kuala Lumpur, Pulau Langkawi and Pulau Pinang. Licences issued to tour coach and car rental operators increased from 18,460 in 2000 to 20,610 in 2005.

8.10 To accelerate private investment in the tourism industry, two special funds were launched in 2001, namely, the Tourism Infrastructure Fund (TIF) totalling RM700 million, and the Special Fund for Tourism and Infrastructure (Special Fund) with an initial allocation of RM400 million. Due to the high demand, both the funds were increased to RM1.2 billion each in July 2005. Major projects under these funds included resorts development, renovation and refurbishment of hotels as well as provision of related infrastructure and services. Investments by the public sector were mainly for the provision of basic infrastructural facilities as well as promotion and marketing. Improvements were made to public amenities including the upgrading and beautification of selected tourism sites as well as the restoration of historical buildings and sites.

Employment and Training

8.11 During the Plan period, employment in the tourism industry grew at an average annual rate of 2.9 per cent from 390,600 in 2000 to reach 451,000 in 2005. Direct employment in the hotel industry increased by 1.6 per cent from 84,171 in 2000 to 91,156 in 2005. Employment by tour and travel agencies was estimated at 13,028 in 2005.

8.12 Initiatives to improve the quality of tourist services included extensive training through the supervision and coordination of the National Tourism Human Resource Development Council (NTHRDC) and the National Vocational Training Council (MLVK). The MLVK developed an additional six National Occupational Skills Standards (NOSS) during the Plan period bringing the total to 77 NOSS covering the hotel, tourism and travel segments as well as theme parks and recreational activities. More than 2,500 tourism-related training programmes were conducted utilising RM29.2 million from the Human Resource Development Fund (HRDF), accommodating 113,139 training places.

Tourism Products and Services

8.13 To enhance the distinct appeal of Malaysian tourism products and services, the Government continued to promote the country's traditional advantages, namely, its cultural and natural heritage. The emphasis on promoting cultural and historical heritage as well as eco- and agro-tourism propagated the popularity of destinations such as Melaka, Pulau Pinang, the east coast of Peninsular Malaysia, Sabah and Sarawak. Other tourism products included shopping, leisure and sports-related activities as well as business-related events, particularly the meetings, incentives, conventions and exhibitions (MICE) segment.

8.14 *Eco-Tourism, Agro-Tourism and Homestay Programme.* During the Plan period, the Government continued to promote and develop eco-tourism as guided by the National Eco-tourism Plan, which identified 48 priority sites. Malaysia leveraged on the listing of the Mulu Caves and the Kinabalu Park on UNESCO's World Heritage Sites as well as other natural sites such as marine parks at the Tioman and Redang islands, to promote its rich and diverse natural

resources as tourist attractions. The homestay programme was enhanced to increase participation of the rural population in tourism-related activities as well as provide rural households opportunities to supplement their incomes. An additional 463 homestay operators were trained and licensed during the Plan period, bringing the total to 1,089 from 79 villages.

8.15 *Cultural and Heritage Tourism.* As part of efforts to preserve cultural and heritage sites and meet the special interests of potential tourists, a number of projects were implemented. More than 60 monuments and 25 historical sites were upgraded as tourist attractions. New and existing cultural centres provided an avenue to showcase Malaysia's traditional arts and crafts including *batik*, *pua kumbu* and *songket*.

8.16 *Thematic Events.* Greater efforts were undertaken to promote the country as a destination for continuous year-round events of festivities and celebrations. These events included Colours of Malaysia, Food and Fruit Festival and the National Water Festival as well as the annual KL Fashion Show, highlighting Malaysian textiles including *batik* and *songket*. In view of the tremendous potential of shopping as an attractive tourism product, the Mega Sales Shopping Carnivals were further promoted and complemented by a variety of other events to attract international and domestic visitors.

8.17 The *Meetings, Incentives, Conventions and Exhibitions* market was an important source of growth for the tourism sector, due to its capability to attract the high spending business travellers. The significant contribution made by both international and local participants in the MICE segment, in terms of number of events and receipts, is as shown in *Table 8-2*.

TABLE 8-2

MEETINGS, INCENTIVES, CONVENTIONS & EXHIBITIONS, 2001-2005

| <i>Indicator</i> | 2001 | 2002 | 2003 | 2004 | 2005 |
|------------------------|------------------|------------------|------------------|------------------|------------------|
| Number of Events | | | | | |
| International | 925 | 2,956 | 2,294 | 2,875 | 3,230 |
| National | 2,775 | 8,868 | 6,882 | 8,625 | 9,321 |
| Total | 3,700 | 11,824 | 9,176 | 11,500 | 12,551 |
| Number of Participants | | | | | |
| Foreign | 473,486 | 699,924 | 550,741 | 675,699 | 775,286 |
| Local | 3,189,360 | 3,288,000 | 3,390,000 | 3,494,000 | 3,602,000 |
| Total | 3,662,846 | 3,987,924 | 3,940,741 | 4,169,699 | 4,377,286 |
| Revenue (RM billion) | | | | | |
| Foreign | 1.23 | 2.03 | 1.73 | 2.14 | 2.95 |
| Local | 1.98 | 2.04 | 2.10 | 2.17 | 2.24 |
| Total | 3.21 | 4.07 | 3.83 | 4.31 | 5.19 |

Source: Ministry of Tourism

8.18 *Sports and Recreation Tourism*. Malaysia continued to host annual global events, such as Petronas F1 Grand Prix, the Raja Muda International Regatta, Le Tour de Langkawi and World Amateur Inter-Team Golf Championship as well as Putrajaya Boat Championship. To develop the potential of the *sailing and cruising industry*, an additional 10 marinas were built at strategic locations including Pulau Langkawi, Pulau Pangkor, Pulau Pinang and Pulau Tioman.

8.19 Recognising the potential of *education tourism* as a new market segment to increase foreign exchange earnings, measures were undertaken to promote Malaysia as a regional centre of education excellence. As a result, foreign exchange earnings from this emerging market increased from RM220 million in 2000 to RM450 million in 2005. As part of efforts to promote education tourism, five Malaysian Education Promotion Centres were set up in Beijing, Dubai, Ho Chi Minh City, Jakarta and Jeddah to promote education opportunities available in Malaysia. In terms of *health tourism*, intensive marketing and promotional activities continued to be undertaken to position Malaysia as a premier destination for quality healthcare. The value of foreign exchange earnings derived from health tourism was estimated at RM925 million in 2005.

8.20 *Malaysia My Second Home Programme*, introduced to encourage foreigners, their spouses and dependants to select Malaysia as their second home, attracted a total of 7,308 participants during the Plan period. The programme was most popular among citizens from China comprising 24 per cent of the total, followed by Bangladesh at 15 per cent, Britain at 8 per cent and Singapore at 6 per cent. A one-stop centre was established in 2005 to facilitate and expedite approvals.

Marketing Strategies and Promotion

8.21 In an effort to position Malaysia as a premier tourist destination in the region, the Government in collaboration with the private sector intensified promotional and marketing activities. The country leveraged on the tagline, 'Malaysia Truly Asia', first introduced in 1999, which is internationally recognised as a uniquely Malaysian brand. Greater emphasis was placed on attracting tourists from the short-haul and regional markets of ASEAN, China, India, Japan and West Asia. Activities to promote Malaysia in the traditional long-haul markets of Europe and the United States of America (USA) were also expanded.

8.22 The advent of e-tourism allowed for greater accessibility to accurate and timely information on tourism products and services. To raise awareness among the industry frontliners and tourism-related personnel as to the importance of the tourism industry, several campaigns such as 'Think Tourism', '*Mesra Malaysia*', and 'Malaysia Welcomes the World' were launched. Concerted efforts were undertaken to manage information concerning events that may adversely affect travel and to make available information to potential travellers, allowing them to make informed decisions on travel plans.

Accessibility

8.23 During the Plan period, concerted efforts were undertaken to improve accessibility into and within the country. In this regard, the Government continued to expand and upgrade infrastructure and communications facilities, which among others, supported the growth of the tourism sector. Improvements to land, rail and sea transportation contributed to increased domestic tourism as well as cross border tourists from Singapore, Thailand, Brunei Darussalam and Kalimantan, Indonesia.

8.24 In terms of air transportation, the country's liberal and open sky policy continued to encourage foreign airlines to increase services into Malaysia, further promoting inbound travel. Opportunities were explored to obtain new and additional landing rights for Malaysia Airlines (MAS) to operate more frequently and enlarge capacities to and from overseas destinations. Other strategies included promoting more charter flights from abroad, undertaking joint operations with other airlines, initiating special fares and increasing cooperation with ASEAN tourism organisations to foster greater intra-ASEAN travel.

8.25 The no-frills air travel packages offered by AirAsia, beginning in 2002, played an important role in accelerating the pace of local tourism as well as tapping new regional market segments. AirAsia flew 277,000 passengers in 2000, which expanded to 5.0 million in 2005. The airline also extended its reach in the region through joint ventures with foreign partners, bringing tourists from the surrounding regions.

III. PROSPECTS, 2006-2010

8.26 The World Tourism Organisation forecasts that international arrivals worldwide are expected to reach 1.0 billion by 2010. Of this, 791 million or about 80 per cent is envisaged to be intra-regional tourists, with the rest being long-haul travellers. The East Asia and Pacific region is expected to receive 200 million travellers. In spite of the rising competition from other tourist-seeking economies, Malaysia's tourism sector is expected to benefit considerably from the growth of international travel during the Ninth Plan period. Tourist arrivals to Malaysia are poised to grow at an average rate of 8.4 per cent per annum and estimated to reach 24.6 million by 2010. Correspondingly, tourist receipts are set to rise at an average annual rate of 13.9 per cent to RM59.4 billion in 2010, and is expected to contribute substantially to the total earnings in the services account of balance of payments.

8.27 On account of their proximity to Malaysia, ASEAN countries, especially Singapore and Thailand, will remain the largest source of tourist arrivals to Malaysia. The country will continue to benefit from greater intra-ASEAN travel trade by intensification of regional cooperation through cultural and information

exchanges, development of attractively priced joint-tour packages as well as the establishment of special travel arrangements for ASEAN travellers. Increased joint development efforts under the purview of the Indonesia-Malaysia-Thailand Growth Triangle are expected to further encourage cross border tourism activities. Further cooperation under the Brunei Darussalam-Indonesia-Malaysia-the Philippines East ASEAN Growth Area (BIMP-EAGA) will continue to encourage travel and tour activities among these countries.

8.28 Outside ASEAN, China, Taiwan and Hong Kong SAR taken as a group, is expected to be the single largest tourist-generating market, followed by India and West Asia. Increased emphasis will also be given to generate greater interest among potential tourists from the traditional markets of Europe, U.K, Australia, New Zealand and the USA to visit Malaysia. With the selection of Kuala Lumpur as the Commonwealth Tourism Centre for a term of three years, Malaysia will establish stronger tourism cooperation with Commonwealth and European nations.

8.29 For the Ninth Plan, the strategy will focus on fully realising the tourism potential as an important source of growth in terms of foreign exchange earnings, entrepreneurship development and employment generation. Efforts will be intensified towards strengthening Malaysia's position as a preferred global tourist destination. Thus, the strategic thrusts will include the following:

- ensuring sustainable tourism development;*
- enhancing development of innovative tourism products and services;*
- encouraging and facilitating domestic tourism;*
- intensifying marketing and promotion activities;*
- enhancing human resource development; and*
- ensuring comfort, safety and the well-being of tourists.*

Sustainable Tourism Development

8.30 A more integrated approach to tourism planning and implementation will be undertaken to ensure sustainable development of the industry. Emphasis will be given to preserving and enhancing existing natural and cultural assets that are susceptible to environmental damage. Local authorities and communities will be encouraged to be more actively involved in project preparation, implementation and maintenance to ensure adverse environmental impact is minimised.

8.31 The role of State Tourism Action Councils will be further strengthened to include monitoring, surveillance and regular evaluation of project outcomes. This is to reinforce, among others, the environmental impact assessment and

other relevant guidelines, which continue to be important considerations when formulating and implementing projects and related infrastructure. It will be necessary to ensure that providers of tourism products and services take into account the specific criteria and guidelines on carrying capacity of environmentally-sensitive tourist areas such as islands, highlands and coastal areas. Tourism programmes and projects, particularly hotels and resorts, will need to incorporate, among others, water and energy conservation as well as waste disposal aspects in their implementation, management and maintenance plans.

Tourism Products and Services

8.32 The development of innovative products and services will be encouraged to cater for varying interests and preferences of tourists in order to increase arrivals, expand length of stay and boost spending of both international and domestic tourists. In addition, travel and tour agencies will be encouraged to improve the design, attractiveness and marketing of travel packages, paying particular attention to special interests, quality and pricing to meet varying demands of travellers.

8.33 *Eco-tourism.* Greater emphasis will be given to eco-tourism through the preservation of natural attractions such as wildlife sanctuaries, national parks, highlands and islands. Wide-ranging adventure and special interest tours and expeditions will be made available where tourists can participate in a myriad of nature-related activities, particularly at the *Taman Negara* in Peninsular Malaysia, Kinabalu Park in Sabah and the Bako National Park in Sarawak. Adventure sports at eco-tourism sites such as Pulau Papan in Wilayah Persekutuan Labuan, Sungai Tembeling in Pahang and Pulau Pinang will be organised to attract more tourists. In addition, tourism facilities such as information and interpretive centres as well as public amenities will be provided and upgraded.

8.34 *Agro-tourism and Homestay Programme.* More value added activities will be expanded under the agro-tourism and homestay programme such as farmstays and visits to agricultural parks and research stations. Guests will be encouraged to visit handicraft sites and participate in activities such as pottery-making, *batik-canting*, *songket*- and basket-weaving.

8.35 *Heritage Tourism.* The preservation and restoration of historical sites, buildings and artefacts will be continued as part of efforts to conserve national heritage as well as increase the number of tourist attractions. In pursuance of this strategy, several historical sites and buildings have been identified for preservation and restoration during the Plan period. These will include Kota Kuala Muda in Kedah, Fort Alice in Sarawak and Bukit Tengkorak neolithic site in Sabah. Heritage trails will be developed based on specific themes including the Baba Nyonya heritage, the Portuguese and Dutch era in Melaka, war relics in Kota Bahru as well as *Bunga Mas* in Kedah and Kelantan.

8.36 In terms of *culture, entertainment and the arts*, promotional efforts will focus on a number of areas such as commercial and non-commercial performing arts, museums, art galleries, handicraft and entertainment centres as well as theme parks. Cultural attractions will continue to be promoted to showcase Malaysia's diverse ethnic and cultural festivals. Malaysia will also be promoted as a gourmet paradise in view of the wide variety of food available owing to its multi-ethnic population. In this regard, innovative food trails based on distinct specialties of states, regions and communities will be developed to attract tourists to savour local delicacies.

8.37 *Film and Media Location*. Increased efforts will be undertaken to make Malaysia a preferred location by foreign film production and media companies for the making of feature films, television commercials and documentaries. This will provide an additional avenue for international publicity and exposure for many of Malaysia's holiday destinations and tourist attractions.

8.38 For the Ninth Plan, the *MICE market* is expected to continue to be a major source of foreign exchange earnings. It is increasingly viewed as a high-yielding market with the potential to attract high volume and quality business travellers to Malaysia. Increased promotional measures will be undertaken to market Malaysia as an ideal location for international MICE activities with key selling points such as political stability, competitive packaging, strong organisational capability and excellent services. In the highly competitive MICE industry, the Government will work closely with the private sector in the bidding process to host major conferences, seminars and exhibitions as well as sporting events. Increased emphasis will be placed on expanding and upgrading MICE-related facilities and amenities, essential to hosting international and local conventions and exhibitions.

8.39 *Thematic Events*. Efforts to position Malaysia as an international shopping destination will be intensified in the Plan period. To promote further interest in shopping, entrepreneurs will be encouraged to obtain agency and dealership rights of products from established local and international brand names. Malaysian arts and crafts such as *batik, wau* and *labu sayong* will also be promoted as distinctive tourist products. In addition, to showcase local music and theatre as well as cosmopolitan entertainment, regular performances will continue to be organised at the *Istana Budaya*, the Petronas Philharmonic Hall and other cultural centres nationwide.

8.40 *Sports and Recreational Tourism*. To promote Malaysia as an international sports and recreational tourism venue, international sporting events such as the Islamic Solidarity Games, the Royal Langkawi International Regatta and the Amazing Race as well as golf tournaments will continue to be hosted. Efforts will also be intensified to position Malaysia as an attractive sports avenue to

host a wide range of extreme sports such as para-gliding, white-water rafting and parachuting as well as future reality television programmes. As part of efforts to provide for diversified tourism products, the sailing and cruising industry will be further encouraged. Putrajaya will continue to be popularised as a sports avenue for canoeing, boating and aqua biking.

8.41 The promotion of *education tourism* will continue to be expanded to expedite the development of Malaysia as a preferred destination for international students. The projected foreign exchange earnings from this potential source of growth is estimated at RM900 million by 2010. Towards this end, the number of Malaysian Education Promotion Centres in selected cities worldwide will be increased. Efforts to promote *health tourism* will be intensified to position Malaysia as an emerging health tourism centre worldwide. In this regard, the private sector will be encouraged to participate in various trade shows and expositions to showcase Malaysia's healthcare services in both traditional and non-traditional medical treatment. By 2010, a total of RM2.0 billion is expected as foreign exchange earnings from health tourism.

8.42 *Malaysia My Second Home* will be promoted more intensively to garner greater interest among potential participants. In this regard, inter-agency collaboration will be enhanced to ensure smoother implementation of the programme.

Domestic Tourism

8.43 Domestic tourism will be further developed to contribute to the growth of the tourism industry and will remain a priority. Programmes to promote domestic travel and tour will focus on nurturing a planned holiday culture among Malaysians and encouraging the local population to explore the diverse and interesting attractions in the country. In this regard, various exhibitions, fairs and special events will be organised to promote value-for-money tourism packages and generate year-round brand awareness for domestic tourism. The *Cuti-cuti Malaysia* tour packages, student travel programmes and *Bas Rombongan* for special interest tour groups will continue to be extensively promoted to boost domestic travel and tour.

8.44 To increase more domestic travel and tour, the private sector will be encouraged to provide better recreational facilities as well as accommodation ranging from high-end to the more affordable in order to cater for different target groups. The expansion of LCC terminal capacity and more competitive routes are also expected to facilitate greater domestic travel. The Federal and state tourism agencies will collaborate with the private sector to jointly organise extensive marketing campaigns through inter-state exhibitions and roadshows to promote domestic tourism in their respective states.

Marketing and Promotion

8.45 The primary aim will be to further internationalise Malaysia's image as an attractive tourist destination. Marketing and promotion efforts will be intensified to sustain the competitiveness and attractiveness of tourism products and services. The theme 'Malaysia Truly Asia' will be capitalised upon to strengthen it as a distinct and identifiable image recognised by the international tourism community. In this regard, multi-pronged marketing and promotional activities, particularly for the Visit Malaysia Year 2007 (VMY2007) will be aggressively pursued through active participation in trade shows, exhibitions and sales missions. These activities will be aimed at maintaining tourist arrivals from the short-haul market, augment inbound travellers from the fast-growing medium-haul market and revive the long-haul, traditional markets. The VMY2007 will also be geared towards increasing tourist arrivals and return visits as well as attracting the higher-spending and longer-staying tourists. The planning and implementation of promotional activities for VMY2007 will be carried out in conjunction with the celebration of Malaysia's 50th Golden Jubilee Merdeka Anniversary.

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8.46 As part of the VMY 2007 promotional and marketing efforts, extensive publicity and promotional activities will be organised internationally and domestically. Measures will also be undertaken to simplify immigration procedures at gateways to Malaysia. Increased efforts will be undertaken to devise and market special travel packages to suit the different needs of tourists from various destinations. The existing website will be upgraded to a full-fledged tourism portal under the Ministry of Tourism to expedite direct online business-to-business and business-to-consumer transactions. Service providers will be encouraged to utilise the portal to advertise products and services, as well as manage sales activities. The portal will provide information on, among others, accommodation, transportation, places of interest and cultural events. In addition, end-to-end travel and tour arrangements as well as online payment can be made. This portal will facilitate data collection and research on customer interests and preferences with the view to improving planning as well as redesigning of products and services.

Investment

8.47 The anticipated growth in tourism will require the expansion of tourism-related infrastructure and facilities. The public sector will supplement private sector efforts with an allocation of RM1.0 billion, and concentrate on the upgrading and maintenance of existing facilities such as public parks, pedestrian and bicycle pathways, rest and recreation areas as well as other basic amenities. Improved infrastructure will be built, including the establishment of additional tourist information centres as well as provision of better access via roads, rails, jetties and bridges to popular tourist destinations.

8.48 In order to continue promoting Malaysia as a preferred tourist destination in this region, the private sector will be encouraged to develop innovative tourism products and services to meet the demand of different market segments as well as develop potential niche markets. For this purpose, the provision of incentives will be considered for the development of special interest products such as eco-tourism, cultural products and MICE. The emphasis will also be on the repackaging of existing attractions and developing new travel and tourism products. Marketing and promotional activities will be tailored to key market segments with a view to increasing greater inbound and domestic travel.

8.49 The tourism industry offers tremendous scope for creativity, innovativeness and entrepreneurship development with wide ranging investment opportunities, including hotels and resorts development as well as provision of a varied range of services and attractions. These opportunities are also expected to encourage greater Bumiputera participation in tourism-related commercial and business activities. SMEs will be encouraged to participate in the expansion of existing and new businesses such as food catering, recreation services and handicraft product development. In terms of financing, the TIF and the Special Fund will be expanded to provide for alternative sources of funding to potential investors. Special investment packages will be developed to enhance Bumiputera participation in the expanding travel and tour activities dealing with inbound tourists as well as setting up tourist operations in new and emerging markets such as West Asia, China and India.

Human Resource Development

8.50 To meet the increasing demand for trained and experienced human resource at the managerial, supervisory and technical levels, particularly for the hotel and travel subsectors, provision of relevant training programmes will be further emphasised. The NTHRDC together with the MLVK and the Ministry of Higher Education as well as the Tourism Accreditation Board will coordinate technical and vocational, as well as management and supervisory training and liaise with the private sector to ensure output is in line with the growing sophistication of the tourism industry. In this regard, the existing NOSS will be constantly reviewed by the MLVK to ensure relevancy of skill standards to meet the more stringent demands of the tourism industry. Students in schools will also be given exposure on career opportunities in the tourism industry, while institutions of higher education will be encouraged to offer a wider range of tourism-related courses. Tour guides will be continuously retrained, while new ones given intensive training to ensure quality service. Tourist guides will also be encouraged to learn foreign languages, particularly Arabic, German, Japanese and Spanish.

Strategic Alliances and Smart Partnerships

8.51 In order to further promote the tourism sector, the Government will continue to facilitate the forging of global and regional strategic alliances and smart partnerships among governments, tourist organisations and the industry.

These partnerships will create goodwill for Malaysia and foster greater cooperation with other countries, thus further propagating inter-travel for meetings and conferences. Tour and travel services, transport services providers, MICE organisations, hoteliers and operators of tourist destinations will be encouraged to collaborate for greater convenience and comfort of travellers. In addition, with the progressive liberalisation of tourism services under the ASEAN Framework Agreement on Services, vigorous efforts will be undertaken to promote Malaysia as a lead-on and add-on destination within ASEAN as well as the Asia Pacific region.

Accessibility

8.52 During the Plan period, efforts will be intensified to improve accessibility to and within the country. Towards this end, services at entry points, transportation links between gateway cities and resorts as well as access to communications services, particularly Internet services will be enhanced. Air, surface and sea transportation infrastructure and facilities will also be upgraded to facilitate the growth of tourism industry. Improvements will continue to be made to facilitate hassle-free travel, including online visa applications and provision of multiple entry permits.

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8.53 Flight frequencies and capacities between Malaysia and specific markets will be increased to facilitate inbound travellers. Other measures include code sharing operations with other airlines, as well as encouraging more international airlines to operate in the country. The liberalisation of air services in the ASEAN region in 2008 will allow greater access to ASEAN capitals, thus promoting regional travel. The Kota Kinabalu Airport will be expanded to establish the nation's second LCC hub after KLIA.

Research and Planning

8.54 Efforts to ensure sustainable tourism development will include the utilisation of a more integrated approach in project planning and implementation. This will entail continuous research and impact evaluation of tourism-related programmes and projects. Market intelligence in collaboration with the private sector will be continuously undertaken to analyse tourist profiles and changing trends in global and domestic travel. In addition, the Tourism Satellite Account (TSA) will be fully developed. The TSA mechanism will, among others, be able to quantify the contribution of the tourism sector to economic growth, incomes and investments in order to support subsequent policy making and readjustment of strategies and programmes for the tourism industry.

Safety and Security

8.55 As comfort, safety and security are an integral part of the travel and tourism industry, increased efforts will be undertaken to ensure Malaysia is a safe and pleasant place to visit. The tourist police force will be strengthened

to provide increased security to tourists. At the same time, the country will capitalise on its political stability and ambience of diverse racial harmony to reinforce the country's image as a tourist-friendly destination.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

8.56 The Ministry of Tourism will continue to take the lead in developing the tourism industry through marketing and promoting the country's diverse tourism products and services. These efforts will be supported by other implementing entities including Tourism Malaysia, state governments and local authorities. In terms of accessibility, the Ministry of Transport will continue to support the growth of the tourism industry by ensuring more efficient transport systems and infrastructure. The Ministry of Home Affairs and the Immigration Department will facilitate travel to and from all gateways in the country.

8.57 The development allocation for the tourism industry under the Ninth Plan period amounting to RM1.8 billion is as shown in *Table 8-3*. The Government will focus on the provision of adequate infrastructure, which will be largely for the purpose of upgrading and maintenance of tourism-related facilities and amenities.

TABLE 8-3

DEVELOPMENT EXPENDITURE AND ALLOCATION FOR TOURISM, 2001-2010 (RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|---|----------------------------|---------------------------|
| Environmental Protection and Beautification | 243.1 | 652.1 |
| Facilities, Infrastructure & Maintenance | 459.4 | 1,034.8 |
| Accommodation | 31.7 | 115.0 |
| Others | 49.4 | 46.0 |
| Total | 783.6 | 1,847.9 |

Source: Economic Planning Unit

V. CONCLUSION

8.58 The Eighth Plan period saw the development of a more robust tourism industry, contributing to greater foreign exchange earnings as well as generating new businesses and employment opportunities. During the Ninth Plan, the tourism industry will continue to be a major source of new growth and a key

driver in the development of the services sector. In order to accelerate the momentum of the tourism industry to realise its full potential, Malaysia will continue to enhance its position as an international tourist destination and promote the domestic travel and tour industry. The focus will also be on improving accessibility through improved air and surface transport including hassle-free travel with online visa applications and multiple entry permits. Private sector participation in the development of innovative products and services, will be further enhanced through improved incentives and adequate funding. The special initiative Visit Malaysia Year 2007, will create a wide range of opportunities for investment, entrepreneurship and job creation.

8.59 Sustainable tourism development will be given priority as the preservation and protection of natural habitats and environmental concerns become increasingly important, especially in the context of responsible tourism. Close collaboration among Federal and state governments as well as the public and private sectors will continue to be strengthened in the formulation and implementation of tourism strategies and programmes.



THRIVING DISTRIBUTIVE TRADE

9

I. INTRODUCTION

9.01 The Eighth Plan period proved to be challenging for the Malaysian distributive trade sector. Despite the economic slowdown in the early years of the Plan period, the sector recorded positive growth largely attributed to the increase in private consumption arising from higher disposable incomes and growth in consumption credit. Increased urbanisation, changing demographic patterns and growing affluence of the populace also contributed to the continued expansion and emergence of new developments in the modes of distribution. Increased efforts were undertaken to strengthen the appropriate policy and legal framework in order to provide for an efficient and dynamic domestic trade sector.

9.02 During the Ninth Plan period, sustained economic growth, higher incomes as well as new entrepreneurial opportunities will provide the impetus for a more thriving distributive trade sector. Population size, urbanisation, evolving lifestyles and consumption patterns are expected to increasingly impact upon the next wave of structural changes in domestic wholesale and retail activities. As distributive trade generates a multitude of investment and employment opportunities across many sectors, it will provide for more extensive inter- and intra-sectoral linkages. Alongside new developments, traditional and smaller businesses will be encouraged to upgrade and adopt modern business practices, in order to expedite their integration into the changing distributive trade systems. Measures will continue to be undertaken to ensure that the sector grows in an efficient and competitive manner in line with the principles of fair trade and competition.

II. PROGRESS, 2001-2005

9.03 The distributive trade sector, comprising wholesale and retail trade, expanded at an average annual rate of 4.3 per cent despite the slowdown in the economy and weak external environment during the first half of the Plan

period. By the end of 2005, the contribution of the distributive trade sector to gross domestic product (GDP) increased from RM26.8 billion in 2000 to RM33.1 billion. Employment in the sector grew at an average rate of 3.7 per cent per annum from 1.1 million jobs in 2000 to 1.3 million jobs in 2005. The expansion of the distributive trade sector was contributed, among others, by the supportive fiscal and monetary policies of the Government.

Developments in Distributive Trade

9.04 The distributive trade sector recorded an average annual growth rate of 5.2 per cent in total sales from RM159.6 billion in 2000 to RM205.6 billion in 2005. The wholesale establishments contributed to the bulk of the total sales turnover at 70.2 per cent in 2005. The rise in tourist arrivals also boosted distributive trade as tourist shopping expenditure increased at an average rate of 13.3 per cent per annum from RM4.0 billion in 2000 to RM7.4 billion in 2005.

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9.05 The vibrancy of the distributive trade, among others, was reflected by the changing structure of the sector as evident by the increasing number of shopping complexes, hypermarkets, department stores, supermarkets and specialty stores as well as the introduction of new retail concepts. In response to evolving retail and marketing concepts, arising largely from changes in demographics, lifestyles and the competitive environment, shopping, leisure, entertainment and cultural activities are being increasingly integrated under one roof and/or at strategic locations. The significant increase in domestic as well as foreign tourist shopper traffic also raised the demand for retail space. The number of shopping complexes increased from 392 in 2000 to 550 in 2005, as shown in *Table 9-1*. The number of shop units, being an integral feature of most housing developments as well as new and established townships, expanded at an average annual rate of 4.2 per cent.

9.06 The increasing presence of hypermarkets, particularly in the cities and bigger towns, reflected the changing lifestyle of shoppers and preference for the convenience, comfort, product variety and long opening hours offered by these largely one-stop shopping establishments. The emergence of hypermarkets, with integrated wholesale and retail functions, spawned off new activities and services. Hypermarkets contributed to increased inter- and intra-sectoral linkages as well as introduced more comprehensive and innovative supply chain management, incorporating international networks, outsourcing and branding, thus creating more avenues for local retailers to develop and modernise their businesses.

TABLE 9-1

SELECTED PERFORMANCE INDICATORS, 2000-2005

| <i>Indicator</i> | <i>2000</i> | <i>2005</i> | <i>Average Annual Growth Rate (%) 2001-2005</i> |
|-------------------------|-------------|-------------|---|
| Shopping Complexes | 392 | 550 | 7.0 |
| Shop Units ('000) | 242 | 297 | 4.2 |
| Hypermarkets | 22 | 81 | 29.8 |
| Foreign | 16 | 68 | 33.6 |
| Local | 6 | 13 | 16.7 |
| Franchisors | 90 | 204 | 17.8 |
| Franchisees | 2,159 | 2,584 | 3.7 |
| Direct Selling Licences | 712 | 569 | -4.4 |
| e-Commerce (RM billion) | 11.1* | 36.7 | 81.8** |
| Business to Business | 7.7* | 29.3 | 95.1** |
| Business to Consumer | 3.4* | 7.4 | 47.5** |

Source: Ministry of Domestic Trade and Consumer Affairs, Ministry of Entrepreneur and Cooperative Development and International Data Corporation

Notes: * Year 2003

**Growth 2004-2005

9.07 To leverage on the extensive networks of foreign hypermarkets, measures were initiated to create more business opportunities for smaller domestic producers and suppliers. In this regard, specific programmes were implemented by agencies such as the Federal Agricultural Marketing Authority (FAMA) and the Federal Land Development Authority (FELDA) as well as co-operatives in collaboration with hypermarkets to market agricultural produce, handicrafts and products of small and medium enterprises (SMEs). Other initiatives included the promotion and marketing of local products overseas, through globally-linked hypermarkets with a view to increase market share and expand exports.

9.08 Another popular mode of retail business, especially for agricultural products, was the market or *pasar* set-ups, namely, *pasar basah*, *pasar malam* and *pasar tani*. These traditional markets continued to enjoy sizeable catchment of the local population, providing self-employment and income-earning opportunities for small traders and budding entrepreneurs.

Franchising

9.09 Increased emphasis was given to the promotion of the franchise industry, as it presented viable opportunities for entrepreneurs to participate in structured and well-established businesses with relatively lower risks and a greater probability of success. The brand name, standard operational procedures, systematic training and support from the franchisors were among the critical factors that contributed to widespread franchised businesses, especially in the food, cosmetics and consumer goods segments. While the franchise industry nurtured many new and existing businesses for homegrown products and services, there remained vast untapped opportunities. During the Plan period, the number of franchisors increased from 90 in 2000 to 204 in 2005, of which 49 were Bumiputera.

9.10 To enhance coordination in the management of franchise development as well as increase participation, particularly of Bumiputera entrepreneurs, *Perbadanan Nasional Berhad* (PNS) was given the mandate in June 2004 to be the sole agency implementing the Franchise Development Programme (FDP). Among the activities implemented under the FDP were product development, franchise investment and financing schemes, education and training, promotion and marketing as well as research and development to develop homegrown franchise systems.

Direct Selling

9.11 Direct selling activities continued to register an increase in sales turnover from RM4.5 billion in 2000 to RM5.3 billion in 2005. There was a significant decline in the number of licences from 712 in 2000 to 385 in 2001, due to the stringent status verification exercise as well as action taken against operators of get-rich-quick schemes. The expansion of the industry from 2002 onwards was largely due to enforcement measures undertaken to promote an orderly development of direct selling as well as the confidence accorded by the Direct Sales (Schemes and Conduct) Regulation 2001 to prevent unethical trade practices. To further expand business opportunities, local direct sales companies also ventured abroad into markets such as Brunei Darussalam, Indonesia, Thailand and the Middle East, exporting herbal and craft products, cosmetics, food products and footwear.

e-Commerce

9.12 The sale of goods and services over the Internet or e-commerce, grew significantly at an average annual rate of 81.8 per cent from RM11.1 billion in 2003 to RM36.7 billion in 2005. This was mainly attributed to the rise in electronic transactions in the business to business (B2B) market from RM7.7 billion to RM29.3 billion, in tandem with the increased acceptance of Internet

commerce. During the same period, the business to consumer (B2C) e-commerce spending registered an increase from RM3.4 billion to RM7.4 billion, as more companies and businesses offered their services direct to consumers through online transactions.

Bumiputera Participation

9.13 During the Plan period, measures undertaken to increase the participation of Bumiputera entrepreneurs in distributive trade focused on a number of aspects, namely, business development, financing, entrepreneurial training, marketing and promotion as well as providing assistance to acquire business premises at strategic locations. The *Perbadanan Usahawan Nasional Berhad* (PUNB) expanded the *Projek Usahawan Bumiputera Dalam Bidang Peruncitan* (PROSPER) to build a pool of viable Bumiputera SMEs in the retail sector.

Strengthening Linkages with Other Sectors

9.14 During the Plan period, the development in transport and communications, agriculture, manufacturing and tourism sectors strengthened linkages with the distributive trade sector, contributing to enhanced activities along supply chains and widening the size and scope of sales and distribution. The increase in direct local sourcing of products through contract manufacturing and farming contributed to the reduction in supply and demand imbalances as well as generated higher levels of production and distribution of goods and services. The promotion of tourism further boosted developments in retail activities, especially in providing the wide range of products, emphasising quality, fashion and branding. Linkages with the agriculture sector were strengthened, among others, with the partial implementation of the National Food Terminal (TEMAN) project, which comprised a chain of marketing and distribution facilities ranging from production to distribution and marketing.

Promoting Healthy Competition

9.15 To ensure a more orderly and efficient development of the distributive trade sector, especially in the context of an increasingly globalised and liberalised environment, a Fair Trade Practices Policy was adopted during the Plan period. The regulatory and institutional framework, still in the early stages of formulation, will provide a more conducive environment for healthy competition and one that will contribute towards preventing anti-competitive behaviour and practices as well as abuse of market power.

9.16 The laws and regulations pertaining to intellectual property rights (IPR) were revised to be in conformity with the Trade-Related Aspects of Intellectual Property Rights (TRIPs) Agreement in order to protect interests of producers

as well as encourage innovation and technology transfer. The Intellectual Property Corporation of Malaysia (MyIPO) was established in 2003 to improve the IPR registration, management and protection systems as well as enhance public awareness on the importance of ownership and commercial significance of intellectual property. MyIPO focused on capacity building as there was a shortage of skilled personnel such as patent examiners, intellectual property lawyers and technology evaluators to facilitate IPR development and build a database for public reference and search.

9.17 With regard to copyrights, various measures were undertaken including the formation of the Special Anti-Piracy Task Force to combat piracy and amendments made to the Copyright Act 1987 for more effective enforcement. A Special Task Force Committee to Eradicate Counterfeit Goods was also set up to ensure appropriate protection for owners of trademarks. The Companies Commission of Malaysia was established to consolidate the tasks and responsibilities of the Registrar of Businesses and the Registrar of Companies as well as ensure the orderly development of the corporate and business sector.

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Consumer Education and Protection

9.18 In view of the rise in the sophistication of trade fraud and infringements as well as inflow of unsafe products, increased attention was given to consumer education and protection. The National Consumer Policy was launched in 2002 to empower consumers to be more aware of their rights and interests as well as promote consumerism. A number of structured consumer education and awareness programmes were undertaken at the school and community levels. The Tribunal for Consumer Claims Malaysia continued to provide consumers an alternative avenue to exercise their rights and make claims against suppliers of defective goods and unsatisfactory services.

III. PROSPECTS, 2006-2010

9.19 During the Ninth Plan period, the distributive trade sector is expected to grow at an average rate of 6.8 per cent per annum taking into account the prospects for economic growth, employment and disposable incomes as well as complementarity with other sectors of the economy. Given the social change, urbanisation and the evolving lifestyles of the population, the distributive trade sector will continue to undergo structural changes that will impact upon its future development, especially the traditional forms of businesses. The structural changes are expected to take various forms ranging from the integration and consolidation of businesses to reap economies of scale, extension of linkages along and up the value chain, to the promotion of new concepts in wholesale and retailing activities.

9.20 Recognising the need to have more orderly development and monitoring of the domestic distributive trade sector, efforts will be undertaken to improve the regulatory framework and guidelines. Strategic collaborations and partnerships as well as business networking will be encouraged to make increased inroads in global markets. As consumption and behavioural patterns change, the distributive trade sector will need to vigorously innovate as well as adopt new and improved retailing strategies and concepts to meet changing expectations of consumers. Notwithstanding the impending changes, increased efforts will be undertaken to ensure a more balanced development between the large-scale wholesale and retail activities and the traditional small businesses. The regulation and zone requirements for large-scale establishments will continue to be enforced.

9.21 With the anticipated restructuring, competitiveness and modernisation of the distributive trade sector, the strategic thrusts for the Ninth Plan will be as follows:

- ❑ *enhancing the regulatory framework to promote the development of distributive trade;*
- ❑ *strengthening the modes of distribution to enhance efficiency, productivity and competitiveness;*
- ❑ *accelerating the growth of e-commerce to support modernisation and expansion of the sector;*
- ❑ *increasing the scope and scale of Bumiputera participation to benefit from the growth of the sector; and*
- ❑ *enhancing consumer awareness and education.*

Enhancing Regulatory Framework

9.22 During the Ninth Plan period, to enhance sustained growth in the distributive trade sector, efforts will be intensified to create a more conducive environment for healthy competition and fair trade practices, especially within the context of increasing competition and globalisation. Among others, a Fair Trade Practices Law (FTPL), premised on the Fair Trade Practices Policy, will be formulated and implemented in stages. In terms of institutional support, a Fair Trade Practices Office, a Fair Trade Practices Commission and a Fair Trade Practices Appeal Tribunal will be established in phases. A Malaysian Competition Network will also be formed to provide a platform for deliberations among relevant public and private sector agencies in the formulation of strategies under the FTPL.

Strengthening Distributive Trade

9.23 The distributive trade sector offers many untapped opportunities for new and diverse investments, especially to meet changing demands of a growing population with rising standards of living and growing affluence. During the Ninth Plan, it is expected that more domestic and foreign establishments will increasingly introduce new types of wholesale and retailing concepts. These structural changes are likely to be through more planned location of retailing outlets which are strategically integrated with a varied range of adjoining activities such as leisure, entertainment, recreation and shopping. Such changes represent new opportunities and sources of growth in the distributive trade sector.

9.24 Efforts will be undertaken to strengthen the capacity and capability of local retailers and wholesalers to respond to changes in the general tastes and preferences of consumers. Greater efforts will be given to nurturing homegrown retail chains and brands. Amongst others, a comprehensive database will be established to monitor and evaluate the trends and pending structural changes in the distributive trade sector as well as assess the effectiveness of programmes and projects implemented. This will also enable more accurate information for policy formulation purposes as well as identifying and studying new approaches that are more conducive in the local context before adopting them.

9.25 As part of efforts to inject dynamism into the distributive trade sector, emphasis will be placed on identifying and developing innovative modes of distribution as well as enhancing, in particular, the efficiency of the supply chains. Measures will be undertaken to enhance participation in the domestic and global supply chains with focus on brand development, benchmarking against similar brands, quality improvement, packaging and competitive pricing as well as promotion in multiple markets. With rising competitive pressures, increasing emphasis will be placed on promoting strategic alliances between suppliers and buyers, including foreign hypermarkets, to expand international collaboration and global market presence. Training programmes on the management of modern businesses, especially for SMEs, will be intensified to enable them to undertake and implement new approaches in wholesale and retail activities.

9.26 An important technological innovation that is anticipated to contribute to the better supply chain management will be the gradual deployment of radio frequency identification (RFID) tagging, which allows for improved tracking of merchandise lifecycles and certifying product authenticity. RFID applications can cover a wide array of activities throughout manufacturing and distribution processes which would provide detailed information to improve quality, timeliness, efficiency and delivery as well as reduce overall costs.

9.27 *Direct Selling.* The Direct Sales Act 1993 will be reviewed to address the changing needs of the industry and enhance the regulatory mechanisms. Direct selling companies will be encouraged to develop and promote their products through continuous quality improvements, innovative packaging, branding and increasing exports. Towards this end, training programmes for direct sales participants will be reinforced to increase marketing, communications and management skills as well as instil good business ethics. A total of 100 new Bumiputera direct selling companies is targeted for development under the Ninth Plan. In addition, local direct selling companies will be encouraged to expand their operations overseas, especially in the Asia Pacific region.

9.28 *Franchising.* During the Plan period, franchise development programmes will be further strengthened to provide for more effective franchisor-franchisee matching, product development and training. To enable more entrepreneurs to participate, increased emphasis will be given to identifying and promoting franchises that require a relatively lower capital base. PNS will devise new approaches to promote local franchise product development. Moreover, existing financing schemes will also be reviewed and procedures simplified to improve access to funding. In addition, co-operatives will be encouraged to leverage on their extensive networks and large membership base to develop franchises. An integrated database on franchising will be established to provide for better planning, monitoring and collaboration among domestic and foreign franchise entrepreneurs. The more successful homegrown franchisors will be encouraged to expand overseas and seize opportunities presented by regional and multilateral arrangements such as the ASEAN Free Trade Areas (AFTA) and Free Trade Agreements (FTAs).

9.29 *Strengthening SMEs in Distributive Trade.* As more than 85 per cent of SMEs in the country are involved in distributive trade activities, further efforts will be undertaken to promote the development of supporting infrastructure such as provision of business premises and related services and strengthening managerial and technical skills. The Government will continue to collaborate with the industry to formulate effective measures targeted to enhance inter-firm linkages and market access, including the utilisation of information and communications technology to raise productivity and efficiency levels along and up the supply chain. Given the rapid expansion of the large-scale wholesale and retail enterprises, the smaller businesses will be accorded greater attention. SMEs in particular will be given assistance to provide a wider range of innovative products and services as well as enhance their capacity to operate in strategically located up-market shopping complexes and popular tourist destinations. They will also be encouraged to increase domestic market share and venture into the export market. Traditional businesses will be encouraged to capitalise on their specialised market knowledge to serve niche markets and offer personalised

services. Access to information and market intelligence will be improved to facilitate changes in the merchandise mix in response to changing consumer trends.

9.30 For smaller traditional enterprises, the Government will increase efforts to establish more shopping arcades, petty trade centres, food courts as well as *pasar tani* and *pasar malam* in strategic locations. Emphasis will also be placed on improving access of petty traders to supporting facilities so as to assist them in enhancing and developing their businesses and promoting self-employment.

9.31 *Intellectual Property Rights.* Measures will continue to be undertaken during the Plan period to ensure a well regulated and efficient IPR management and protection system, in order to support distributive trade in terms of product innovation and branding. MyIPO will expedite the registration process of trademarks and patents to protect the interests of local and foreign companies to fully reap the potential benefits. Towards this end, the capacity and expertise of MyIPO will be further expanded and strengthened. Greater emphasis will be accorded to increase awareness on IPR, its importance as a source of wealth and intellectual capital as well as the commercial benefits of IPR protection.

9.32 To inculcate ethical business practices, eradicate trade malpractices and protect consumer interests, the enforcement agencies will continue to be strengthened in terms of expansion in personnel and improvements in operational skills. Increased focus will be on the prevention of counterfeit and copyright infringement offences. The capacity for intelligence gathering, surveillance, investigation and prosecution will also be upgraded to meet the increasing challenges encountered in enforcement activities.

Accelerating the Use of e-Commerce

9.33 During the Ninth Plan period, the value of e-commerce transactions is expected to grow at an average annual rate of 27 per cent to reach RM155 billion in 2010. To strengthen the legal framework and further increase public confidence in e-commerce transactions as well as reduce online fraud, the Electronic Transaction Bill, Electronic Government Activities Bill and the Personal Data Protection Bill, will be enacted. The private sector will need to assume a major role in expediting the growth of e-commerce. In line with this objective, initiatives to be spearheaded by wholesalers and retailers will include redefining the value chain and restructuring the internal functions and processes in order to effectively participate in and benefit from e-commerce. To improve the process of information transfer and virtual transactions among trading parties, businesses will be encouraged to adopt global standards in item identification, data capture methods and messaging.

Increasing Bumiputera Participation

9.34 The PROSPER programme will be expanded to nurture 1,250 new entrepreneurs. In this regard, PUNB will collaborate with key domestic and global players to expand existing operations as well as develop new chains of retail outlets including concept shops, mini-markets, supermarkets and specialty shops. The scope and coverage of PROSPER will be widened to include wholesale businesses. This will provide an additional avenue to assist Bumiputera small traders and contractors to source their supplies more efficiently. Increasing emphasis will need to be placed on extending existing linkages along the supply chain, reaping economies of scale, augmenting efficiency, emphasising market intelligence and quality as well as upgrading professional, supervisory and financial management skills.

9.35 Bumiputera professionals will also be encouraged to participate in profession-based retail outlets such as clinics, pharmacies and optical shops. PNS, as the focal agency for franchising, is expected to develop more than 50 new local franchise products and services as well as acquire selected franchises from abroad designated for Bumiputera participation and ownership. In addition, efforts will be undertaken to enhance the role of co-operatives in the development of the distributive trade sector. In this regard, co-operatives will be encouraged to widen their scope of operations and promote local products, more extensively through strategic collaboration with established marketeers.

9.36 During the Plan period, more focused training programmes, especially with regard to the management of modern retail and wholesale businesses, will be provided to enable Bumiputera entrepreneurs to face emerging challenges arising from increasing competition. Existing courses will be improved and new ones introduced at relevant educational institutions and government agencies such as *Majlis Amanah Rakyat (MARA)* and *Institut Keusahawanan Negara (INSKEN)*. Efforts will be intensified to assist Bumiputera entrepreneurs to move up the value chain and market high-end retail products requiring innovativeness, creativity and talent. Among others, the arts and crafts industries will be further modernised and upgraded to include research and design activities in order to create new demand and expand into domestic and overseas markets.

Enhancing Consumer Awareness and Education

9.37 To enhance consumer awareness and protection, consumer education programmes will be expanded to a larger segment of consumers including school children through campaigns and workshops. Business ethics education in schools and institutions of higher education will also be promoted to inculcate good ethics and responsibilities in doing business. In addition, the Smart Partnership programme will be intensified to enhance the role of non-government

organisations and voluntary groups in educating the general public on consumer-related matters. The conferment of awards such as Best Consumer Organisation, Best Consumer Club and *Tokoh Pengguna* will be continued to accord due recognition to partners in consumer education and protection. The Consumer Protection Act 1999 will be reviewed to enhance consumer welfare. The scope will be extended to cover areas such as e-commerce, health and risk assessment of products and services including genetically modified organisms. The revised law will ensure adequate provisions for consumer complaints and recourse to be settled expeditiously at a reasonable cost.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

9.38 The overall development of the distributive trade sector will continue to be spearheaded by the Ministry of Domestic Trade and Consumer Affairs. The Ministry of Entrepreneur and Cooperative Development will be the lead agency to increase Bumiputera participation in the sector as well as cooperate with PNS to promote the expansion of the franchise industry. INSKEN will provide various courses to entrepreneurs, especially Bumiputera, in the development and management of modern retail and wholesale businesses.

9.39 The Ninth Plan development allocation for the distributive trade sector is as shown in *Table 9-2*. It is mainly to complement private sector efforts in the provision of business premises, financing for the development of new and existing retail enterprises, as well as training and consultancy services.

TABLE 9-2
**DEVELOPMENT EXPENDITURE AND ALLOCATION
FOR DISTRIBUTIVE TRADE, 2001-2010**
(RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|---------------------------------|----------------------------|---------------------------|
| Funds for Distributive Trade | 300.0 | 450.0 |
| Business Premises | 408.0 | 1,372.4 |
| Modernisation of Trade Services | 44.1 | 27.0 |
| Training and Consultancy | 46.4 | 116.0 |
| Total | 798.5 | 1,965.4 |

Source: Economic Planning Unit

V. CONCLUSION

9.40 During the Eighth Plan period, the growth of the distributive trade sector was supported by efforts to stimulate domestic demand and the expansion of new distribution modes. In the Ninth Plan period, the strategy to develop a thriving distributive trade sector will be to focus on progressive modernisation, adoption of innovative approaches as well as increasing overall efficiency and productivity, especially in the context of more competitive globalised environment. While existing regulations will be strengthened, a comprehensive fair trade policy and legal framework will be formulated to provide a more conducive environment for market competition, promote the entry and participation of small enterprises as well as encourage good business practices and enhance consumer welfare.



STREAMLINING PRIVATIZATION

10

I. INTRODUCTION

10.01 The Government continued to refine and improve the implementation of the privatization programme during the Eighth Plan period. Existing procedures were streamlined and new measures introduced to further enhance its effectiveness. In addition, some concession agreements were reviewed by mutual consent, to provide a more equitable distribution of costs and benefits to the various stakeholders. To sustain the effectiveness of the programme in promoting the participation of Bumiputera entrepreneurs, stricter but fair conditions were imposed on ownership and changes in the equity structure of privatized entities. At the same time, the build-lease-maintain-transfer approach was introduced in the implementation of some major projects.

10.02 In the Ninth Plan period, the implementation process will be further streamlined, including adopting new approaches and mechanisms to enhance the efficacy of the privatization programme. The programme will continue to support the private sector-led growth strategy as well as increase the participation of Bumiputera entrepreneurs in the economy. To inculcate greater professionalism on the part of concessionaires in the implementation of privatized projects, standards will be put in place, performance indicators instituted and the reward and penalty system for tariff review introduced. In this regard, the regulatory framework will be further strengthened. The use of private finance initiatives (PFI) will facilitate greater participation of the private sector in the areas of management, operations and maintenance to improve the delivery of infrastructure facilities and public services.

II. PROGRESS, 2001-2005

10.03 During the Plan period, 35 projects were approved for implementation, of which 10 were existing entities and services, and 25 new projects. Of the total, 15 were in the construction sector and eight in the electricity, gas and water sector, as shown in *Table 10-1*. The completed projects included the New Pantai Expressway (NPE), Kajang Outer Ring Road (SILK), Shah Alam-

Kuang Expressway (Guthrie Corridor) and Western Kuala Lumpur Traffic Dispersal Scheme (SPRINT) Package C. Among the projects that are in various stages of implementation included the Butterworth Outer Ring Road, Kuala Lumpur-Putrajaya Expressway, Duta-Ulu Klang Expressway (DUKE) and Senai-Desaru-Pasir Gudang Expressway.

TABLE 10-1
**NUMBER OF PRIVATIZED PROJECTS BY SECTOR
 AND MODE, 2001-2005**

| Sector | Mode of Privatization (Number of Projects) | | | | | | | | | | % of Total |
|-------------------------------------|--|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|--------------|
| | SOE | BOT | BLT | SOA | BOO | LD | LIST | LOA | MC | Total | |
| Agriculture & Forestry | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5.7 |
| Construction | 0 | 3 | 2 | 0 | 0 | 10 | 0 | 0 | 0 | 15 | 42.9 |
| Electricity, Gas & Water | 0 | 1 | 0 | 0 | 5 | 0 | 2 | 0 | 0 | 8 | 22.9 |
| Transport, Storage & Communications | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 5.7 |
| Government Services | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 5.7 |
| Other Services | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 17.1 |
| Total | 1 | 6 | 2 | 1 | 5 | 10 | 3 | 1 | 6 | 35 | 100.0 |

Source: Economic Planning Unit

Notes: SOE = Sale of Equity LD = Land Development
 BOT = Build-Operate-Transfer LIST = Listing
 BLT = Build-Lease-Transfer LOA = Lease of Assets
 SOA = Sale of Assets MC = Management Contract
 BOO = Build-Operate-Own

Benefits of Privatization

10.04 *Efficiency and Productivity.* The performance indicators of the privatized entities continued to record an improvement during the Plan period. This can be attributed to better utilisation of resources, closer attention to consumer demand, technological change and lower production costs. Privatization also led to speedy delivery of facilities, such as in the development of the Federal Government offices in Putrajaya through the build-lease-transfer mode.

10.05 *Benefits to the Public.* The construction of toll highways contributed to the comfort and safety of road users. During the Plan period, 16 privatized highway projects were undertaken to construct an additional 604.5 kilometres of the national road network. These projects involved capital expenditure of RM18.0 billion, as shown in *Table 10-2*. Four projects totalling 87.8 kilometres were completed while the remaining projects are under construction or negotiation.

The completion of the NPE provided an alternative route to the Old Klang Road while the SILK offered better linkages between the southern and western part of Wilayah Persekutuan Kuala Lumpur. In addition, the construction of the road tunnel as part of the Stormwater Management and Road Tunnel project as well as the Kuala Lumpur-Putrajaya Expressway were undertaken to improve the south-bound traffic from Jalan Tun Razak to the Kuala Lumpur-Seremban Highway.

TABLE 10-2
**IMPLEMENTATION OF PRIVATIZED ROAD
PROJECTS, 2001-2005**

| <i>Project</i> | <i>Length (km)</i> | <i>Cost (RM million)</i> |
|--|------------------------|------------------------------|
| Completed | | |
| New Pantai Expressway | 19.7 | 1,099.3 |
| Kajang Outer Ring Road (SILK) | 37.1 | 1,189.0 |
| Shah Alam-Kuang Expressway (Guthrie Corridor) | 25.0 | 785.0 |
| Western Kuala Lumpur Traffic Dispersal Scheme (SPRINT) Package C | 6.0 | 420.6 |
| Sub-total | 87.8 | 3,493.9 |
| Under Construction | | |
| Stormwater Management and Road Tunnel (SMART) | 6.0 | 588.0 |
| Butterworth Outer Ring Road | 19.0 | 327.0 |
| Kuala Lumpur-Putrajaya Expressway | 26.0 | 1,697.3 |
| Duta-Ulu Klang Expressway (DUKE) | 18.0 | 1,166.3 |
| Senai-Desaru-Pasir Gudang Expressway | 77.2 | 1,675.2 |
| Sub-total | 146.2 | 5,453.8 |
| Under Negotiation | | |
| Penang Outer Ring Road | 17.0 | 1,057.0 |
| Kajang-Seremban Highway | 40.0 | 1,280.0 |
| West Coast Highway | 215.2 | 3,015.0 |
| Kuala Lumpur-Kuala Selangor Expressway | 33.1 | 750.7 |
| Kemuning-Shah Alam Expressway | 14.7 | 553.1 |
| South Klang Valley Expressway | 42.0 | 1,470.7 |
| Eastern Dispersal Link (EDL) | 8.5 | 888.0 |
| Sub-total | 370.5 | 9,014.5 |
| Total | 604.5 | 17,962.2 |

Source: Economic Planning Unit

10.06 Most of the road projects were implemented through the build-operate-transfer method, which requires the private sector to construct, operate and maintain the facility using its own funds and in return, collect toll from road

users during the concession period. At the end of the concession period, the facilities will be transferred at no cost to the Government. During the Plan period, the Jalan Kuching, Jalan Pahang and Jalan Cheras toll roads were handed over to the Government and the toll charges removed.

10.07 The privatization of water supply services in Selangor was undertaken to meet the high capital expenditure required in building new dams, reservoirs and water treatment plants as well as replacing old pipes to cater to the increase in demand for treated water. In this regard, a total of RM3.4 billion of capital expenditure was committed for capital works. In addition, as part of the efforts to improve the efficiency of water distribution to consumers and reduce the loss of treated water, the Government provided a sum of RM500 million to replace old pipes and install new meters in Selangor, Kuala Lumpur and Putrajaya.

10.08 The management and operation of the KL Sentral station was privatized to improve passenger interchange service and facilities. The station was designated as a city terminal and an international gateway serving several rail operators such as *Keretapi Tanah Melayu Berhad*, *Projek Usahasama Transit Ringan Automatik Sdn. Bhd.* (PUTRA) and the Express Rail Link (ERL) and finally linking it with the Kuala Lumpur International Airport (KLIA).

10.09 *Gains to Government.* During the Plan period, the Government continued to benefit from the privatization programme in terms of savings in capital expenditure amounting to RM28.6 billion, of which 81.5 per cent was from the electricity, gas and water sector, followed by the construction sector at RM3.7 billion or 12.8 per cent. Apart from having the facilities provided earlier, the savings of public funds enabled the Government to reallocate its limited resources to other sectors of the economy.

10.10 The Government also benefited in terms of proceeds from the concessionaires through the sale of assets and equity, generating RM21.7 million and RM40.5 million, respectively, as shown in *Table 10-3*. A total of 6,249 employees was transferred to the private sector, reducing the government administrative burden as well as generating savings in operating expenditure. During the Plan period, some concession agreements for support services were extended based on their performance and benefits generated.

10.11 The implementation of the privatization programme was further strengthened through the introduction of a standard format for privatization agreements and the renegotiation of several concession agreements, with mutual consent, to improve their terms and conditions. Among the new elements introduced was the sharing of revenue with the Government by the concessionaire upon achieving an agreed threshold, replacing automatic with performance-based tariff adjustments, abolishing exclusivity in the provision of service as well as the tightening of quality and service standards.

TABLE 10-3

**PROCEEDS, SAVINGS AND REDUCTION IN
PUBLIC SECTOR EMPLOYEES, 1983-2005**

| <i>Item</i> | <i>2001-2005</i> | <i>1983-2005</i> |
|--|------------------|------------------|
| Proceeds (RM million) | | |
| Sale of Assets | 21.7 | 1,536.5 |
| Sale of Equity | 40.5 | 4,940.2 |
| Savings (RM million) | | |
| Capital Expenditure ¹ | 28,603.9 | 153,960.8 |
| Operating Expenditure | 126.9 | 7,747.1 |
| Number of Public Sector Employees Transferred | 6,249 | 113,220 |

Source: Economic Planning Unit

Note: ¹ Based on estimated project cost.

10.12 During the Plan period, the Government took over certain privatized projects that are strategic in nature which were adversely affected by the economic slowdown. This included the operations and management of light rail services operated by *Sistem Transit Aliran Ringan Sdn. Bhd.* (STAR) and PUTRA. This is to enable the public to continue to enjoy uninterrupted transportation services.

10.13 To safeguard and protect the Government's interest as well as other stakeholders, the provision of Government guarantee and the level of indebtedness was discontinued and step-in rights as well as expropriation, which allowed for Government intervention under stipulated conditions, was introduced. As a measure to maintain a sustainable Government land bank for future use, land development projects using the land swap mode in the Klang Valley and the cities of Ipoh and Johor Bahru as well as Pulau Pinang, was discouraged and only undertaken on a very selective basis.

Bumiputera Participation

10.14 Privatization continued to be used as a vehicle to enhance Bumiputera participation in the corporate sector, particularly through equity participation. Measures were undertaken to ensure that only capable entrepreneurs were selected to undertake construction works and participate in vendor development programmes. In this regard, provisions to enhance wider participation of Bumiputera entrepreneurs were included in privatization agreements and steps were undertaken to ensure that these provisions were met by the concessionaires.

10.15 *Contract Works.* Opportunities continued to be given to Bumiputera entrepreneurs to participate in commercial and industrial activities through contract

works. To ensure wider distribution of economic benefits, the requirement to award contract works to Bumiputera entrepreneurs was increased to at least 60 per cent. In nine road projects implemented during the Plan period, 27 Bumiputera contractors were awarded contracts valued at RM4,398.4 million, representing 66.7 per cent of the total contracts value.

10.16 *Vendor Development.* The vendor development programme, which is an integral component of privatization, was instrumental in promoting wider linkages between the small and medium enterprises (SMEs), in particular Bumiputera entrepreneurs, and the larger companies. It provided better access and opportunities to SMEs for the supply of products, parts and components as well as operations and maintenance.

10.17 *Equity Ownership and Control.* The policy that requires at least 30 per cent equity participation of Bumiputera entrepreneurs in privatized projects continued to be rigorously implemented. Based on the overall equity ownership of 35 companies approved to implement privatized projects during the Plan period, Bumiputera had a controlling interest in 24 companies. However, in terms of par value of the shares, Bumiputera owned only 17.2 per cent of the equity, as shown in *Table 10-4*. This was largely due to the higher level of the paid-up capital held by the Government in some of these companies.

TABLE 10-4

**EQUITY OWNERSHIP OF PRIVATIZED ENTITIES
UPON PRIVATIZATION, 2001-2005¹**

| <i>Equity Ownership</i> | <i>Par Value</i> | |
|-------------------------|-------------------|-------------------|
| | <i>RM million</i> | <i>% of Total</i> |
| Government | 309.3 | 74.7 |
| Bumiputera | 71.3 | 17.2 |
| Non-Bumiputera | 21.4 | 5.2 |
| Foreign | 12.1 | 2.9 |
| Total | 414.1 | 100.0 |

Source: Economic Planning Unit

Note: ¹ Based on 35 projects approved.

10.18 Bumiputera equity ownership reflected an increase from 32.7 per cent upon privatization to 51.7 per cent at the end of 2005, as shown in *Table 10-5*. In absolute terms, Bumiputera ownership of the share capital at par value increased from RM5.5 billion upon privatization to RM14.9 billion in 2005.

TABLE 10-5

EQUITY OWNERSHIP OF PRIVATIZED ENTITIES¹

| Equity Ownership | Upon Privatization | | December 2005 | |
|------------------|--------------------|--------------|-----------------|--------------|
| | Par Value | | Par Value | |
| | RM million | % of Total | RM million | % of Total |
| Government | 8,584.4 | 50.7 | 9,013.8 | 31.2 |
| Bumiputera | 5,535.6 | 32.7 | 14,901.5 | 51.7 |
| Non-Bumiputera | 1,510.5 | 8.9 | 2,573.0 | 8.9 |
| Foreign | 1,303.4 | 7.7 | 2,368.5 | 8.2 |
| Total | 16,933.9 | 100.0 | 28,856.8 | 100.0 |

Source: Economic Planning Unit

Note: ¹ Privatized projects processed by the Economic Planning Unit.

III. PROSPECTS, 2006-2010

10.19 During the Ninth Plan period, the implementation of the privatization programme will be further streamlined. The maintenance of facilities will be included in the concession agreements of privatized infrastructure projects approved during the period. The PFI will be introduced in the implementation of privatized projects, with output specifications and key performance indicators (KPIs) clearly stipulated. The performance of the privatized entities will be regularly evaluated and audited to ensure that the projects meet the standards set and adhere to the KPIs. The strategies for privatization during the Plan period will be as follows:

- strengthening approval procedures;*
- emphasising performance standards;*
- streamlining the implementation process;*
- enhancing viability through risk distribution;*
- strengthening the institutional and regulatory framework; and*
- increasing Bumiputera participation.*

Strengthening the Approval Procedures

10.20 Efforts will continue to be undertaken to strengthen approval procedures, including the review of current practices and requirements, strengthening the legal framework and administrative procedures as well as improving the standard

format for terms and conditions of privatization agreements to protect the public and national interest. The selection of concessionaires will be through a bidding process and the projects to be implemented will be Government-initiated, based on national priorities and strategies to ensure greater multiplier effects and upgrade the quality of services. In addition, potential concessionaires will be assessed on their ability to undertake the project and the delivery of services in terms of efficiency, quality as well as sustainability.

Emphasising Performance Standards

10.21 Measures to enhance the privatization programme to increase efficiency as well as financial and operational benefits will include clearly defined output specifications of the services to be provided. A performance-based delivery system will be developed to ensure that services delivered are in accordance with the performance standards set by the Government. KPIs will be made compulsory in all privatized projects to ensure that concessionaires perform their responsibilities effectively. In this regard, tariff charges and revisions will be subjected to a reward and penalty system, where payment for services will be linked to performance with deductions imposed when service levels are not met. This system will thus serve as an incentive to the concessionaires to deliver services to the requisite standard over the life term of the project to ensure full recovery of the capital expenditure.

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Streamlining the Implementation Process

10.22 The PFI will be introduced in implementing privatization projects during the Plan period. The PFI involves the transfer to the private sector the responsibility to finance and manage a package of capital investment and services including the construction, management, maintenance, refurbishment and replacement of public sector asset such as buildings, infrastructure, equipment and other facilities, which creates a stand alone business. The private sector will create the asset and deliver a service to the public sector client. In return, the private sector will receive payment in the form of lease rental charges, which commensurate with the levels, quality and timeliness of the service provision throughout the concession period. The structure of the lease rental payment for PFI projects will guarantee a total return to the concessionaire's capital investment expenditures including financing cost repayment and profit to investment. The asset and facilities will be transferred to the public sector at the expiry of the concession period.

10.23 As the evaluation and procurement process involved in implementing PFI will be more elaborate, particularly the need to be clear about output specifications, maintenance, performance indicators and distribution of risks, an effective enabling framework for implementation will be developed. In this regard, steps will be undertaken to establish the public sector comparator in evaluating the proposals and determining the value-for-money as compared to the conventional approach.

10.24 An effective mechanism will be developed to expedite the procurement process and respond to the demands of the contract details as required in the PFI approach. Measures will also be undertaken to establish long-term financing schemes through local financial institutions, including the Employees Provident Fund, to facilitate the financing of PFI projects, which normally have long gestation periods. As PFI projects are complex in nature and require new skills and support services, intensive training will be provided to enhance the capacity and expertise of the public sector personnel involved in the negotiation and monitoring of projects.

10.25 To further streamline the implementation process, new conditions will be imposed to ensure prospective companies have access to capital, including having a minimum paid-up capital of RM250,000 when proposing a project and providing documentary proof of financial support within twelve months upon signing of an agreement. In addition, companies must also furnish evidence of technical and management expertise.

Enhancing Viability Through Risk Distribution

10.26 To enhance the viability and sustainability of projects, emphasis will be placed on optimal distribution of risks between the public and private sectors. The Government will continue to facilitate project implementation, particularly through legislation and land cost support while the private sector's capability will be utilised in managing risks associated with design, construction, operations and maintenance.

Strengthening Institutional and Regulatory Framework

10.27 The institutional and regulatory framework will be further strengthened to protect consumer interests and ensure efficiency in the delivery of services by the privatized entities. The *Suruhanjaya Perkhidmatan Air Negara* (SPAN) will be the regulator responsible for water and sewerage services. Among others, it will ensure the productivity of the water supply services and sewerage services industry as well as the monitoring of operator compliance with stipulated service standards and contractual obligations towards delivery of effective and efficient service to consumers. In this regard, all water supply entities will be corporatised and licensed by SPAN. Under the new licensing regime, the level of rates to be charged for the water supply services will be determined by the Government, on the recommendation of SPAN. To ensure that the newly created regulatory authorities function effectively, efforts will be undertaken to provide the necessary legislation and resources as well as adequate personnel with appropriate skills and expertise.

10.28 The monitoring and evaluation mechanism of implementing agencies will be strengthened to ensure compliance of privatized companies to the provisions of the privatization agreements. Training programmes will be provided to enhance technical knowledge in project evaluation and performance auditing.

Increasing Bumiputera Participation

10.29 Privatization will continue to be used as a vehicle to meet the objective of increasing Bumiputera equity ownership in the corporate sector. Towards this end, the requirement to allocate a minimum of 30 per cent of the equity of privatized entities to Bumiputera entrepreneurs will continue to be enforced. In addition to the three-year moratorium on the change in shareholding structure and shareholders, stringent procedures will continue to be adopted in the selection of Bumiputera entrepreneurs to prevent the dilution of Bumiputera interests in the privatized companies.

10.30 Opportunities will continue to be extended to Bumiputera entrepreneurs to participate in the commercial and industrial activities of privatized entities through the requirement to award at least 60 per cent of the contract works to Bumiputera entrepreneurs. The award of contract works will be tightened to exclude subsidiaries of the main concessionaire. The concessionaires will continue to be required to offer employment opportunities to Bumiputera individuals, especially at the professional and managerial levels. Vendor and entrepreneur development programmes will continue to remain as an integrated feature of privatization. To ensure that the requirement of Bumiputera participation is effectively implemented and monitored, an integrated approach will be adopted to streamline the efforts of the existing monitoring mechanism, including the sector-based regulatory authorities.

IV. INSTITUTIONAL SUPPORT

10.31 The Economic Planning Unit will be the lead agency in negotiating privatization agreements. It will be supported by other central agencies such as the Ministry of Finance, the Attorney General's Department, the Ministry of Public Works, the Valuation Department, the Federal Department of Lands and Mines and the relevant client agencies.

V. CONCLUSION

10.32 During the Eighth Plan period, new measures were introduced and stricter conditions imposed in the implementation of the privatization programme to safeguard consumer interests and increase efficiency and productivity. In the Ninth Plan, the programme will be further streamlined, with project selection identified by the Government and selection of concessionaires through a bidding process. The PFI will be introduced in implementing privatization projects. In this regard, the adoption of KPIs, risk distribution and maintenance will enhance the delivery of infrastructure facilities and public services. A performance-based

delivery system will be implemented where tariff charges and revision will be subjected to a reward and penalty system. Long-term financing schemes through local financial institutions, including the Employees Provident Fund, will be established. The privatization programme will continue to be used to support and increase further the participation of Bumiputera entrepreneurs in the economy.



ENHANCING HUMAN CAPITAL

11

I. INTRODUCTION

11.01 During the Eighth Plan period, the economy maintained full employment and recorded growth in labour productivity. Employment expanded in line with economic growth, which was mainly contributed by the services and manufacturing sectors. The quality of the labour force improved with the increasing supply of educated and skilled human resource. Various initiatives were undertaken including the implementation of several training and retraining programmes to reduce skills mismatch and enhance the employability of labour, particularly graduates.

11.02 The quality of the nation's human capital will be the most critical element in the achievement of the National Mission, and thus human capital development will be a key thrust in the Ninth Plan period. Human capital development will be holistic; encompassing the acquisition of knowledge and skills or intellectual capital including science and technology (S&T) and entrepreneurial capabilities as well as the internalisation of positive and progressive attitudes, values and ethics through education, training and lifelong learning.

11.03 Capacity building will be strengthened to develop knowledgeable, skilled and innovative human capital to drive a knowledge-based economy. Emphasis will also be given to develop human capital that is progressive in thinking and attitude with strong ethics and universal values as espoused by *Islam Hadhari*. The implementation of lifelong learning programmes will be accelerated to encourage skills upgrading among all segments of society. Education and training delivery systems will be expanded, particularly in vocational and technical fields. National schools will be strengthened to become the *school of choice* for all Malaysians. Measures will be undertaken to enhance the quality of education and training to be at par with international best practices. Programmes will be implemented to develop human capital that is innovative and has high capability in S&T as well as strong entrepreneurial skills.

II. PROGRESS, 2001-2005

Population

11.04 The Malaysian population increased to 26.75 million in 2005, as shown in *Table 11-1*. The population growth rate continued to decline as a result of the decrease in total fertility rate to 2.76 in 2005. The life expectancy at birth of the population improved with male life expectancy increasing from 70.0 years in 2000 to 70.6 years in 2005 and female life expectancy from 75.1 years to 76.4 years.

TABLE 11-1
POPULATION SIZE AND AGE-STRUCTURE, 2000-2010
(million persons)

| | 2000 | % | 2005 | % | 2010 | % | Average Annual Growth Rate (%) | |
|-----------------------------|--------------|-------|--------------|-------|--------------|-------|--------------------------------|------------|
| | | | | | | | 8MP | 9MP |
| Total Population | 23.49 | | 26.75 | | 28.96 | | 2.6 | 1.6 |
| Citizens | 22.08 | 100.0 | 24.36 | 100.0 | 26.79 | 100.0 | 2.0 | 1.9 |
| Bumiputera | 14.35 | 65.0 | 16.06 | 65.9 | 17.95 | 67.0 | 2.3 | 2.2 |
| Chinese | 5.76 | 26.1 | 6.15 | 25.3 | 6.52 | 24.3 | 1.3 | 1.2 |
| Indian | 1.70 | 7.7 | 1.83 | 7.5 | 1.97 | 7.4 | 1.6 | 1.4 |
| Others | 0.27 | 1.2 | 0.32 | 1.3 | 0.35 | 1.3 | 2.6 | 2.2 |
| Non-Citizens ¹ | 1.41 | | 2.39 | | 2.17 | | 11.0 | -1.8 |
| Age Structure | | | | | | | | |
| 0-14 | 8.00 | 34.0 | 8.72 | 32.6 | 9.18 | 31.7 | 1.7 | 1.0 |
| 15-64 | 14.56 | 62.0 | 16.88 | 63.1 | 18.42 | 63.6 | 3.0 | 1.8 |
| 65 and above | 0.93 | 4.0 | 1.15 | 4.3 | 1.36 | 4.7 | 4.3 | 3.4 |
| Dependency Ratio (%) | 61.4 | | 58.5 | | 57.2 | | | |
| Median Age (years) | 22.4 | | 23.3 | | 24.2 | | | |
| Total Fertility Rate | 2.88 | | 2.76 | | 2.48 | | | |
| Bumiputera | 3.38 | | 3.18 | | 2.80 | | | |
| Chinese | 2.25 | | 2.19 | | 2.04 | | | |
| Indian | 2.46 | | 2.34 | | 2.15 | | | |
| Urban (%) | 62.0 | | 63.0 | | 63.8 | | | |
| Rural (%) | 38.0 | | 37.0 | | 36.2 | | | |

Source: Department of Statistics and Economic Planning Unit

Notes: ¹ This includes permanent residents, foreign workers with work permits, expatriates and foreign students.

Labour Force

11.05 The labour force increased to 11.3 million in 2005, as shown in *Table 11-2*. The quality of the labour force improved with the share having educational

TABLE 11-2
EMPLOYMENT BY SECTOR, 2000-2010
('000 persons)

| Sector | 2000 | % | 2005 | % | 2010 | % | Average Annual Growth Rate (%) | |
|---|----------------|--------------|-----------------|--------------|-----------------|--------------|--------------------------------|------------|
| | | | | | | | 8MP | 9MP |
| Agriculture, Forestry, Livestock & Fishing | 1,423.0 | 15.3 | 1,405.7 | 12.9 | 1,323.8 | 11.1 | -0.2 | -1.2 |
| Mining & Quarrying | 41.7 | 0.4 | 42.7 | 0.4 | 44.7 | 0.4 | 0.5 | 0.9 |
| Manufacturing | 2,565.8 | 27.7 | 3,132.1 | 28.7 | 3,594.7 | 30.0 | 4.1 | 2.8 |
| Construction | 752.2 | 8.1 | 759.6 | 7.0 | 764.7 | 6.4 | 0.2 | 0.1 |
| Electricity, Gas & Water | 75.0 | 0.8 | 93.0 | 0.8 | 103.5 | 0.9 | 4.4 | 2.2 |
| Transport, Storage & Communications | 461.6 | 5.0 | 631.2 | 5.8 | 701.5 | 5.9 | 6.5 | 2.1 |
| Wholesale & Retail Trade, Hotels & Restaurants | 1,582.9 | 17.1 | 1,927.2 | 17.7 | 2,171.0 | 18.0 | 4.0 | 2.4 |
| Finance, Insurance, Real Estate & Business Services | 500.2 | 5.4 | 732.3 | 6.7 | 826.8 | 6.9 | 7.9 | 2.5 |
| Government Services | 981.0 | 10.6 | 1,052.8 | 9.7 | 1,109.8 | 9.3 | 1.4 | 1.1 |
| Other Services | 891.2 | 9.6 | 1,118.2 | 10.3 | 1,335.5 | 11.1 | 4.6 | 3.6 |
| Total | 9,274.6 | 100.0 | 10,894.8 | 100.0 | 11,976.0 | 100.0 | 3.3 | 1.9 |
| Labour Force | 9,571.6 | | 11,290.5 | | 12,406.8 | | 3.4 | 1.9 |
| Local Labour | 8,820.6 | | 9,512.9 | | 10,864.3 | | 1.5 | 2.7 |
| Foreign Labour | 751.0 | | 1,777.6 | | 1,542.5 | | 18.8 | -2.8 |
| Foreign Worker with Work Permit | 732.6 | | 1,742.1 | | 1,500.0 | | 18.9 | -2.9 |
| Expatriate | 18.4 | | 35.5 | | 42.5 | | 14.0 | 3.7 |
| Unemployment | 297.0 | | 395.7 | | 430.8 | | | |
| Unemployment Rate (%) | 3.1 | | 3.5 | | 3.5 | | | |
| Labour Force Participation Rate (%) | 65.7 | | 66.7 | | 67.3 | | | |
| Male | 85.7 | | 86.6 | | 87.4 | | | |
| Female | 44.7 | | 45.7 | | 46.3 | | | |

Source: Economic Planning Unit

attainment at tertiary¹ level increasing from 13.9 per cent in 2000 to 20.0 per cent in 2005. The economy registered full employment with the unemployment rate at 3.5 per cent in 2005. Labour shortages, especially for the low skilled, resulted in the increased employment of foreign workers. Foreign workers with work permits increased to 1.7 million in 2005 with the manufacturing sector as the largest employer, accounting for 31.0 per cent. The number of expatriates increased to 35,480, of whom 52.6 per cent were in the services sector.

Employment

11.06 Employment increased at an average rate of 3.3 per cent per annum with 1.6 million new jobs created, as shown in *Table 11-2*. The services and the manufacturing sectors generated 1,062,800 jobs and 566,300 jobs, respectively. Employment in the agriculture sector contracted by 17,300 jobs in 2005 due to the increased use of labour-saving technologies and better farm management. The structure of employment by major occupational categories reflected the increased demand for highly skilled human resource, as shown in *Table 11-3*.

Labour Productivity

11.07 During the Plan period, labour productivity improved in all sectors of the economy. Labour productivity in the agriculture sector increased, attributed among others, to good agricultural practices, utilisation of new technologies and the shift towards integrated farming and large-scale commercial production activities. In the manufacturing sector, growth in labour productivity was due to improvements in the quality of the workforce and better organisational management as well as increased labour efficiency. In the services sector, wider utilisation of information and communications technology (ICT) such as e-banking and e-commerce as well as implementation of innovative work processes, mergers and acquisitions, particularly in banking and telecommunication subsectors, contributed to productivity growth.

Human Capital Development

Education Programmes

11.08 *Pre-school and Primary Education.* Enrolment of pre-school children aged four to six increased to 702,897 in 2005, as shown in *Table 11-4* with the public sector accounting for 51.3 per cent. To ensure quality, the adoption of the National Pre-school Curriculum for children aged five to six years was

¹ Refers to those with degree, diploma, *Sijil Tinggi Persekolahan Malaysia*, matriculation, A-level and post-*Sijil Pelajaran Malaysia* certificate.

TABLE 11-3
EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP¹, 2000-2010
('000 persons)

| Occupational Group | '000 persons | | | % of Total | | | Average Annual Growth Rate (%) | |
|--|----------------|-----------------|-----------------|--------------|--------------|--------------|--------------------------------|------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | 9MP |
| Senior Officials & Managers ² | 639.9 | 871.6 | 1,018.0 | 6.9 | 8.0 | 8.5 | 6.4 | 3.2 |
| Professionals ³ | 537.9 | 680.9 | 778.4 | 5.8 | 6.2 | 6.5 | 4.8 | 2.7 |
| Technicians & Associate Professionals ⁴ | 1,112.9 | 1,430.5 | 1,580.8 | 12.0 | 13.1 | 13.2 | 5.1 | 2.0 |
| Clerical Workers ⁵ | 890.4 | 991.4 | 1,018.0 | 9.6 | 9.1 | 8.5 | 2.2 | 0.5 |
| Service Workers & Shop & Market Sales Workers ⁶ | 1,205.6 | 1,558.0 | 1,892.2 | 13.0 | 14.3 | 15.8 | 5.3 | 4.0 |
| Skilled Agricultural & Fishery Workers ⁷ | 1,391.2 | 1,376.0 | 1,344.9 | 15.0 | 12.6 | 11.2 | -0.2 | -0.5 |
| Craft & Related Trade Workers ⁸ | 844.0 | 1,263.8 | 1,604.8 | 9.1 | 11.6 | 13.4 | 8.4 | 4.9 |
| Plant & Machine Operators & Assemblers ⁹ | 1,493.2 | 1,568.9 | 1,628.7 | 16.1 | 14.5 | 13.6 | 1.0 | 0.8 |
| Elementary Occupations ¹⁰ | 1,159.5 | 1,153.7 | 1,110.2 | 12.5 | 10.6 | 9.3 | -0.1 | -0.8 |
| Total | 9,274.6 | 10,894.8 | 11,976.0 | 100.0 | 100.0 | 100.0 | 3.3 | 1.9 |

Source: Economic Planning Unit

Notes: ¹ This classification is based on Malaysia Standard Classification of Occupations 1998.

² Includes general managers, department managers and senior government officials.

³ Includes graduate teaching professionals, accountants and auditors and computer system designers and analysts.

⁴ Includes non-graduate teachers, supervisors and engineering and computer support technicians.

⁵ Includes administrative clerks, accounting and finance clerks and 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 and construction and maintenance labourers.

made compulsory at all pre-schools beginning 2003. Enrolment in primary schools increased to 3.0 million in 2005. The construction of 9,930 new classrooms contributed to the improvement in the class-classroom ratio from 1:0.90 in 2000 to 1:0.92 in 2005.

11.09 To encourage greater participation and improve the performance of students in primary schools, various educational support programmes such as the Textbook Loan Scheme, boarding facilities, *Skim Baucer Tuisyen* and *Tabung Kumpulan Wang Amanah Pelajar Miskin* were provided to students, particularly from low-income households, remote areas and the Orang Asli. Enrolment of Orang Asli at the primary level increased from 21,704 in 2000 to 26,210 in 2005 while at the secondary level from 5,971 to 8,490. In addition, the *Program Pembangunan Pendidikan Luar Bandar Sabah dan Sarawak* provided integrated infrastructure and facilities to rural and remote schools.

11.10 In order to inculcate moral and ethical values as well as nurture responsible citizens, various programmes were introduced. The j-QAF² programme was introduced in 2005 to Muslim students at the primary level, starting with Year 1. The *Sivik dan Kewarganegaraan* subject was also introduced in 2005 to students in Year 4 primary and Form 1 secondary schools to create consciousness regarding their roles, rights and responsibilities towards society as well as to inculcate patriotism.

11.11 *Secondary Education.* Enrolment in Government and Government-assisted schools increased to 2.1 million in 2005, as shown in *Table 11-4*. Enrolment in the vocational and technical schools increased to 72,827 in 2005. With the construction of 9,936 classrooms, the class-classroom ratio improved from 1:0.83 in 2000 to 1:0.85 in 2005. The proportion of science stream students increased from 32.2 per cent in 2000 to 45.6 per cent in 2005.

11.12 *Special Education.* The Special Education Integration Programme was expanded to integrate children with special needs into the normal school environment. Under this programme, the national curriculum was adopted for visually and hearing impaired children in primary and secondary schools. An adaptive curriculum was used for children with learning disabilities.

11.13 *Quality Improvement.* The *Kurikulum Bersepadu Sekolah Rendah (KBSR)* and *Kurikulum Bersepadu Sekolah Menengah (KBSM)* were reviewed to strengthen the adoption of the student-centred learning approach. The teaching of Science and Mathematics in English, commenced in 2003 was extended to students in Year 1 to Year 3, lower secondary and Form Six as well as in matriculation colleges in 2005.

² Refers to the objective of mastering *Jawi* reading and writing, mastering and completing *Al-Quran* recitation, acquiring skills in Arabic language and strengthening as well as internalising the practice of *fardhu ain*.

TABLE 11-4

**STUDENT ENROLMENT¹ IN PUBLIC EDUCATION
INSTITUTIONS, 2000-2010**

| Level of Education | Number of Students | | | % of Total | | | Increase (%) | |
|--|--------------------|------------------|------------------|--------------|--------------|--------------|--------------|------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | 9MP |
| Pre-school² (4-6) | 539,469 | 702,897 | 784,200 | 9.8 | 11.6 | 11.9 | 30.3 | 11.6 |
| Primary | 2,907,123 | 3,044,977 | 3,195,977 | 52.6 | 50.0 | 48.3 | 4.7 | 5.0 |
| Lower Secondary | 1,256,772 | 1,330,229 | 1,425,231 | 22.7 | 21.9 | 21.6 | 5.8 | 7.1 |
| Government & Government-aided Schools | 1,251,466 | 1,322,212 | 1,412,235 | | | | | |
| MARA Junior Science Colleges | 5,306 | 8,017 | 12,996 | | | | | |
| Upper Secondary | 707,835 | 763,618 | 881,247 | 12.8 | 12.6 | 13.3 | 7.9 | 15.4 |
| Government & Government-aided Schools (Academic) | 637,292 | 678,646 | 774,550 | | | | | |
| MARA Junior Science Colleges | 10,118 | 12,145 | 21,470 | | | | | |
| Government & Government-aided Schools (Technical & Vocational) | 60,425 | 72,827 | 85,227 | | | | | |
| Post-secondary | 94,544 | 199,636 | 277,904 | 1.7 | 3.3 | 4.2 | 111.2 | 39.2 |
| Government & Government-aided Schools | 48,035 | 144,194 | 202,904 | | | | | |
| Pre-Diploma & Pre-University Courses | 46,509 | 55,442 | 75,000 | | | | | |
| Teacher Education | 23,740 | 34,672 | 45,899 | 0.4 | 0.6 | 0.7 | 46.0 | 32.4 |
| Total | 5,529,483 | 6,076,029 | 6,610,458 | 100.0 | 100.0 | 100.0 | 9.9 | 8.8 |

Source: Ministry of Education

Notes: ¹ Enrolment refers to total student population in that particular year.

² Includes private pre-schools.

11.14 *Teacher Development.* The teacher training curriculum and co-curriculum were strengthened to develop teachers as competent managers of the teaching and learning process and capable of utilising ICT to create innovative teaching techniques. The implementation of the *Program Pensiswazahan Guru* was continued to increase the number of teachers with degree qualifications.

11.15 *Tertiary Education.* The capacity of existing universities was expanded to provide greater access to higher education. In addition, new universities, university colleges, branch campuses, polytechnics as well as community colleges were established, as shown in *Table 11-5*.

11.16 Enrolment at all levels of study in public and private tertiary education institutions increased to 731,698 in 2005, as shown in *Table 11-6*. At the post-graduate level, enrolment for masters and doctor of philosophy (PhD) programmes accounted for 16.2 per cent of enrolment at all degree levels in public institutions

TABLE 11-5

TERTIARY EDUCATION INSTITUTIONS¹, 2000 & 2005

| <i>Institution</i> | <i>2000</i> | <i>2005</i> |
|--------------------|-------------|-------------|
| Public: | | |
| University | 11 | 11 |
| University College | 0 | 6 |
| Polytechnic | 11 | 20 |
| Community College | 0 | 34 |
| Total | 22 | 71 |
| Private: | | |
| University | 5 | 11 |
| University College | 0 | 11 |
| Branch Campus | 3 | 5 |
| College | 632 | 532 |
| Total | 640 | 559 |
| TOTAL | 662 | 630 |

Source: Ministry of Higher Education

Notes: ¹ Refers to university, university college, branch campus, college, polytechnic and community college.

of higher education³ and 3.8 per cent in private institutions of higher education. The total output from public and private tertiary education institutions at all levels of study increased from 130,161 in 2000 to 252,730 in 2005, of which 58.5 per cent was from private tertiary education institutions. In 2005, there was an estimated 11,900 Government-sponsored students enrolled in institutions of higher education abroad.

11.17 To facilitate access to higher education, a total of RM7.9 billion was disbursed by the *Perbadanan Tabung Pendidikan Tinggi Negara* (PTPTN) during the Plan period, benefiting 678,467 students. In addition, government agencies, government-linked companies, state governments as well as private organisations such as companies and banks also provided financial assistance.

11.18 *Improving the Supply of S&T Human Resource.* Students enrolled in science and technical-related programmes at first degree and diploma levels in public and private tertiary education institutions increased from 229,014 in 2000 to 291,546 in 2005. At post-graduate level, enrolment in science and technical-related programmes increased from 12,602 to 18,910.

³ Refers to university, university college, branch campus and college.

TABLE 11-6
ENROLMENT IN TERTIARY EDUCATION INSTITUTIONS
BY LEVELS OF STUDY, 2000 - 2010

| Level of Study | Number of Students | | | | | | Average Annual Growth Rate (%) | | | | | | |
|----------------|--------------------|----------------|----------------|----------------|----------------|----------------|--------------------------------|----------------|------------------|------------|------------|-------------|------------|
| | 2000 | | | 2005 | | | 2010 | | 2001-2005 | | 2006-2010 | | |
| | Public | Private | Total | Public | Private | Total | Public | Private | Public | Private | Public | Private | |
| Certificate | 23,816 | 81,754 | 105,570 | 37,931 | 94,949 | 132,880 | 141,290 | 143,480 | 284,770 | 9.8 | 3.0 | 30.1 | 8.6 |
| Diploma | 91,398 | 117,056 | 208,454 | 98,953 | 131,428 | 230,381 | 285,690 | 188,680 | 474,370 | 1.6 | 2.3 | 23.6 | 7.5 |
| First Degree | 170,794 | 59,932 | 230,726 | 212,326 | 110,591 | 322,917 | 293,650 | 134,550 | 428,200 | 4.4 | 13.0 | 6.7 | 4.0 |
| Masters | 24,007 | 2,174 | 26,181 | 34,436 | 4,202 | 38,638 | 111,550 | 5,770 | 117,320 | 7.5 | 14.1 | 26.5 | 6.5 |
| PhD | 3,359 | 131 | 3,490 | 6,742 | 140 | 6,882 | 21,410 | 270 | 21,680 | 15.0 | 1.4 | 26.0 | 14.0 |
| Total | 313,374 | 261,047 | 574,421 | 390,388 | 341,310 | 731,698 | 853,590 | 472,750 | 1,326,340 | 4.5 | 5.5 | 16.9 | 6.7 |

Source: Ministry of Higher Education

11.19 The increase in enrolment for post-graduate studies, especially in the science and technical-related fields as well as the expansion of post-doctoral fellowships, contributed to increased research and development (R&D) activities in public universities and university colleges. R&D grants of RM676.1 million were allocated to enhance research activities. A total of 1,631 R&D projects was undertaken under the Intensification of Research in Priority Areas (IRPA) programme. This programme enabled 92 and 338 students at Ph.D and masters level, respectively to obtain their degrees by research. During the Plan period, 27 institutes were established such as Institute of Gerontology, Institute of Space Science and Institute of *Halal* Food to become centres of excellence.

11.20 *Quality Enhancement.* Efforts were undertaken to enhance the quality of education in public and private institutions of higher education. The Malaysian Qualification Framework (MQF) was developed for assuring the standards of qualifications and quality of delivery. New programmes were designed in consultation with industry while institutions of higher education were required to review their curricula every three to five years. Academic programmes were restructured to allow students to study for double major, major-minor, double and joint award degree.

11.21 *Lifelong Learning.* Lifelong learning programmes with flexible entry requirements were provided by community colleges as well as by public and private institutions of higher education such as the Open University of Malaysia (OUM) and University Tun Abdul Razak (UNITAR). Community colleges offered short-term courses while institutions of higher education provided extension education programmes.

11.22 *Regional Centre of Educational Excellence.* Measures were undertaken to promote Malaysia as a regional education hub as well as a centre of educational excellence. These included the implementation of a quality assurance system, promotional activities and the establishment of education promotion offices in Beijing, Dubai, Ho Chi Minh City and Jakarta. With these efforts, enrolment of foreign students in education institutions increased to 50,380 in 2005. Of this total, 82 per cent were in institutions of higher education, mainly from East Asia and Pacific, followed by ASEAN countries.

Training Programmes

11.23 *Skills Training.* The capacity of public training institutions for pre-employment training was expanded with the establishment of 20 skills training institutions and the upgrading of 10 institutions. As a result, the output from public training institutions increased to 38,765 in 2005, as shown in *Table 11-7.*

TABLE 11-7

OUTPUT OF SKILLED AND SEMI-SKILLED HUMAN RESOURCE BY COURSE, 2000-2010

| Course | Number of Trainees | | | | | | Average Annual Growth Rate (%) | | | | |
|---|--------------------|---------------|---------------|---------------|---------------|---------------|--------------------------------|-------------|-------------|-------------|-------------|
| | 2000 | | 2005 | | 2010 | | 2001-2005 | | 2006-2010 | | |
| | Public | Private | Public | Private | Public | Private | Public | Private | Public | Private | |
| Engineering | 16,428 | 9,730 | 31,633 | 17,337 | 56,330 | 44,627 | 100,957 | 14.0 | 12.2 | 12.2 | 20.8 |
| Mechanical | 9,606 | 2,232 | 17,380 | 4,866 | 30,966 | 10,608 | 41,574 | 12.6 | 16.9 | 12.2 | 16.9 |
| Electrical | 5,234 | 7,378 | 11,677 | 12,221 | 19,828 | 33,498 | 53,326 | 17.4 | 10.6 | 11.2 | 22.3 |
| Civil | 1,588 | 120 | 2,576 | 250 | 5,536 | 521 | 6,057 | 10.2 | 15.8 | 16.5 | 15.8 |
| Building Trades | 1,417 | 547 | 2,566 | 1,200 | 4,232 | 2,633 | 6,865 | 12.6 | 17.0 | 10.5 | 17.0 |
| Information & Communications Technology | 903 | 7,520 | 1,016 | 11,844 | 1,853 | 12,886 | 14,739 | 2.4 | 9.5 | 12.8 | 1.7 |
| Others | 2,133 | 928 | 3,550 | 2,730 | 9,379 | 1,630 | 11,009 | 10.7 | 24.1 | 21.4 | -9.8 |
| Total | 20,881 | 18,725 | 38,765 | 33,111 | 71,794 | 61,772 | 133,566 | 13.2 | 12.1 | 13.1 | 13.3 |

Source: Manpower Department, Ministry of Youth and Sports, National Vocational Training Council, Ministry of Agriculture and Agro-Based Industry, Majlis Amanah Rakyat and Construction Industry Development Board Malaysia

11.24 Intake into courses at *Sijil Kemahiran Malaysia* Level 4 and diploma in advanced public training institutions increased to 7,110 in 2005. In addition, state skills development centres (SDCs) also expanded their capacity to train more skilled workers with intake for pre-employment courses increasing to 11,060 in 2005. Under the *Pembangunan Sumber Manusia Berhad* (PSMB) Apprenticeship Scheme, a total of 2,735 trainees was trained. During the Plan period, a total of 286,669 skilled workers was produced.

11.25 The Government introduced the double-shift training programme in 2005 to increase training opportunities for school leavers as well as the supply of skilled human resource. A total of 49 training institutions involving public training institutions and SDCs conducted the programme. During the Plan period, the Skills Development Fund disbursed financial assistance totalling RM644.6 million, benefiting 135,496 trainees.

11.26 *Quality Improvement.* To improve and standardise the quality of training for instructors, the National Occupational Skills Standards (NOSS) for instructors was developed and retraining programmes under the Skills Development Programme for Instructor and Vocational Training Officer and the Look East Policy were conducted. Beginning 2005, NOSS was developed based on a new format to improve the quality of training. In addition, the National Dual Training System (NDTS) was launched in July 2005 to strengthen the training delivery system and ensure that the training provided was in line with industry requirements.

11.27 *Retraining and Skills Upgrading.* The PSMB intensified its efforts to encourage more employers to retrain and upgrade the skills of their employees. In this regard, the coverage of the Human Resource Development Fund (HRDF) was expanded to include firms in manufacturing-related services such as logistics and market support. The Government continued to provide financial assistance in the form of matching grants to small and medium enterprises (SMEs). Financial assistance was also provided under the Small and Medium Industries Development Corporation (SMIDEC) Skills Upgrading Programme.

III. PROSPECTS, 2006-2010

11.28 With increasing competition in the global market, the economy will have to further strengthen its competitiveness and venture into new growth areas. This will require world class human capital that is knowledgeable and highly skilled, flexible and creative as well as imbued with positive work ethics

and spiritual values. Therefore, during the Ninth Plan period, capacity building will be accorded high priority. Towards this end, comprehensive improvement of the education, training and lifelong learning delivery systems will be undertaken. Emphasis will also be given to the development of entrepreneurial skills at all levels of education and training to facilitate the creation of an entrepreneurial society. Lifelong learning programmes will be expanded to provide greater opportunities for individuals to improve and add value to themselves through continuous acquisition of knowledge and skills.

Human Capital Development Policy Thrusts

11.29 Investment in human capital will be given greater emphasis during the Plan period to sustain economic resilience and growth, drive a knowledge-based economy as well as foster a community with an exemplary value system. This will be achieved through greater collaboration between the Government, the private sector and the community. In this regard, the human capital policy development thrusts are:

- ❑ *undertaking comprehensive improvement of the education and training delivery systems;*
- ❑ *strengthening national schools to become the school of choice for all Malaysians to enhance national unity;*
- ❑ *implementing measures to bridge the performance gap between rural and urban schools;*
- ❑ *creating universities of international standing and ensuring that tertiary institutions meet the needs of employers;*
- ❑ *providing more opportunities and access to quality education, training and lifelong learning at all levels;*
- ❑ *nurturing an innovative society with strong S&T capabilities and the ability to acquire and apply knowledge;*
- ❑ *strengthening national unity and developing a society with a progressive outlook, exemplary value system and high performance culture as well as with an appreciation for tradition and heritage; and*
- ❑ *enhancing the forum of engagement and consultation between the Government, private sector, parents and community in human capital development.*

Population

11.30 During the Plan period, the population is projected to increase to 28.96 million in 2010, growing at an average rate of 1.6 per cent per annum, lower than during the Eighth Plan period, as shown in *Table 11-1*. The lower rate is due to the decline in total fertility rate to 2.48 in 2010, which can be attributed to more Malaysians pursuing higher education and career advancement leading to delayed marriages as well as having smaller families.

11.31 The population in the working age group of 15-64 years will account for 63.6 per cent of total population while those aged 65 years and above will increase to 4.7 per cent in 2010. The increasing share of the aged indicates the need to increase support and facilities for the elderly. With the share of the population living in urban areas projected to increase to 63.8 per cent in 2010, demand for infrastructure and housing facilities as well as education and employment opportunities is expected to increase.

11.32 Life expectancy at birth is expected to improve to 71.0 years in 2010 for male and 77.1 years for female. This is largely attributed to improvements in accessibility to health and medical services as well as increased emphasis on preventive care services.

Labour Force

11.33 The quality of the labour force will be improved with the increasing share of the labour force with educational attainment at tertiary level to meet the demand of a knowledge-based economy. Recognising the potential of women in increasing the supply of local labour, greater female participation in the labour force will be encouraged. Overall labour force participation rate (LFPR) is expected to be 67.3 per cent in 2010 with the LFPR for male at 87.4 per cent and female LFPR at 46.3 per cent in 2010. The labour force is estimated to increase to 12.4 million in 2010.

11.34 In line with the policy to shift to technology-intensive and higher value added activities, there will be judicious employment of foreign workers. The number of foreign workers will be reduced gradually to provide greater employment opportunities to local workers and to reduce administration costs as well as the outflow of foreign exchange. Local labour, particularly graduates, will have to change their mindset so as not to be too choosy in selecting occupations.

11.35 A review of the labour legislation will be undertaken to promote a conducive environment for productivity improvement and enhancement of

competitiveness. The review will also ensure that the industrial relations practices keep pace with the emerging business environment as well as contribute to social stability and facilitate labour mobility and flexibility in working arrangements.

11.36 Strategic measures to attract and retain knowledge workers who are highly mobile will be undertaken to increase the supply of knowledgeable and highly skilled human capital. Among the measures to source global talents will include encouraging Malaysians to return as well as collaborating with foreign scientists to increase indigenous R&D capability and capacity.

11.37 Efforts will be intensified to enable persons with disabilities to engage in productive economic activities and to be self-reliant. These include providing more vocational training programmes, particularly in skills demanded by the industry.

Employment

11.38 Employment is expected to grow at an average rate of 1.9 per cent per annum, contributing 1.1 million jobs during the Plan period, particularly those requiring tertiary education. The economy is expected to maintain full employment with the unemployment rate at 3.5 per cent in 2010.

11.39 The services and the manufacturing sectors will create 693,400 and 462,600 jobs, respectively. In the services sector, the wholesale and retail trade, hotels and restaurants subsector will be the largest contributor to employment at 18.0 per cent, growing at an average rate of 2.4 per cent per annum. In the manufacturing sector, the expected increase in global demand, particularly for electrical and electronics as well as for wood products, will contribute to employment growth. The demand for labour in the agriculture sector is expected to contract by 1.2 per cent per annum due to greater utilisation of modern technology, precision farming and mechanisation.

11.40 The demand for knowledge workers, which comprise senior officials and managers, professionals, technicians and associate professionals categories, is expected to grow at an average rate of 2.5 per cent per annum. The demand for workers in the professionals category is expected to be 97,500, as shown in *Table 11-3*.

11.41 Recognising the importance of self-employment in employment creation and economic growth, efforts will be intensified to create more self-employment opportunities. Business opportunities for self-employment and entrepreneurship including in petty trading, SMEs, agriculture and services will be promoted.

The inculcation of entrepreneurial values and changing the mindset so as to view self-employment as a viable alternative to salaried employment will be intensified including in institutions of higher education. In addition, a special entrepreneurship training programme will be implemented for unemployed graduates.

11.42 *Labour Market Information.* The implementation of Electronic Labour Exchange (ELX) will be improved for effective placement of jobseekers as well as dissemination of labour market information to ensure efficient functioning of the labour market. In this regard, education and training institutions will provide information on their graduates to the ELX including their employment status to facilitate job placement. Effective measures will be undertaken to disseminate information on ELX to stakeholders including employers, students and jobseekers. Employers will be encouraged to make regular use of ELX to register job vacancies and provide feedback on placement. A mechanism will be established to monitor and ensure optimum utilisation of ELX. In addition, greater efforts will be undertaken to facilitate graduates, particularly those who have participated in Government-sponsored education and training programmes to secure employment.

Accelerating Lifelong Learning

11.43 The implementation of lifelong learning programmes will be accelerated to enable all segments of society to continuously learn and acquire knowledge and skills. Lifelong learning infrastructure such as community colleges will be expanded and upgraded. The use of schools and community centres for lifelong learning will also be encouraged. In addition, e-learning and distance education will be further promoted to increase accessibility. In order to change the attitude and mindset of individuals towards continuous learning, measures to inculcate a learning culture will be implemented at all levels of society.

11.44 Public institutions of higher education will establish centres for continuing education and continue to offer more places with flexible entry requirements up to 10 per cent of intake at diploma and degree levels. The OUM and UNITAR will be encouraged to offer more programmes at masters and Ph.D levels to cater to the needs of working people. A National Council for Lifelong Learning will be established to provide policy direction and coordinate lifelong learning activities. Private education and training providers as well as non-governmental organisations (NGOs) will also be encouraged to provide lifelong learning programmes. In addition, employers will be encouraged to promote lifelong learning among their employees.

Retraining and Skills Upgrading

11.45 In order to enhance competitiveness and economic resilience, labour productivity will be increased through efficient utilisation of labour, skills upgrading, improving management capabilities, intensifying R&D and innovation activities as well as increasing utilisation of technology and ICT in all sectors of the economy. Firms will also be encouraged to implement the productivity-linked wage system. In this regard, the PSMB will widen the coverage of the HRDF to include industries such as port services, multimedia industries, automotive industries as well as accounting and audit firms. In addition, PSMB will develop modular training programmes, which can be conducted at the workplace. Employers, especially SMEs, will also have to undertake measures to accelerate training and retraining of their employees due to rapid technological changes and increasing need for skilled workers.

11.46 The capacity and capability of public training institutions will be strengthened to meet the training needs of public sector employees. Existing training programmes will be continued and new programmes will be offered with special emphasis on values and ethics. Towards this end, *Institut Tadbiran Awam Negara* (INTAN) will expand their training programmes to include courses such as developing high performance employees, customer services and Islamic finance. To facilitate the development of lifelong learning among civil servants, INTAN will lead the implementation of e-learning initiatives based on the Public Sector e-Learning Blueprint. To further enhance the management skills and professionalism of education personnel, *Institut Aminuddin Baki* will intensify its training efforts.

11.47 Training in specialised areas such as customs, safety and security, health, property evaluation, diplomatic relations, and professional and technical fields will continue to be provided by the respective training institutions. These institutions include *Akademi Kastam DiRaja Malaysia*, *Akademi Bomba dan Penyelamat Malaysia*, *Akademi Imigresen Malaysia*, *Institut Kesihatan Umum*, *Institut Penilaian Negara*, Institute of Diplomacy and Foreign Relations and the IKRAM Training and Infrastructure Development Institute.

11.48 Private training institutions will continue to provide management and other specialised training to meet the demand for highly competent managers to ensure industries become more resilient and competitive in the global market. In this regard, institutions like the Malaysian Institute of Management, Institute of Bankers, FMM Institute of Manufacturing and Malaysia Institute of Human Resource Management will be encouraged to expand and strengthen their

training programmes. The National Productivity Corporation will also expand their training capacity.

11.49 During the Plan period, the entrepreneurial training programmes will be intensified to promote greater self-reliance and competitiveness, particularly among Bumiputera entrepreneurs. Entrepreneurial training will be expanded, among others, by increasing the capacity of the *Institut Keusahawanan Negara*. As a coordinating agency for entrepreneurial training, the institute will enhance the quality of and standardise the entrepreneurial training programmes. The training programmes will also emphasise positive values and ethics. In addition, programmes will be undertaken to change the perception of society, particularly school leavers and graduates, on self-employment. To encourage and facilitate school leavers and graduates in self-employment and foster entrepreneurship, integrated information on self-employment will be provided.

11.50 During the Plan period, with the greater focus on agricultural development, agricultural agencies will expand their retraining and skills upgrading programmes for farmers and entrepreneurs as well as their employees. The existing training programmes offered by various agricultural agencies will be reviewed with the objective, among others, to strengthen commercialisation and management skills, improve environmental management as well as place greater emphasis on ethics and positive values. To intensify and strengthen the provision of training in agricultural-related areas, agricultural training institutions will offer part-time training programmes and conduct short-courses. Towards this end, training needs analysis will be conducted to measure the skills gap as well as identify the types and level of skills required in the agriculture sector.

Education Programmes

11.51 *Pre-school Education.* Pre-school education programmes will be expanded to provide full coverage for children in the five to six years age group. Greater focus will be given towards pre-school teacher training programmes including those from other agencies in order to enhance the quality of teaching and learning as well as to meet the increasing demand for trained teachers. To ensure the provision of quality pre-school education, assistant pre-school teachers will be deployed to all Government-assisted pre-schools. In addition, early childhood development programme for children aged four and below will be introduced.

11.52 *Primary and Secondary Education.* The main focus of primary and secondary education will be to further increase access to quality education, particularly in Sabah and Sarawak as well as in rural areas. In addition, greater emphasis will be given to developing a strong foundation in Mathematics,

Science and the English language as well as to instil good ethics and discipline among school children. In line with the policy of compulsory primary education, enrolment is expected to increase to 3.2 million in 2010, as shown in *Table 11-4*. Enrolment at the secondary education level will increase to 2.3 million. Measures will also be undertaken to reduce and eventually eliminate the incidence of school drop-outs to ensure that all students complete at least 11 years of schooling.

11.53 *Special Education*. Educational opportunities for children with special needs will be expanded by opening special classes in regular schools to enable these children to adapt to the normal school environment. To improve the quality of teaching and learning, more teachers will be trained and the curriculum for special education will be further improved.

11.54 *Quality Improvement*. National schools will be strengthened to become the *school of choice* for all ethnic groups to enhance national unity. Towards this end, language subjects, namely Mandarin and Tamil, will be made available. The j-QAF programme will be expanded for Muslim students in primary schools and moral education provided to Muslim and non-Muslim students to imbue them with religious knowledge and high moral values. *Sivik dan Kewarganegaraan* subject will also be expanded to Year 5 and Year 6 in primary schools and secondary schools.

11.55 The implementation of the school-based assessment system will be accelerated to enable continuous evaluation and support the development of creativity as well as analytical and problem-solving skills. The KBSR and KBSM curricula and co-curricular activities will be improved in consultation with educationists, community, parents as well as those from the industry to keep pace with changing needs. The KBSM curricula and co-curricular activities will incorporate programmes and activities for early exposure to the world of work and career options as well as involvement in community services and charity work to produce students with a more balanced outlook.

11.56 During the Plan period, the *Program Pembestarian Sekolah* refers to the process of leveraging on all existing ICT initiatives such as the smart school project, computerisation project, utilising ICT in the teaching and learning of Science and Mathematics in English, SchoolNet and MySchoolNet to enhance the quality of education. *Program Pembestarian Sekolah* will be implemented in all primary and secondary schools to enable teachers to integrate ICT in teaching, learning and management.

11.57 Measures will be undertaken to bridge the performance gap between students in rural and urban schools, especially in Mathematics, Science and the English language. All dilapidated schools will be replaced to provide a

conducive teaching and learning environment. In addition, experienced teachers will be deployed to schools in rural areas while there will be compulsory posting for newly recruited teachers to rural areas for a specified period. An allocation of RM690 million will be provided for teachers quarters with RM143 million for the construction of teachers quarters in the remote areas of Sabah and Sarawak. Quality teaching and learning materials will be provided including upgrading and maximisation of school library resources to enrich and enliven lessons in classrooms. Public library infrastructure and services will be upgraded and expanded to all districts, *mukim* and villages to enable students and the public to have greater access to reading materials.

11.58 *Teacher Development.* The implementation of the *Program Khas Pensiswazahan Guru* will be accelerated to increase the quality and professionalism of teachers and to achieve the target of making all secondary school teachers and 25 per cent primary school teachers as graduate teachers by 2010. The teacher training curriculum will be reviewed to improve subject content, enhance pedagogical skills and enable greater application of ICT in education. The teaching school concept will be introduced to provide greater opportunities for lecturers and trainees to experiment with teaching and learning innovations in an actual classroom environment and to conduct collaborative research. In addition, advanced training programmes in various aspects of education will be implemented to encourage teachers to continuously enhance their professionalism.

11.59 *Tertiary Education.* Greater access to tertiary education will be provided to achieve the target of 40 per cent participation rate of the age group 17-23 years in 2010. Enrolment at the post-graduate level will be expanded to meet the target of 25 per cent of the total enrolment at degree levels in 2010. A special programme will be implemented to increase the enrolment of post-graduate students, particularly in S&T programmes. During the Plan period, enrolment in tertiary education institutions at all levels is expected to increase to 1,326,340 in 2010 with 32.3 per cent at first degree and 35.8 per cent at diploma levels. To cater for the projected increase in demand for associate professionals and technicians, more courses, particularly at the diploma level, will be offered.

11.60 *Financing of Education.* The PTPTN will continue to provide financial assistance to facilitate students to acquire higher education at public and private institutions of higher education, particularly in critical areas. Recognising that the provision of education is not the sole responsibility of the Government and the rising cost of higher education, parents will be further encouraged to save for their children's education.

11.61 *Enhancing Quality.* Measures will be undertaken to enhance the quality of public and private institutions of higher education to be at par with world renowned universities. Towards this end, the quality of institutions of higher education will be benchmarked against international standards to enable these institutions to become globally competitive. Institutions of higher education will continuously audit their quality through a rigorous rating system to nurture competition in the pursuit of excellence. To support the implementation of the MQF and to establish a unified quality assurance system, the Malaysian Qualifications Agency will be established.

11.62 Institutions of higher education will design their academic programmes and develop their curricula based on market requirement to ensure the employability of graduates. These programmes will be implemented with greater collaboration and active support from industry and employer associations. In addition, students will be given early exposure to workplace environment through a minimum of four months internship and structured attachment programmes. The quality of academic staff will be improved through more staff development programmes in order to enhance their knowledge and skills including pedagogy and assessment skills. The number of academic staff with PhD qualification in public universities will be increased to achieve the target of 60 per cent of total academic staff by 2010. Private education providers will also be encouraged to employ more academic staff with PhD qualification and upgrade the qualifications of their staff.

11.63 Institutions of higher education will undertake measures to increase the proficiency of students in English and enhance their ability to access knowledge and undertake research. Languages such as Mandarin, Tamil and Arabic as well as other foreign languages will be offered to undergraduates to encourage multilingualism in order to be competitive in the global market.

11.64 Public institutions of higher education and their academic and non-academic staff will increase global outlook and international engagement with renowned international institutions to enable them to benchmark with best practices globally. The public university governance system will be reviewed to create an environment that encourages, among others, institutional diversity, creativity and innovativeness in the pursuit of excellence. The use of ICT and technology-mediated methods will be intensified to facilitate intellectual engagement as well as discovery and application of knowledge.

11.65 *Improving Capability in S&T.* The research and innovative capability of local institutions of higher education will be strengthened to develop indigenous capacity building, particularly in key technology areas and to nurture an innovative

society with a strong S&T capability. Towards this end, the enrolment of students in S&T programmes at all levels will be increased to facilitate the creation of a critical mass of research scientists and engineers (RSEs). This will provide the potential source for R&D activities and to meet the targeted ratio of 50 RSE per 10,000 labour force in 2010.

11.66 Greater collaboration in research will be undertaken between public institutions of higher education and the local industry and research institutes as well as with reputable foreign research institutions, universities and firms. Private institutions of higher education will be encouraged to collaborate in research with public institutions of higher education. *Universiti Malaya, Universiti Putra Malaysia, Universiti Kebangsaan Malaysia and Universiti Sains Malaysia* will be designated as research universities. These universities will be further developed to be at par with world renowned universities.

11.67 *Developing Regional Centre of Excellence for Education and Training.* Efforts will be intensified to develop Malaysia into a regional centre for excellence in education and training through smart public-private partnership. A dedicated agency will be established to promote and export higher education through more strategic marketing and branding of educational products in order to attract a target of 100,000 foreign students at all levels including the school level by 2010. Private education and training providers will be required to enhance their quality as well as specialise and offer more high-end courses with competitive fee structures to attract foreign students.

Skills Training Programme

11.68 An adaptable, trainable and multi-skilled workforce is required as industries leverage on technological advancements, new management systems and production methods to increase their competitive edge in the global market. Such a workforce is also a prerequisite to enhance Malaysia's competitiveness in attracting foreign direct investment and encourage reinvestment. During the Plan period, the capacity and efficiency of the training delivery system will be enhanced by expanding public training institutions, increasing the number of advanced training courses offered, strengthening quality assurance and encouraging greater private sector participation.

11.69 *Increasing Accessibility.* Access to industrial skills training will be increased to expand the supply of highly skilled human resource, particularly at diploma and advanced diploma levels. The capacity of advanced training institutions will be expanded and upgraded and training programmes will be redesigned to meet the increasing demand for skilled workers with entrepreneurial skills. Private training providers will continue to complement Government efforts through the provision of quality training.

11.70 The implementation of the NDTs will be intensified to double the intake of trainees each year through increased participation of industries, particularly SMEs. The coverage of the NDTs will also be expanded to include new courses.

11.71 *Quality Improvement.* The quality of industrial skills training will be enhanced through accelerating the development of market-driven curriculum, which is based on the new NOSS, strengthening collaboration with industry, improving the quality of instructors, reviewing the accreditation procedure of the training providers and assessment method for trainees and expanding the application of e-learning. In addition, to improve the planning, designing and implementation of training programmes, the management information system in training agencies will be strengthened and the National Advisory Council on Education and Training will be established.

Holistic Human Capital Development

11.72 *High Performance Culture.* As the nation progresses to become a developed nation as envisioned in Vision 2020, efforts will be intensified to develop knowledge workers who are competitive, flexible, dynamic and performance-oriented. Creating an environment that supports the development of such individuals is equally crucial. During the Plan period, the development of a high performance culture in all spheres, from schools to the workplace, will also be emphasised. More performance-based elements will be incorporated including in public sector employment, entrepreneur development programmes and R&D grants.

11.73 *Progressive Outlook, Strong Moral and Ethics.* Human capital development programmes that emphasise ethics, moral and spiritual values will be implemented. *Islam Hadhari* will be promoted to nurture a progressive developmental outlook in society. Programmes to develop a moral and ethical society will be made an integral and critical part at all levels of development planning to complement the physical development programmes as well as enhance national unity. In this regard, values of tolerance and moderation as well as a sense of belonging and pride in the nation, which are crucial in a multi racial country will be given emphasis.

11.74 Programmes to internalise moral and ethical values will be wide in coverage encompassing all segments and age groups in society. The implementation of these programmes will also be broad-based involving family and religious institutions, educational and training institutions, the workplace and community as well as media. Employers will be encouraged to develop a corporate code of ethics and design a suitable implementing mechanism to give effect to the code. In addition, greater emphasis will be given to enhance appreciation for tradition and heritage.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

11.75 The development of human capital will be undertaken by the Ministry of Education (MOE), Ministry of Higher Education (MOHE), Ministry of Human Resources (MOHR), Ministry of Entrepreneur and Co-operative Development (MECD) and Ministry of Youth and Sports (MOYS). The MOE will be responsible for providing greater access to quality pre-school, primary and secondary education while the MOHE will be responsible for increasing access to quality tertiary education. Training programmes to enhance skills of the labour force will be undertaken by the MECD, MOHR as well as MOYS.

11.76 In line with the greater focus on human capital development, a total of RM45.1 billion will be allocated during the Ninth Plan period to implement the various education and training programmes, as shown in *Table 11-8*.

TABLE 11-8

DEVELOPMENT EXPENDITURE AND ALLOCATION FOR EDUCATION AND TRAINING, 2001-2010 (RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|---|----------------------------|---------------------------|
| Education | 37,922.0 | 40,356.5 |
| Pre-school | 215.7 | 807.3 |
| Primary Education | 5,369.3 | 4,837.3 |
| Secondary Education | 8,748.1 | 6,792.8 |
| Government & Government-aided Schools (Academic) | 7,931.2 | 5,549.1 |
| MARA Junior Science Colleges | 433.1 | 614.5 |
| Government & Government-aided Schools (Technical & Vocational) | 383.8 | 629.2 |
| Tertiary Education | 13,403.9 | 16,069.0 |
| Teacher Education | 1,368.1 | 577.7 |
| Other Educational Support Programmes | 8,816.9 | 11,272.4 |
| Training | 4,450.9 | 4,792.6 |
| Industrial Training | 3,930.6 | 4,103.6 |
| Commercial Training | 158.6 | 179.5 |
| Management Training | 361.7 | 509.5 |
| Total | 42,372.9 | 45,149.1 |

Source: Economic Planning Unit

V. CONCLUSION

11.77 During the Eighth Plan period, the quality of the labour force improved with the increasing supply of educated and skilled human resource due to the expansion in the capacity of education and training institutions. During the Ninth Plan period, human capital development will be one of the main thrusts as envisaged in the National Mission. Greater focus will be given to holistic human capital development encompassing knowledge and skills, progressive attitude as well as strong moral and ethical values. Lifelong learning programmes will be expanded. The inculcation of entrepreneurial values will be intensified to promote self-employment. Measures will be undertaken to upgrade S&T capabilities to drive innovation. Smart partnerships and collaboration among stakeholders in education, training and lifelong learning will be intensified. Greater private sector participation in the provision of quality education and training will be encouraged. The education, training and lifelong learning delivery systems will be improved to enhance the quality of human capital and produce the towering individuals needed to meet the challenges of development and drive a knowledge-based economy.



HARNESSING SCIENCE, TECHNOLOGY AND INNOVATION

12

I. INTRODUCTION

12.01 During the Eighth Plan period, efforts were focused on strengthening science and technology (S&T) capability and capacity to support productivity-driven growth and improve competitiveness. In this regard, various measures were implemented to increase the diffusion and application of technology, promote commercialisation of research and expand S&T human resource. The private sector continued to contribute towards the expansion of research and innovation activities, particularly in high value added industries. Arising from the collective efforts of the public and private sectors, the S&T indicators registered improvements in terms of research intensity and scientific and technological human resource.

12.02 Taking into cognisance the increasingly challenging and competitive global environment, the development thrust for the Ninth Plan period will be to harness science, technology and innovation (STI) as a key driver in raising national capacity to acquire and utilise knowledge and foster innovation. Towards this end, a holistic approach to strengthen the National Innovation System (NIS) will be adopted to enhance productivity and competitiveness. The advancement, dissemination and application of knowledge and technologies will be intensified to add value to the nation's diversified economic activities. Higher priority will be given to market-oriented research and development (R&D) and increasing the rate of commercialisation. Concerted efforts will also be geared towards enhancing human capital to strengthen technological capability and capacity to support innovation-led growth.

II. PROGRESS, 2001-2005

12.03 The S&T policy continued to lay the foundation for the attainment of a scientific and technologically advanced society and support the national development strategy of productivity-driven growth. In this regard, the STI input indicators such as R&D expenditure and number of researchers as well as output indicators in terms of number of patents granted and publications, recorded improvements.

National R&D Expenditure

12.04 During the Plan period, R&D was given due priority as reflected by the increase in national gross expenditure on R&D (GERD) from RM1.7 billion in 2000 to RM4.3 billion in 2005, at an average annual rate of 20.8 per cent¹, as shown in *Table 12-1*. This rate of growth in GERD exceeded the average growth rate of 20.4 per cent per annum required to achieve the GERD to gross domestic product (GDP) ratio of 1.5 per cent by 2010. The ratio of GERD to GDP, a measure of research intensity, increased from 0.5 per cent in 2000 to 0.9 per cent in 2005.

TABLE 12-1
SCIENCE, TECHNOLOGY AND INNOVATION INDICATORS,
2000-2005

| <i>Indicator</i> | <i>2000</i> | <i>2002</i> | <i>2005^e</i> |
|---|-------------|-------------|-------------------------|
| National Gross Expenditure on R&D (RM million) | 1,671.5 | 2,500.6 | 4,300 |
| Public | 703.6 | 867.5 | 1,500 |
| Private | 967.9 | 1,633.1 | 2,800 |
| National Gross R&D Expenditure (% to GDP) | 0.5 | 0.7 | 0.9 |
| Number of Researchers | 15,022 | 17,790 | 27,500 |
| Number of Researchers per 10,000 Labour Force | 15.6 | 18.0 | 25.0 |
| Proportion of Time Spent on R&D (FTE ¹) | 43 | 43 | 55 |
| Total Patents Filed | 6,227 | 4,937 | 6,286 |
| Resident | 206 | 322 | 522 |
| Non-resident | 6,021 | 4,615 | 5,764 |
| Total Patents Granted | 405 | 1,492 | 2,508 |
| Resident | 24 | 32 | 37 |
| Non-resident | 381 | 1,460 | 2,471 |
| Publication in International Journals | 1,930 | 2,016 | 2,293 |
| Royalties (RM million) | | | |
| Receipts | 70.4 | 74.1 | 98.0 |
| Payments | 2,268.1 | 2,399.0 | 5,851.0 |
| Net | -2,197.7 | -2,324.9 | -5,753.0 |

Source: Ministry of Science, Technology and Innovation, Bank Negara Malaysia and Department of Statistics

Notes: ^e estimates

¹ Full Time Equivalent (FTE) is based on the actual proportion of time spent on R&D.

¹ The National Survey of Research and Development 2002 and 2004 Reports and projections.

Technology Inflows

12.05 There was a widening deficit in terms of technology, royalties and fees as reflected in the balance of payments. Although foreign technology acquisition represented a means to expedite technological advancement, the increased deficit in royalties and fees underscored the need to step up efforts towards enhancing homegrown technological capabilities.

Public Sector R&D Programme

12.06 In accordance with the priority given to R&D, the funding for R&D grant schemes expanded by 59.9 per cent compared with the Seventh Plan period. With this increase, a total of RM1.4 billion was allocated for R&D during the Eighth Plan period. Of this total, RM1.0 billion was provided for direct public sector involvement in R&D while the remaining RM430 million was allocated to enhance private sector R&D through the Industry Research and Development Grant Scheme (IGS), MSC Research and Development Grant Scheme (MGS) and Demonstrator Applications Grant Scheme (DAGS).

12.07 The Intensification of Research in Priority Areas (IRPA) funding mechanism was fine-tuned to ensure more effective and efficient implementation of research projects. During the Plan period, a total of 2,139 projects valued at RM836.9 million was approved under the IRPA programme, as shown in *Table 12-2*. An assessment of 1,233 IRPA projects implemented during the Plan period indicated, among others, the filing of 544 intellectual property rights (IPRs) such as patents, industrial designs, and copyrights as well as 4,872 publications including national

TABLE 12-2
IRPA PROGRAMME APPROVALS BY AREA OF RESEARCH,
2001-2005

| Area | Projects Approved | | Amount Approved | |
|---------------------------------|-------------------|--------------|-----------------|--------------|
| | Number | % | RM million | % |
| Science and Engineering | 576 | 26.9 | 137.1 | 16.4 |
| Agro-industry | 420 | 19.7 | 95.8 | 11.4 |
| Manufacturing and Construction | 311 | 14.5 | 358.9 | 42.9 |
| Health | 219 | 10.2 | 115.4 | 13.8 |
| Services and IT | 204 | 9.5 | 47.1 | 5.6 |
| Social | 151 | 7.1 | 21.4 | 2.6 |
| Environmental | 119 | 5.6 | 21.7 | 2.6 |
| Energy, Mineral and Geo-Science | 74 | 3.5 | 32.7 | 3.9 |
| Economics | 65 | 3.0 | 6.8 | 0.8 |
| Total | 2,139 | 100.0 | 836.9 | 100.0 |

Source: Ministry of Science, Technology and Innovation

and international papers. These projects also provided opportunities for capacity building and were instrumental in producing 92 Doctor of Philosophy (Ph.D) and 338 Masters graduates as well as enhancing the capabilities of 765 research staff in new and emerging technologies.

12.08 The Biotechnology R&D Grant Scheme established in 2001 under the National Biotechnology Directorate approved a total of RM95.3 million for 47 biotechnology research projects in priority areas such as molecular biology, agro-biotechnology and medical biotechnology. The Scientific Advancement Grant Allocation (SAGA) enabled promising researchers at institutions of higher education to work on basic research for capacity building and knowledge advancement in fundamental sciences. This was part of the overall endeavour towards realising the long-term objective of having Malaysians conferred the Nobel scientific award.

12.09 In an effort to encourage private sector participation in R&D activities, an allocation of RM127.1 million was approved under the IGS. An evaluation of the 65 completed IGS projects indicated that 26 projects or 40 per cent were commercialised with total sales of RM149.6 million while the remaining were in the process of further commercialisation. In addition, 24 IPRs in the form of patents, copyrights and trademarks were filed.

12.10 During the Plan period, MGS continued to provide assistance to innovative local companies to develop multimedia technologies and applications. The gains from the MGS included the commercialisation of 27 projects with total sales of RM198.5 million and listing of 12 MGS companies in the Malaysian Exchange of Securities Dealing and Automated Quotation (MESDAQ). To foster wider application of information and communications technology (ICT) at the community level and spur innovations, an allocation of RM79.3 million was approved for 51 projects under the DAGS. A number of these projects contributed towards bridging the digital divide including the *e-bario* and *e-pekak* projects which demonstrated the usage of ICT by a remote rural community in Sarawak, and improving ICT literacy among the deaf community, respectively.

Commercialisation of Research and Technology

12.11 An evaluation of R&D Projects funded under the IRPA Programme during the Seventh Malaysia Plan, revealed that only 3.4 per cent of the projects were commercialised during the Eighth Plan period. This indicated the need to provide more extensive assistance for downstream development of R&D initiatives. To expedite the rate of commercialisation, a package of programmes was put in place. The Commercialisation of Research and Development Fund (CRDF) facilitated the development of a number of new products and production processes as well as assisted participating companies to start-up production capacity. In addition, the Technology Acquisition Fund (TAF) provided assistance to companies to acquire strategic foreign technologies for further value creation.

12.12 As part of efforts to accelerate commercialisation of R&D findings, new fiscal incentives such as pioneer status for 10 years and tax deductions equivalent to actual investment were made available. To promote commercialisation of R&D in agriculture by the private sector, a fund of RM300 million was established in 2005. The research management and commercialisation unit of universities and research institutions were strengthened to increase the uptake of commercialisation of public sector R&D findings.

Indigenous Capacity Building in Key Technologies

12.13 In line with the Second Science and Technology Policy (STP2) and the Second Industrial Master Plan (IMP2), efforts were intensified to strengthen indigenous capacity and capability in key technology areas. Emphasis was given to capacity reinforcement of key technologies, particularly in biotechnology, ICT, advanced manufacturing, advanced materials, aerospace-related technology and nanotechnology.

12.14 *Biotechnology.* To support the development of the biotechnology industry and enhance synergy among the key stakeholders, three laboratories were established. These laboratories were in the areas of agro-biotechnology at the Malaysian Agricultural Research and Development Institute (MARDI), genomics and molecular biology at the *Universiti Kebangsaan Malaysia* (UKM) as well as pharmaceuticals and nutraceuticals at the *Universiti Putra Malaysia* (UPM). These initiatives were boosted with the launching of the National Biotechnology Policy in April 2005.

12.15 *Information and Communications Technology.* As part of efforts to enhance domestic capabilities in ICT application and development, the R&D focus areas included pervasive computing, cyberspace security as well as semiconductor and microelectronics. In the area of semiconductors and microelectronics, R&D activities included semiconductor processes such as fabrication, test and failure analysis as well as digital and analogue design of integrated circuit (IC), and advanced microelectronics.

12.16 During the Plan period, *advanced manufacturing* technology was given emphasis to enhance competitiveness of the manufacturing sector. The technology services offered included rapid prototyping and systems development through contract research, consultancy and training programmes. Recognising the importance of *advanced materials* to industrial competitiveness, the Advanced Materials Research Centre (AMREC) and several other research institutions and universities conducted R&D on a wide range of advanced materials for industrial applications.

12.17 *Aerospace-related technology* continued to be given due priority to strengthen technological development capability and generate new sources of growth. The National Micro-Satellite Programme and TIUNGSAT-1 provided the

foundation towards developing the capability and potential in the field of aerospace-related technology. In addition, a mission operations facility was set up in 2005 to enable the command and control of national satellites.

12.18 *Nanotechnology*. Recognising the potential impact of nanotechnology on a wide range of industries, efforts were focused on capacity building in nanoscience and nanotechnology research. The areas of nanotechnology R&D undertaken were related to nanoparticles, micro-machining and fabrication as well as sensors for electronics, communications, automotive and chemicals industries.

Innovation and Intellectual Property

12.19 In view of the significant role of patents in promoting innovation and serving as a source of new product development, greater emphasis was placed on the generation of intellectual property (IP). In this regard, the number of patents filed by residents increased from 206 in 2000 to 522 in 2005. The number of patents granted to residents increased from 24 in 2000 to 37 in 2005. Recognising the need to strengthen the patent registration and management system, the Intellectual Property Corporation of Malaysia (MyIPO) was established in 2003.

Strengthening Technological Capability of SMEs

12.20 Various measures were undertaken to strengthen the technological capability of the small and medium enterprises (SMEs). In this regard, a number of technology and research-based agencies provided extension services, including business and technical skills training as well as technical consultations to assist new and existing SMEs. Facilities and funding were also made available to strengthen R&D capability, design capacity and prototyping activities for potential commercialisation products and processes to produce higher value-added products. These activities contributed towards the enhancement of technological capabilities of participating SMEs, especially in the provision of high quality parts and components to a number of industries.

Incubators for New Technology-based Enterprise Creation

12.21 During the Plan period, technology incubation was given emphasis to serve as catalysts for the creation and nurturing of new technology-based enterprises. In this regard, technology incubator programmes were implemented by SIRIM Berhad, Technology Park Malaysia (TPM), Malaysian Technology Development Corporation (MTDC), Multimedia Development Corporation (MDC) and Kulim Hi-Tech Park. Several institutions of higher education such as *Universiti Sains Malaysia* (USM) and *Universiti Teknologi Malaysia* (UTM) also established incubator programmes to commercialise their R&D output. During the Plan period, a total of 400 companies benefited from the services provided such as shared facilities, technical assistance and entrepreneur development.

Standardisation and Quality Assurance

12.22 During the Plan period, greater emphasis was placed on meeting international standards through testing, measurement and quality assurance. A milestone was achieved in standardisation efforts with the implementation of the National Standards Strategy and Action Plan in 2004. The Plan aimed at further improving productivity and competitiveness as well as protecting consumer interests and the environment.

12.23 The Department of Standards Malaysia (DSM) became a signatory to mutual recognition arrangements for accreditation, standards and measurements under a number of international and regional cooperation programmes. Such arrangements provided the recognition and acceptance of test and calibration analyses reports as well as quality certificates issued by conformity assessment bodies that were accredited by DSM.

S&T Human Resource

12.24 In line with the efforts to increase human resource with S&T knowledge and skills, the number of S&T graduates increased at an average annual rate of 25.3 per cent during the Plan period. As a proportion of total output, S&T graduates increased from 40.1 per cent in 2000 to 52.4 per cent in 2005, which increased the potential pool of research scientists and engineers (RSEs).

12.25 Recognising the need to enhance S&T capacity and capability, the S&T human resource development programme was implemented. A total of RM116 million was allocated to fund the National Science Fellowship (NSF), the Post-Doctoral Research Fellowship, Post-Graduate Grant Scheme for In-Service Personnel, Training Specialist and Consultant Grant Scheme and Attachment for Researchers. Another RM61 million was allocated to public institutions of higher education to fund post-graduate students in key technology areas.

III. PROSPECTS, 2006-2010

12.26 In an increasingly competitive global economy, the ability to leverage on STI will become strategically more important in national development. Rapid advancements and the pervasive role of STI in the global economy requires that the nation build upon and enhance its capability and capacity in STI in order to tap into potential wealth creating opportunities. Therefore, the Government will place greater emphasis on capacity building and strengthening the NIS to build upon leading-edge technologies and know-how. Towards this end, the target will be to increase national R&D expenditure to 1.5 per cent of GDP by 2010 with private sector expenditure of more than 70 per cent. In addition, measures will be undertaken to achieve the target of 50 RSEs per 10,000 labour force by 2010. A focused approach based on niche areas will be adopted to

build a critical mass of technopreneurs to increase the rate of commercialisation of R&D and create more S&T-based companies.

STI Development Thrusts

12.27 The thrust for STI development during the Ninth Plan period will be to contribute towards innovation-led growth as well as enhance productivity and competitiveness for wealth creation and social well-being. Efforts will be intensified towards mastering and harnessing S&T for widespread applications in generating knowledge, innovation and growth. In this regard, concerted efforts will be undertaken to implement the following strategies:

- ❑ *strengthening the NIS to contribute more effectively towards the development and diffusion of new technologies to enhance productivity, competitiveness and growth;*
- ❑ *enhancing S&T human capital as a principal source of innovation and competitive advantage;*
- ❑ *promoting technopreneurship to enhance national innovative capacity and increasing the number of S&T-based companies;*
- ❑ *enhancing technological capability and capacity of SMEs to meet the challenges of globalisation and increasing competition;*
- ❑ *prioritising and consolidating R&D and commercialisation initiatives to ensure more effective resource allocation and increase the rate of commercialisation of R&D and returns to investment;*
- ❑ *focussing on targeted R&D to generate new sources of growth;*
- ❑ *promoting standardisation and quality assurance for competitiveness and consumer well-being;*
- ❑ *increasing STI awareness to contribute towards nurturing a culture of creativity and innovation; and*
- ❑ *improving international linkages in STI development to tap global knowledge.*

Strengthening NIS

12.28 Recognising that the nation's growth potential increasingly hinges on the effectiveness of the innovation capacity and capability in creating, diffusing and using knowledge, a holistic approach will be adopted to strengthen the NIS. Towards this end, the National Innovation Council will be established to provide leadership in the formulation of policies and key strategies to stimulate innovation at national and firm levels and contribute to the development of dynamic innovative

clusters. The NIS Framework will take into consideration successful models and best practices of other technologically-advanced countries and adapt these to strengthen the NIS.

12.29 During the Plan period, efforts will be geared towards enhancing the capability of research institutions and universities to generate technologies required for product and process innovations as well as improving mechanisms for effective technology transfer. In this regard, R&D collaboration with the industry will be intensified to enhance productivity and technological development of companies as well as contribute towards the revenue of universities and research institutions. The universities will, however, continue to conduct fundamental research to provide the basis for advancement in scientific knowledge and technology applications. Consolidation of STI infrastructure will be undertaken to ensure optimum utilisation of available facilities and equipment. An evaluation of the technology parks, incubator centres as well as research facilities of universities and research institutions will be undertaken to increase their effectiveness to commercialise R&D and create spin-off companies.

12.30 Realising that financing is a key enabling factor for innovation, measures will be undertaken to increase access to financing and improve funding mechanisms. The R&D and commercialisation grant schemes will be augmented after taking into account the entire value chain of activities from research to market. This will be complemented by efforts to develop viable business and financing models for commercialisation of R&D findings. In addition, more venture capital will be mobilised to spawn high technology companies.

12.31 To further encourage innovation, technology transfer and commercialisation, the existing IP framework will be strengthened. Measures will be undertaken to enhance IP support facilities and shorten the IP approval process. The technology licensing offices of research institutions and universities will be strengthened. As part of efforts to increase the rate of commercialisation of public research findings, the mechanism on assignment of IP and sharing of royalties will be reviewed. This review will be aimed at, amongst others, to increase the uptake of R&D by industry as well as provide rewards for innovation and entrepreneurship.

Enhancing S&T Human Capital

12.32 Realising that human resource in S&T form the core of scientific discovery and innovation, efforts will be intensified to increase human capital investment and mastery of knowledge in accordance with the fourth principle of *Islam Hadhari*. To achieve the target of 50 RSEs per 10,000 labour force by the year 2010, measures will be undertaken to increase the number of RSEs at an average annual rate of 17.7 per cent. To generate demand for RSEs, centres of excellence in emerging technology areas will be set up and the R&D capacity of universities and research institutions will be upgraded. More technology-

based companies will be created and R&D collaboration between universities, research institutions and the private sector, particularly government-linked companies (GLCs) and multinational corporations (MNCs), will be enhanced.

12.33 As part of efforts to provide a more conducive environment to raise the level of interest in research work as well as to encourage innovation and commercialisation, researchers will be allowed to hold key positions and/or own equity in spin-off companies. A flexible mechanism to provide options for researchers to return to their former post at the relevant institutions will be considered. Upon reaching the retirement age, due consideration will be given to extend services of researchers in order to ensure completion of key R&D projects, as well as enable researchers with proven track record to continue contributing towards national R&D and innovation activities.

12.34 To optimise the utilisation of expertise and core competencies of RSEs, measures will be undertaken, particularly by public research institutions and universities, to increase the FTE of RSEs to 70 per cent. This will involve, among others, organisational restructuring to reduce their administrative workload and further improvements in the scheme of service for RSEs to enable them to be promoted and remain as researchers. These initiatives will be complemented by the move to designate selected public universities as research universities, which will contribute towards the increase in FTE and demand for researchers.

12.35 The S&T human resource development programme will be fine-tuned to ensure the development of key competencies in strategic research areas to meet national and industry needs. In this regard, a study on the S&T human resource requirements will be conducted and a directory for RSEs will be established to facilitate strategic planning as well as to ensure the development of a critical mass of RSEs in key technology areas. To increase the capacity and capability of R&D talent pool, dedicated centres of excellence for targeted areas of research will be established. This will be done by strengthening existing laboratories or institutes that have high potential and proven track records. These centres of excellence will be able to tap students of institutions of higher education to assist in research activities and provide employment opportunities for S&T graduates.

12.36 Post-graduate programmes will be given greater emphasis to provide the necessary support for R&D projects as well as enhance technology transfer and development. The curriculum of institutions of higher education will be continuously reviewed to improve the quality of science, engineering and management programmes. In addition, courses that combine hard technical, science and engineering subjects with soft skills development including management of technology and innovation programmes will be encouraged.

12.37 Considering that schools and education form the basic building block for S&T human resource, the S&T curricula at primary and secondary levels of education will be continuously reviewed to meet national and industry requirements as well as nurture a culture of innovation and creativity. In addition, efforts will be intensified to provide training to teaching professionals to enable them to keep abreast of the latest scientific and technological development.

12.38 To support the human resource requirements along the entire innovation value-chain, programmes will be put in place to develop an adequate number of technopreneurs, technology licensing officers and business managers. These programmes will be geared towards addressing the gaps in human resource with competencies and skills in risk assessment, technology evaluation and business management. In addition, the skills of supervisors, technicians and production workers will be upgraded, especially in handling advanced technological equipment and laboratory facilities.

12.39 To complement the initiatives of capacity building, the National Brain Gain Programme will be spearheaded by a focal point at the Ministry of Science, Technology and Innovation which will interface directly with RSEs abroad and coordinate the needs of the industry, research institutions and universities. In this regard, a mechanism and financial modalities will be put in place to facilitate the placement of top-notch overseas RSEs into positions, research projects and institutions that are suitable to their expertise as well as provide relocation support, where necessary. The RSEs could serve as mentors or guide selected R&D projects to accelerate technology transfer and enhance technological capability.

Promoting Technopreneurship

12.40 Technopreneurs and new technology-based enterprises are key agents in the NIS. In this regard, the technology incubator programme will be enhanced to develop a sustainable pool of indigenous technopreneurs and technology-based enterprises. It will be integrated into the broader strategy of enhancing the utilisation of new knowledge and technology produced by research institutions and universities for the development of new products and services. The incubators will place greater emphasis on nurturing services such as financial and risk management as well as IP management. In addition, networking and technical services will be provided.

12.41 The Government will work closely with the relevant industry associations involved in developing and nurturing entrepreneurs to further enhance the effectiveness of the incubator programmes as a key vehicle to promote technopreneurship. In this regard, efforts will be made to develop capacity and capability in incubator management and the promotion of best practices in incubator operations.

12.42 As part of efforts to nurture a Bumiputera S&T community for wealth creation, the technopreneurship development programme will be enhanced. In this context, Bumiputera RSEs will be provided with mentoring services such as technology evaluation and business plan development. Technology incubation and business matching initiatives will be intensified to commercialise R&D findings by Bumiputera RSEs through the establishment of start up companies or technology licensing.

Enhancing Technological Capability and Capacity of SMEs

12.43 During the Plan period, high priority will be accorded to strengthen the technological capability and capacity of SMEs to meet the challenges of globalisation and increasing competition. Towards this end, strategies will be directed at acquiring technologies that will propel SMEs up the value chain in the manufacturing, agriculture and services sectors. Increased emphasis will also be placed on technology development capabilities to establish technological leadership, achieve product and services differentiation as well as to create a greater number of local technology-based companies.

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12.44 To fast-track domestic technology development capabilities of SMEs, specific programmes will be implemented to nurture local SMEs as R&D partners to tap the opportunities of R&D outsourcing by MNCs and GLCs. Measures will also be undertaken to encourage collaborative ventures among MNCs, GLCs and SMEs, to facilitate technology transfer and skills development as well as marketing. More targeted R&D projects will be undertaken by universities and research institutions in collaboration with SMEs.

12.45 During the Plan period, technopreneur development will be expanded to support S&T-based SMEs to benefit from homegrown technologies, particularly Bumiputera SMEs. This will be achieved through, among others, the provision of appropriate infrastructure, transfer of technology and better access to financing. New support mechanisms will be introduced to enhance outreach programmes for SMEs including technical, design, marketing and business advisory services.

Prioritising and Consolidating R&D and Commercialisation Initiatives

12.46 During the Plan period, efforts will be intensified to commercialise at least 10 per cent of the public-funded R&D projects. Towards this end, measures will be undertaken to strengthen and address existing gaps along the entire value chain of bringing innovative ideas to market. The R&D and commercialisation funding mechanism will be realigned to provide end-to-end financing and resources will be redirected towards more demand-driven R&D to increase the rate of commercialisation. This includes the setting up of the ScienceFund and TechnoFund as well as enhancements to the CRDF.

12.47 The ScienceFund is a R&D grant scheme, which will provide funding from basic research to the development of laboratory-scale prototype. The TechnoFund is a grant scheme to develop technologies for commercialisation. The scope of TechnoFund will include development of commercial-ready prototype, pilot plant and incubation activities to address the funding gap of pre-commercialisation activities.

12.48 The CRDF will continue to provide matching grants to increase the rate of commercialisation of R&D outcomes. As part of efforts to enhance the CRDF, higher value added nurturing services will be provided to the recipients. The CRDF will include a component for competitive bidding by universities and research institutions to conduct pre-feasibility studies on R&D results. This will enhance the marketability of public R&D findings and thereby increase the commercialisation potential.

12.49 In order to yield maximum benefits, well-designed mechanisms for effective management of R&D, generation of intellectual capital and commercialisation will be put in place. Greater emphasis will be directed towards conducting technology scanning, market intelligence and feasibility studies to guide research priorities and allocations to enhance value creation from investments in R&D. The participation of the industry and venture capitalists in the process of determining research priorities will be enhanced. The approval of R&D and commercialisation projects will take into account critical success factors such as technical and market feasibility, risk management, adequate human and financial resources, institutional support and viable commercialisation and business models.

12.50 To ensure the smooth progress and successful completion of projects, measures will be undertaken to strengthen the coordination, monitoring and evaluation of R&D and commercialisation of projects. In addition, suitable targets and milestones for R&D and commercialisation projects will be established to facilitate an objective and systematic assessment of these projects. The disbursement of funds at key milestone stages will be based on the achievement of these well-defined targets.

Promoting Targeted Technologies for New Sources of Growth

12.51 During the Plan period, greater emphasis will be placed on targeted R&D to build competence and specialisation in emerging technologies to generate new sources of growth. To avoid the spreading of resources too thinly across a broad range of areas, priority will be given towards developing a few niche areas. In this regard, focus will be directed at biotechnology, advanced materials, advanced manufacturing, ICT and nanotechnology to generate 300 S&T-based companies through public funded R&D and 50 companies with global partnerships. To fully harness the benefits of technology development, diffusion and application

in targeted growth areas, a cluster-based approach will be adopted and collaboration between the research community and industry players will be enhanced through improved mechanisms and processes.

Biotechnology

12.52 In moving forward, biotechnology will be positioned as a new growth area to enhance economic prosperity and social well-being. Towards this end, concerted efforts will be geared towards accelerating the development of the biotechnology industry based on the strategic thrusts and directions of the National Biotechnology Policy. Accordingly, the identified focus areas, namely, agricultural, healthcare and industrial biotechnologies will be developed by leveraging on the nation's strength and competitive advantage.

Information and Communications Technology

12.53 During the Plan period, greater efforts will be undertaken to leverage on ICT as an enabler to enhance productivity and competitiveness as well as a driver to harness new sources of growth. Towards this end, the technology focus areas that will be emphasised include semiconductors and microelectronics; Internet Protocol version 6 (IPv6), grid computing and language engineering; and information security.

12.54 *Semiconductors and Microelectronics.* As part of efforts to shift towards high value added activities, R&D will be directed towards development of IC design and advanced chips packaging. In this regard, micro-electro-mechanical systems (MEMS) design will be developed for the fabrication of various devices and applications such as radio frequency (RF) switches, resonators, accelerometers and sensors. R&D in mobile communications will be conducted to increase local content and applications to cellular users. The use of wireless broadband such as third generation (3G) and general packet radio service (GPRS) will further enable interactive applications development and enhance the growth of communications services.

12.55 *IPv6, Grid Computing and Language Engineering.* The anticipated migration from IPv4 to IPv6 will spur R&D activities in the areas of IPv6 compatible applications, quality and security, which are new features available within the IPv6 protocol. Grid computing will be given emphasis to facilitate advanced informatics research, which includes language identification, statistical techniques of data classification as well as various medical and biotechnology research.

12.56 *Information Security.* To realise the full potential of ICT, efforts will be intensified to mitigate the impact of information security threats and breaches. In this regard, areas of research in ICT security will be targeted at preserving e-sovereignty and establishing trust within e-commerce. Efforts will be undertaken

to develop affordable and effective authentication engines, secure communications, high availability systems, trusted identity, secure applications and trusted systems to ensure confidentiality, integrity and availability of information.

Advanced Materials and Manufacturing

12.57 Efforts will be intensified to develop new and improved advanced materials for applications by a diverse range of industries. The utilisation of *advanced materials* is expected to benefit industries by, among others, extending equipment life, reducing maintenance cost as well as increasing energy efficiency and reliability of products. The R&D focus areas for advanced materials include photonic materials for the telecommunications industry as well as metal and polymer composite materials for defense, aerospace, agriculture and automotive industries. Emphasis will also be directed at developing new materials for energy storage devices. Efforts will be geared towards promoting the use of advanced technologies, engineering, and processes to enhance competitiveness and create higher value added products. In order to support *advanced manufacturing* as a source of growth, R&D in areas such as control technologies, flexible manufacturing systems (FMS), computer integrated manufacturing (CIM) and advanced process engineering will be undertaken.

Nanotechnology

12.58 During the Plan period, R&D in nanotechnology will focus on areas with high potential for application in local industries. These include nanostructured catalysts for environment-friendly hydrocarbon fuels, nanostructured membranes for waste water treatment and MEMS for medical diagnostic devices. The R&D capacity in nanotechnology will be enhanced to develop a strong knowledge base among researchers to enable them to participate in international networks and leverage on the global knowledge.

Promoting Standardisation and Quality Assurance

12.59 Standards and conformance are critical tools to improve industrial efficiency and productivity as well as raise level of competitiveness of exports and acceptance by consumers. During the Plan period, the implementation of the National Standards Strategy and Action Plan will be expedited, particularly the development of relevant Malaysian standards. In addition, Malaysian standards will be harmonised with international standards to ensure acceptability of Malaysian products and services in overseas markets.

12.60 In response to industry needs, accreditation schemes will be further developed and expanded to include more areas such as electromagnetic compatibility (EMC), information security management system (ISMS) and Hazard Analysis and Critical Control Point (HACCP). The availability of these schemes

will enable conformity assessment bodies to expand their scope of certification and testing as well as seek accreditation, thus ensuring the credibility and competency of the services offered to industries. To provide wider support to industries to be global trade players, the Government will continue to seek acceptance into the relevant international accreditation bodies for mutual recognition arrangements of regional and international accreditation organisations in these expanded areas.

12.61 Malaysia will remain vigilant on the emergence of new instruments of trade and international business, which can impact the competitiveness of exports to the global market. In particular, the use of eco-labels and safety standards are expected to become mandatory in the face of growing concern over the environment and public health. In order to meet these requirements, the regulatory and institutional framework will be strengthened to implement an eco-labelling scheme, which identifies products that minimise the burden on the environment.

Increasing STI Awareness

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12.62 As part of efforts to create a culture of creativity and innovation, focus will be directed at promoting greater awareness, interest and understanding of STI at all levels of society, particularly at the school level. Campaigns will be organised to increase awareness on the contribution of STI towards creating wealth and improving quality of life as well as encourage S&T as a preferred career choice. New approaches will be adopted to coordinate promotional activities by various government agencies, in collaboration with the private sector and non-governmental organisations (NGOs), to create a greater impact on targeted groups such as school children and rural population.

12.63 The exhibition gallery of the National Science Centre in Kuala Lumpur will be upgraded to include new exhibits to attract more visitors. A new regional science centre will also be established in Kedah. In addition, the dedicated programmes for schools, and children in rural areas to visit the science centres, will be expanded.

Improving International Linkages in STI Development

12.64 Given the increasingly interdependent global economy, international networking and collaboration will remain an important strategy to enhance capabilities in STI. In this regard, international strategic partnerships will continue to be forged to enhance sharing of knowledge and resources. The existing bilateral cooperation arrangements, covering ASEAN as well as other regional and multilateral cooperation programmes on S&T will be strengthened. The various memoranda of understanding and bilateral cooperation agreements will be translated into more beneficial outputs in the interest of STI development in Malaysia.

12.65 As part of efforts to tap global knowledge, a more coordinated effort will be undertaken to establish linkages with world-renowned institutions in targeted areas of excellence and competence. Towards this end, greater focus will be given to facilitate collaborative research programmes, research attachment, post-doctoral training and the hosting of international conferences in strategic fields. Malaysian researchers will be encouraged to participate actively in major global research programmes organised by regional and international S&T organisations.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

12.66 The Ministry of Science, Technology and Innovation is the lead agency in the implementation of the R&D and commercialisation programmes in collaboration with other key ministries and agencies. The Ministry of Higher Education and the relevant universities and training institutions will implement programmes to ensure an adequate supply of S&T human resource.

TABLE 12-3
**DEVELOPMENT EXPENDITURE AND ALLOCATION FOR SCIENCE,
TECHNOLOGY AND INNOVATION, 2001-2010**
(RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|---|----------------------------|---------------------------|
| Research and Development (R&D) | 926.6 | 1,581.6 |
| R&D Grant ¹ | 926.6 | - |
| ScienceFund/Fundamental Research | - | 1,581.6 |
| Technology Acquisition Fund (TAF) | 70.7 | 142.5 |
| Commercialisation of Technology | 267.5 | 1,843.3 |
| Industry R&D Grant Scheme (IGS) | 197.0 | - |
| Commercialisation of Research and Development Fund (CRDF) | 30.5 | 115.0 |
| Technology Development and Incubator Programme ² | 40.0 | 228.3 |
| TechnoFund | - | 1,500.0 |
| S&T Human Resource Development and Awareness | 123.1 | 650.6 |
| S&T Infrastructure | 1,950.0 | 1,035.1 |
| Total | 3,337.9 | 5,253.1 |

Source : Economic Planning Unit

Notes: ¹ Include IRPA, SAGA, Biotechnology R&D, Malaysia-MIT Partnership Programme and Oceanography R&D.

² Include MTDC and MDC programmes.

12.67 For the Ninth Plan period, an allocation of RM5.3 billion will be provided for STI initiatives to strengthen the NIS, as shown in *Table 12-3*. In line with the focus towards downstream R&D activities and commercialisation, 67.9 per cent will be allocated for R&D, technology acquisition and commercialisation of research. Priority will also be accorded to develop S&T human resource, raise awareness on S&T and provide S&T infrastructure and facilities.

V. CONCLUSION

12.68 During the Eighth Plan period, measures were undertaken to strengthen the S&T policy framework and infrastructure to enhance productivity and competitiveness. For the Ninth Plan period, a more holistic approach will be adopted to strengthen the NIS and move the economy up the value chain. Concerted efforts will be directed at raising the technology, knowledge and innovation content across all sectors of the economy. The emphasis will be placed on addressing the gaps along the entire value chain of bringing research ideas to market. To encourage private sector participation in innovation as well as product and market development activities, matching grants, venture capital and improved incentives for R&D and technology acquisition will be made available. The S&T human resource development programme will be implemented to ensure the development of core competencies in key technology areas for value creating activities and meeting industry needs. To support the establishment of new technology-based enterprises, efforts will be geared towards promoting technopreneurship and enhancing technology incubator programmes. The successful implementation of these programmes will necessitate the mobilisation of collaborative efforts among the Government, industry and relevant stakeholders in a synergistic manner to maximise STI potential as a principal driver to raise the nation's capacity for knowledge and innovation as stated in the second thrust of the National Mission.



WOMEN AND DEVELOPMENT

13

I. INTRODUCTION

13.01 During the Eighth Plan period, women continued to make tangible contributions towards the social and economic development of the nation. Women attained higher levels of education, increased their participation in the labour force and were involved in various business activities.

13.02 During the Ninth Plan period, efforts will be undertaken to provide an enabling environment to ensure more effective participation of women in national development. Women will be equipped with the necessary skills and knowledge to enable them to be more competitive and versatile to meet the challenges of a knowledge-based economy.

II. PROGRESS, 2001-2005

13.03 Women participated and made contributions in various fields of national development, through greater participation in the labour market as well as improved access to education. These were made possible through, among others, changes to the legal and institutional framework, including an amendment to the Federal Constitution, increased employability through higher educational attainment as well as the implementation of gender-sensitive policies and programmes.

Population, Labour Force and Employment

13.04 The size of the female population increased at an average rate of 2.5 per cent per annum and accounted for 48.7 per cent of the total population in 2005, as shown in *Table 13-1*. The proportion of the female population aged 65 years and above increased from 2.1 per cent in 2000 to 2.3 per cent in 2005, largely due to improvements in life expectancy.

TABLE 13-1

POPULATION STRUCTURE BY GENDER, 2000 AND 2005

| | 2000 | | 2005 | |
|--------------------------------|---------------|--------------|---------------|--------------|
| | Number ('000) | % | Number ('000) | % |
| Population | 23,495 | 100.0 | 26,748 | 100.0 |
| Male | 11,981 | 51.0 | 13,728 | 51.3 |
| 0 - 14 years | 4,116 | 17.5 | 4,498 | 16.8 |
| 15 - 64 years | 7,429 | 31.6 | 8,690 | 32.5 |
| 65 and above | 436 | 1.9 | 540 | 2.0 |
| Female | 11,514 | 49.0 | 13,020 | 48.7 |
| 0 - 14 years | 3,887 | 16.5 | 4,222 | 15.8 |
| 15 - 64 years | 7,131 | 30.4 | 8,188 | 30.6 |
| 65 and above | 496 | 2.1 | 610 | 2.3 |
| Life Expectancy (years) | | | | |
| Male | | 70.0 | | 70.6 |
| Female | | 75.1 | | 76.4 |

Source: Economic Planning Unit

13.05 Women accounted for 48 per cent of the working age population of 15-64 years. During the Plan period, the female labour force participation rate increased from 44.7 per cent in 2000 to 45.7 per cent in 2005. The number of women employed during the Plan period increased from 3.3 million in 2000 to 3.9 million in 2005, as shown in *Table 13-2*. Its share to total employment increased from 35.6 per cent to 36.7 per cent during the same period. Women were mainly involved in the manufacturing, wholesale and retail trade as well as the agriculture sectors.

13.06 In terms of occupational structure, a higher percentage of women was employed in high-paying occupations, mainly due to improvements in their educational attainment. The proportion of women in the senior officials and managers category increased from 4.8 per cent in 2000 to 5.4 per cent in 2005, as shown in *Table 13-3*. In the professional category, women were mainly employed as doctors, dentists, lawyers and architects. A significant increase was also recorded in the services and sales workers category from 13.3 per cent in 2000 to 17.7 per cent in 2005 while the share of women in low-paying occupations declined, particularly in the plant and machine operators and assemblers category.

TABLE 13-2
**EMPLOYMENT BY GENDER AND SECTORS,
 2000 AND 2005**

| Sector | Number ('000) | | | | % | | | |
|--|----------------|----------------|----------------|----------------|--------------|--------------|--------------|--------------|
| | 2000 | | 2005 | | 2000 | | 2005 | |
| | Male | Female | Male | Female | Male | Female | Male | Female |
| Agriculture, Forestry, Livestock and Fishing | 1,030.3 | 392.7 | 1,046.9 | 358.8 | 17.3 | 11.9 | 15.2 | 9.0 |
| Mining and Quarrying | 36.5 | 5.3 | 39.9 | 2.8 | 0.6 | 0.2 | 0.6 | 0.1 |
| Manufacturing | 1,460.0 | 1,105.8 | 1,865.8 | 1,266.3 | 24.5 | 33.5 | 27.0 | 31.7 |
| Construction | 704.3 | 47.9 | 703.5 | 56.1 | 11.8 | 1.5 | 10.2 | 1.4 |
| Electricity, Gas and Water | 66.8 | 8.2 | 81.5 | 11.5 | 1.1 | 0.2 | 1.2 | 0.3 |
| Transport, Storage and Communications | 402.8 | 58.8 | 536.3 | 94.9 | 6.7 | 1.8 | 7.8 | 2.4 |
| Wholesale and Retail Trade, Hotels and Restaurants | 954.7 | 628.2 | 1,176.6 | 750.6 | 16.0 | 19.0 | 17.0 | 18.7 |
| Finance, Insurance, Real Estate and Business Services | 296.4 | 203.8 | 421.4 | 310.9 | 5.0 | 6.1 | 6.1 | 7.8 |
| Other Services | 1,019.0 | 853.1 | 1,026.6 | 1,144.4 | 17.0 | 25.8 | 14.9 | 28.6 |
| Total | 5,970.8 | 3,303.8 | 6,898.5 | 3,996.3 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Economic Planning Unit

TABLE 13-3
**EMPLOYMENT BY OCCUPATION AND GENDER,
 2000 AND 2005**
 (%)

| Occupational Category | 2000 | | 2005 | |
|--|--------------|--------------|--------------|--------------|
| | Male | Female | Male | Female |
| Senior Officials and Managers | 8.0 | 4.8 | 9.4 | 5.4 |
| Professionals | 5.1 | 7.2 | 5.5 | 7.5 |
| Technicians and Associate Professionals | 10.9 | 14.1 | 12.6 | 14.0 |
| Clerical Workers | 5.2 | 18.3 | 4.6 | 17.2 |
| Services and Sales Workers | 12.9 | 13.3 | 12.3 | 17.7 |
| Skilled Agricultural and Fishery Workers | 17.5 | 10.0 | 14.7 | 9.9 |
| Craft and Related Trade Workers | 11.5 | 4.4 | 15.2 | 5.0 |
| Plant and Machine Operators and Assemblers | 16.2 | 15.8 | 15.9 | 11.5 |
| Elementary Occupations | 12.7 | 12.1 | 9.8 | 11.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Economic Planning Unit

Educational Attainment

13.07 The social and economic advancement of women has been contributed largely by equal access to educational opportunities. Enrolment of females in primary and secondary schools reflected the gender ratio in the country, accounting for about half of the total enrolment in 2005. Female enrolment at the matriculation and form six levels accounted for 67 per cent while their enrolment in public universities continued to increase significantly from 61 per cent in 2000 to 63.4 per cent in 2005. However, at the post-graduate level, female students accounted for only 48.8 per cent and 35.7 per cent at the masters and doctorate levels, respectively. The availability of affordable and equal access to education opportunities through the years enabled the achievement of the Millennium Development Goal (MDG) of gender equality and the elimination of disparities in primary and secondary education by 2005.

Training

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13.08 As part of efforts to enable women to improve themselves and take advantage of opportunities in the job market, various skills and entrepreneur training programmes were implemented. About 3,000 women entrepreneurs benefited from courses implemented specifically for loan recipients under the *Yayasan Tekun Nasional* (YTN). Similar courses implemented under the *Majlis Amanah Rakyat* (MARA) Entrepreneur Programme provided training for about 8,000 women. In addition, training programmes were implemented to assist women entrepreneurs to upgrade their businesses to the level of small and medium enterprises (SMEs). Under the Agricultural Entrepreneurship Development Programme, 154 training workshops were conducted benefiting 6,328 women that resulted in their involvement in agro-based food industries, achieving total sales amounting to RM94.1 million. Various efforts were also undertaken to equip women with skills and knowledge in information and communications technology (ICT) including through programmes such as *Internet Desa* and *e-Industri Desa*.

Financial Assistance

13.09 During the Plan period, various financial assistance schemes were implemented to facilitate more women to become entrepreneurs. Under the YTN scheme, about RM200 million was disbursed as loans to 46,000 women to assist in their entrepreneurial activities. The *Bank Simpanan Nasional* Micro-Credit Scheme provided loans amounting to RM446 million to about 49,000 women entrepreneurs. Through the Micro-Credit Scheme under *Bank Pertanian Malaysia*, a total of RM55.9 million was provided to about 5,600 women. Under the Special Assistance Scheme for Women Entrepreneurs, an allocation of RM18.5 million was provided to 185 women entrepreneurs to enable their

involvement in information technology-related services, designing and packaging, research and development as well as marketing. In addition, to encourage more women to venture into technology acquisition activities such as designing, patenting and drawing blueprints, a Technology Acquisition Fund for Women (TAF-W) was established with an allocation of RM25 million.

Health Status

13.10 Women continued to benefit from improvements in health care services. During the Plan period, female life expectancy improved from 75.1 years in 2000 to 76.4 years in 2005 compared with 70 years and 70.6 years, respectively, for males. Maternal mortality, an indicator of the health status of women, remained low at 0.3 per 1,000 live births.

13.11 The maternal and child health programme, aimed at reducing maternal and child mortality and morbidity, improving prenatal and antenatal health care as well as providing health and nutrition education, continued to be implemented. In addition, emphasis was given to ensuring access to safe delivery services. As a result, deliveries attended by trained personnel continued to increase from 99 per cent in 2000 to 99.5 per cent in 2005. Concerted efforts were also undertaken to widen the coverage of antenatal health care services resulting in 77 per cent of pregnant women having access to such services. These efforts contributed towards the lowering of maternal mortality rates similar to that in developed countries.

13.12 In view of the fact that women, especially young women, are in the high-risk category in terms of their vulnerability to the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS), greater emphasis was given to increasing awareness as well as providing information and education. Despite the efforts, the proportion of women with HIV infection increased from 7.9 per cent in 2001 or 466 cases of a total of 5,938 cases to 11.6 per cent or 358 cases from 3,089 cases as of June 2005.

13.13 The increasing incidence of cancer among women, especially breast and cervical cancers, had serious implications on them as well as their families. Data from the National Cancer Registry indicated that the incidence of breast cancer increased from 52.8 per 100,000 population in 2002 to 56.8 per 100,000 population in 2005. As cancer can be treated if detected early, efforts were undertaken to provide women with information and knowledge on cancer and its treatment as well as encourage regular health screening.

13.14 Recognising the importance of promotive and preventive health towards ensuring women are healthy and remain healthy, greater emphasis was given to the implementation of health education and awareness programmes. In this

regard, the *Nur Sejahtera* programme was introduced in 2004 to educate women on the importance of regular medical examinations as well as leading healthy lifestyles. In addition, Health Line was introduced in 2005 to provide comprehensive and integrated online information on non-communicable diseases such as cancer, diabetes and cardiovascular illnesses, thus empowering communities, especially women, on the importance of health and the early detection of diseases.

Poverty Among Women

13.15 Various economic, social and training programmes were implemented by the Government and non-governmental organisations (NGOs) to reduce the incidence of poverty among women, including single mothers and female-headed households. Through these programmes, the incidence of poverty among female-headed households declined from 12.5 per cent in 2002 to 11.5 per cent in 2004. Through the *Skim Pinjaman Ikhtiar*, implemented by the *Amanah Ikhtiar Malaysia* (AIM), about 67,000 women from the low-income group were involved in micro-credit enterprises. Women in the rural areas were also provided with opportunities to establish workshops and trading stall premises to facilitate their involvement in small businesses. In addition, training in ICT was conducted to enable these women to increase their productivity and efficiency. The *Skim Khas Ibu Tunggal* was established by AIM in 2001 to enable single mothers to undertake income-generating activities by providing easy access to financial assistance. About 2,800 single mothers benefited from this scheme.

Supportive Legislation

13.16 During the Plan period, existing legislation were reviewed and new ones enacted to protect the rights and dignity of women. In 2001, Article 8(2) of the Federal Constitution was amended to include 'gender' as one of the prohibitive grounds for discrimination. Consequently, a number of laws were amended. With effect from 2002, widows of civil servants were allowed to continue receiving pensions after remarriage while a similar amendment was made to the Social Security Act 1969 in 2003. The Land Act (Group Settlement Areas) 1960 was amended in 2002 to allow wives of land settlers equal ownership of land provided to their husbands under land development schemes. The Immigration Rules were also amended to allow foreign men married to Malaysian women to renew their social visit passes annually, compared with the original renewal period that varied between one to six months, depending on the country of origin. A similar provision was also provided to foreign wives separated or divorced from their Malaysian husbands.

13.17 Women as homemakers perform one of the most vital roles in society. In recognition of this role and to provide these women with financial security in their old age, the Employers Provident Fund (EPF) allowed husbands to

contribute to accounts under their wives' names through the self-employed contribution scheme.

13.18 Various efforts were undertaken to ensure uniformity among states in the judgement of cases pertaining to Islamic Family Law. During the Plan period, 11 states and Wilayah Persekutuan Kuala Lumpur, Labuan and Putrajaya accepted the uniform model. In addition, for efficient and effective implementation and monitoring of laws and judgements relating to family issues such as divorces and alimony, a specific division for the coordination and enforcement of laws was established at the Department of Islamic Development Malaysia.

Violence against Women

13.19 During the Plan period, efforts were undertaken to stem the increasing number of cases of violence against women. In addition to reviewing existing and introducing new legislation, preventive and rehabilitative programmes were implemented. A total of 43 programmes was implemented, benefiting about 45,000 participants. A national campaign on Women against Violence (WAVE) was launched in 2002 to raise awareness on violence. Subsequently, voluntary organisations for WAVE were established in all states. Members of these organisations were provided training and information on the identification of violence and treatment of victims. About 300 volunteers were trained and stationed in community service centres, hospitals and shelter homes.

National Machinery for the Advancement of Women

13.20 The Government, the private sector and NGOs, worked together to improve the status of women as well as ensure greater collaboration and coordination in the implementation of activities for women and their families. During the Plan period, the Ministry of Women, Family and Community Development was established to address in a concerted manner issues relating to women. In this regard, the National Advisory Council on Women was restructured and membership increased to provide better representation for the exchange of ideas and information on issues relating to women. In addition, councils for women and family development were established at the state level as well as in each parliamentary constituency to provide the link with the grassroots.

13.21 To further strengthen the national machinery and improve its effectiveness, the Cabinet Committee on Gender Equality was established in 2004 to provide policy direction and monitor activities pertaining to women and family development. Gender focal points were appointed in all ministries and agencies to ensure integration of the gender perspective in the formulation and implementation of policies and programmes and the removal of any form of discrimination against women. In addition, a pilot project to incorporate the gender perspective in the

national budget process was implemented in five ministries. To ensure the systematic collection and compilation of gender-disaggregated data to facilitate analysis, a gender disaggregated information system was also established. Recognising the important role of women in national development, the Government agreed to implement the quota of at least 30 per cent of decision-making positions in the public sector to be held by women. In line with this, the private sector and NGOs were also encouraged to increase the participation of women in managerial and key positions.

13.22 Taking cognisance of the important role of NGOs in complementing Government efforts for the benefit of women and their families, capacity-building courses were implemented to improve the leadership, administrative, planning and financial management skills among members of NGOs. In addition, a total of RM56.7 million was disbursed to about 550 NGOs and councils for women and family development at the state level to implement activities and programmes for women and their families.

Participation at the International Level

13.23 During the Plan period, the Government continued to demonstrate its commitment to uphold the rights and dignity of women at the international level. Malaysia actively participated in various meetings and initiatives at the regional and international levels. These included the APEC Women Ministers Meeting, the ASEAN Committee on Women and the Commission on the Status of Women at the United Nations. Through bilateral arrangements, Malaysia continued to raise gender issues and share experiences in advancing the status of women.

13.24 As chair of the Non-aligned Movement (NAM), Malaysia initiated the inclusion of issues confronting women as part of the agenda of NAM. In this regard, Malaysia hosted the first Ministerial Meeting of NAM on the Advancement of Women in 2005. The Meeting endorsed the Putrajaya Declaration and the Programme of Action for the Advancement of Women in Member Countries of NAM. Among the outcomes of this Meeting was the establishment of the NAM Centre for Gender Development in Kuala Lumpur.

III. PROSPECTS, 2006-2010

13.25 During the Ninth Plan period, in line with the principles of *Islam Hadhari*, efforts will continue to be undertaken to address issues confronting women to enable them to realise their potential and participate more effectively as partners in development. Towards this end, legal and institutional constraints that inhibit the greater participation of women in the economy will be reviewed to promote their active involvement as well as contribute to their further advancement. Emphasis will be given to empowering women by providing greater access to

education and skills upgrading programmes as well as involving them in policy-making. These initiatives will be guided by commitments made during the Fourth World Conference for Women in Beijing in 1995 and the Ministerial Meeting of NAM on the Advancement of Women held in Putrajaya in 2005. The strategic thrusts for the further advancement of women during the Plan period will be as follows:

- ❑ *promoting greater female participation in the labour force;*
- ❑ *increasing education and training opportunities;*
- ❑ *enhancing participation in business and entrepreneurial activities;*
- ❑ *reviewing laws and regulations to promote the status of women;*
- ❑ *improving further the health status and well-being of women;*
- ❑ *reducing violence against women;*
- ❑ *reducing incidence of poverty and improving quality of life;*
- ❑ *strengthening national machinery and institutional capacity; and*
- ❑ *advancing issues pertaining to women at the international level.*

Promoting Greater Female Participation in the Labour Force

13.26 The Government will continue to encourage greater female participation in the labour force and contribute towards socio-economic development of the country. As the greater involvement of women in the labour market will require creating a better balance between unpaid work and paid labour, effective labour market policies must encompass more than job creation. Towards this end, measures will be undertaken to ensure the provision of necessary support facilities to enable women to enter the labour market. These include the introduction of family-friendly workplace practices and the provision of appropriate training programmes. Community childcare and nursery centres will be established in selected housing areas to ensure the availability of affordable quality care. In addition, the re-entry of women into the labour market will be facilitated with the provision of retraining opportunities.

13.27 The private sector, being the largest employer, will be encouraged to facilitate greater female participation in the labour market through the provision of more conducive working arrangements that take into account the multiple roles and responsibilities of women. These include new and flexible working arrangements such as teleworking, part-time work and job-sharing. In addition, efforts will be undertaken to implement the concept of home office to encourage women to embark on small businesses.

13.28 As household and caring work remains predominantly with women, many of whom subordinate formal employment to family responsibilities, an increasing number of women are involved in the informal sector with flexible working arrangements. Hence, measures will be undertaken so that women in the informal sector have better access to adequate social protection in facing lifecycle events such as sickness, invalidity and old age as well as employment risks.

Increasing Education and Training Opportunities

13.29 Recognising the human resource requirement of a knowledge-based economy and the need to move into high value added activities, more educational and training opportunities will be provided to assist women in meeting these demands. Training and retraining opportunities will be provided to enable more women to acquire new and advanced skills that are relevant to industry needs, particularly in view of the rapid changes in technology. In this regard, the private sector will also be encouraged to provide skills training and retraining opportunities for women, including in new technologies.

13.30 More female students will be encouraged to enter into fields of study such as science and engineering. Towards this end, career guidance programmes will be implemented at the primary level to instil greater awareness among female students and parents regarding opportunities in professional and technical fields. Counselling and information on prospects in non-academic fields will also be provided to female students to encourage them to pursue vocational and technical subjects. In addition, increased training opportunities will be provided in community colleges and skills training institutions for female students who dropped out of formal schooling. To ensure that women, especially those in the rural areas, continue to have access to ICT, formal and non-formal training programmes in computer literacy and applications will be conducted.

Enhancing Participation in Business and Entrepreneurial Activities

13.31 Efforts to enhance the participation of women in business and entrepreneurial activities will continue to be undertaken through improved consolidation and integration of financial assistance and training programmes. Information on the availability of these programmes will be widely disseminated. A special window will be created in existing financial programmes to enable more women to obtain loans. The implementation of the home office concept will further facilitate the involvement of women in business activities. More opportunities will be provided for women to be involved in agro-based industries and businesses. Recognising that biotechnology is a new source of growth, efforts will be undertaken to encourage women entrepreneurs to leverage on

its potential, especially in agriculture and health care biotechnology. Women entrepreneurs will also be encouraged to network with other successful organisations, both locally and abroad.

Reviewing Laws and Regulations to Promote the Status of Women

13.32 Existing laws and regulations that discriminate or inhibit the well-being and participation of women in development efforts will be reviewed. Recognising the importance of ensuring the well-being and safety of women at the workplace, the Employment Act 1955, the Industrial Relations Act 1957 and the Occupational Safety and Health Act 1994, will be amended to include provisions that prohibit all forms of sexual harassment. Measures will continue to be undertaken to improve enforcement and speedy implementation of court decisions, including *syariah* court decisions, to ensure the protection and welfare of women. In addition, the private sector will be encouraged to review their collective agreements to ensure that there is no gender discrimination.

Improving Further the Health Status and Well-Being of Women

13.33 During the Plan period, efforts to promote the health of women and their families will be continued. To ensure that women remain healthy, emphasis will be given to the implementation of wellness programmes, increasing health awareness, promoting prevention, screening and early intervention for specific diseases such as cancer, especially among women in the low-income group and remote areas. Policies and strategies will be formulated to integrate reproductive health components into the primary health care system. Mobile clinics will also be provided under the *Nur Sejahtera* Programme to increase accessibility to health care services.

13.34 Realising the vulnerability of women, especially young women, to HIV/AIDS and other sexually transmitted diseases, concerted efforts will be undertaken to increase awareness and educate women on these diseases. The programme on the prevention of mother-to-child transmission of HIV as well as the provision of care and support for those infected, including counselling, will be continued. Education on sexuality, living skills and behaviour change programmes will be intensified. To ensure consistency and quality in implementing these programmes, the guidelines on education on sexuality, jointly formulated with NGOs, will be implemented. In addition, adolescent reproductive health programmes will be implemented by the Government and NGOs with the aim of instilling positive values and responsible behaviour as well as promoting healthy lifestyles.

13.35 Measures will continue to be undertaken to provide comprehensive and integrated health care for women and children. Towards this end, a special

hospital for women and children will be established in Kuala Lumpur. This facility will serve as the national referral centre for the health and well-being of women and children as well as undertake research on illnesses confronting them.

Reducing Violence against Women

13.36 Concerted efforts will be undertaken to increase awareness that ensuring the safety and well-being of women and families is the responsibility of all. Awareness and training programmes relating to understanding gender roles and expectations, preventing abuse and violence, resolving conflicts and maintaining family harmony will continue to be implemented by the Government and NGOs. Implementation of WAVE campaigns will be intensified with greater community participation and involvement. Shelter facilities for victims of violence will be established at the existing *Rumah Nur* in five states, namely Kelantan, Melaka, Pahang, Sabah and Selangor. The facility in Selangor will also be utilised to provide protection for foreign women who are victims of human trafficking.

13.37 The private sector will also be encouraged to participate in efforts to eliminate violence against women. The Government, in collaboration with NGOs, will ensure the availability of support mechanisms for victims of violence, including gazetting more shelter homes and providing volunteers with adequate training as well as placing them in strategic locations such as hospitals and police stations. Gender sensitization courses will continue to be implemented for agencies involved in the handling and management of domestic violence cases. In this regard, standard operating procedures will be developed for the use of relevant agencies and NGOs to ensure greater coordination and effectiveness in the handling of such cases.

Reducing Incidence of Poverty and Improving Quality of Life

13.38 Efforts will be undertaken to further reduce the incidence of poverty among women, particularly in the rural areas including in Sabah and Sarawak. To address urban poverty, a programme for poor women in urban areas will be developed. Special emphasis will be given to single mothers through the formulation of a strategic action plan which will outline education and training programmes as well as measures to facilitate their involvement in income generating activities. Among others, the *Inkubator Kemahiran Ibu Tunggal* (I-KIT) programme, to provide skills enhancement for single mothers, will be introduced. I-KIT will focus on seven areas, namely tailoring, handicraft, tourism, beauty therapy, business, entrepreneurship and childcare. The *Program Anak Angkat* will be implemented through smart partnership with the private sector. Under this programme, private companies will be encouraged to provide financial support for the education of children of single mothers. The Government will complement these efforts by providing incentives in the form of tax rebates to these companies.

Strengthening National Machinery and Institutional Capacity

13.39 During the Plan period, the national machinery and institutional capacity for the advancement of women will be further strengthened. Efforts will also be undertaken to meet the 30 per cent quota for women in decision-making positions in the public sector. Towards this end, greater opportunities will be provided to women to assume positions in the premier category of the public service. In addition, emphasis will be given to the appointment of more women councillors in the various local authorities.

13.40 Training will be provided to increase the effectiveness of gender focal points in public agencies to ensure the inclusion of the gender perspective in policies, strategies and programmes of these agencies. Gender sensitive budget analysis and sensitization programmes will continue to be implemented for policy makers and planners. Greater efforts will also be undertaken to ensure the systematic collection and compilation of gender disaggregated data to facilitate effective analysis, monitoring, impact assessment and policy formulation. In addition, the implementation of gender sensitive budgets will be expanded in stages to other ministries.

13.41 Given the social and physical differences between men and women and consistent with the people-centred development thrust, greater emphasis will be given to gender mainstreaming. Towards this end, the mainstreaming strategy will ensure gender considerations are routinely included in the formulation of major sectoral policies, strategies and programmes. In addition, a gender-related development index will be developed to provide an indication of gender equality in the country.

13.42 Councils for women and family development at the state and parliamentary constituency levels will continue to strengthen linkages with the grassroots. In this regard, training will be provided to members of these councils to enhance their effectiveness in programme formulation and implementation as well as resolving issues confronting women at the grassroots.

13.43 NGOs will be further encouraged to complement Government efforts in the advancement of women, especially at the grassroot level. Towards this end, NGOs will be provided with financial support to implement programmes that directly benefit women and improve their quality of life. In addition, training will be provided to NGOs to ensure professionalism in handling issues relating to women.

Advancing Issues Pertaining to Women at the International Level

13.44 The Government, together with the private sector and NGOs, will continue to participate actively in international fora on the advancement of women. In

doing so, Malaysia will be able to share its experiences in specific areas such as poverty eradication, educational attainment and health improvements and promote a more holistic approach to development.

13.45 The NAM Centre for Gender and Development in Malaysia will enable concerted efforts to be undertaken at the international level to promote the advancement and empowerment of women through a lifelong learning approach. In this regard, the Centre will undertake various programmes, including capacity building, exchange of ideas and information and research, as well as work closely with international organisations and institutions.

IV. INSTITUTIONAL SUPPORT

13.46 During the Ninth Plan period, programmes for the further advancement of women will continue to be implemented by the Ministry of Women, Family and Community Development as the lead agency. These efforts will be complemented by other key ministries such as the Ministry of Education, Ministry of Health, Ministry of Human Resource and Ministry of International Trade and Industry as well as the private sector and NGOs.

V. CONCLUSION

13.47 During the Eighth Plan period, women continued to advance in various fields of development, largely due to their access to education and training, health care as well as improved employment opportunities. During the Ninth Plan period, efforts will be undertaken to further improve the status of women to enable them to reach their full potential and contribute towards the social and economic development of the country. Towards this end, gender mainstreaming will be given emphasis and gender considerations included in the formulation of policies and programmes. Emphasis will also be given towards equipping women with the requisite skills and knowledge as well as creating an enabling and supportive environment for their further advancement.



EMPOWERING YOUTHS FOR THE FUTURE

14

I. INTRODUCTION

14.01 During the Eighth Plan period, youth development programmes aimed at equipping youths with the necessary knowledge and skills were implemented to enable them to meet the challenges of economic development and globalisation. Focus was also given to inculcate positive values and good ethics as well as instil a sense of patriotism among youths.

14.02 During the Ninth Plan period, the thrust of youth development will emphasise on empowering youths to enhance their role in society, fostering national unity and nation building. In this regard, extensive programmes will be implemented to develop youths with good leadership qualities as well as equipping them with entrepreneurial skills and knowledge. Emphasis will also be given to the development of wholesome individuals with spiritual and high moral values that can become towering personalities.

II. PROGRESS, 2001-2005

14.03 Youth development programmes undertaken during the Eighth Plan period were aimed at increasing the role and participation of youths in national development. These programmes included education and skills training while inculcating discipline and self-reliance, promoting greater sense of cooperation with the community as well as developing leadership qualities among youths.

Youth Population and Employment

14.04 The youth population, comprising those in the 15-39 age-group, constituted 41.5 per cent of the total population in 2005. During the Plan period, the youth population increased at an average rate of 2.4 per cent per annum from 9.85 million in 2000 to 11.10 million in 2005, as shown in *Table 14-1*.

TABLE 14-1

POPULATION BY AGE GROUP, 2000-2010

| Age Group | Million Persons | | | % of Total | | |
|--------------|-----------------|--------------|--------------|--------------|--------------|--------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 |
| 0-14 | 8.00 | 8.72 | 9.18 | 34.0 | 32.6 | 31.7 |
| 15-39 | 9.85 | 11.10 | 11.65 | 42.0 | 41.5 | 40.2 |
| More than 39 | 5.64 | 6.93 | 8.13 | 24.0 | 25.9 | 28.1 |
| Total | 23.49 | 26.75 | 28.96 | 100.0 | 100.0 | 100.0 |

Source: Economic Planning Unit

14.05 The total number of youths employed in 2005 was about 6.67 million or 60.3 per cent of the total youth population compared with 6.16 million or 62.9 per cent in 2000. Youths were mainly employed in the manufacturing sector, accounting for 24.0 per cent in 2005, as shown in *Table 14-2*, indicating the expanding opportunities in the sector. This was followed by the wholesale and retail trade, hotels and restaurants sector, which accounted for 23.8 per cent and other services at 18.9 per cent.

TABLE 14-2

YOUTH EMPLOYMENT BY SECTOR, 2000 AND 2005

| Sector | '000 Persons | | % of Total | | Average Annual Growth Rate (%) |
|---|----------------|----------------|--------------|--------------|--------------------------------|
| | 2000 | 2005 | 2000 | 2005 | 8MP |
| Agriculture, Forestry, Livestock & Fishing | 770.9 | 751.1 | 12.5 | 11.3 | -0.5 |
| Mining & Quarrying | 17.9 | 21.2 | 0.3 | 0.3 | 3.4 |
| Manufacturing | 1,731.0 | 1,603.5 | 28.1 | 24.0 | -1.5 |
| Electricity, Gas & Water | 25.7 | 29.2 | 0.4 | 0.4 | 2.6 |
| Construction | 498.7 | 598.6 | 8.1 | 9.0 | 3.7 |
| Finance, Insurance, Real Estate & Business Services | 351.4 | 493.4 | 5.7 | 7.4 | 7.0 |
| Transport, Storage & Communications | 266.4 | 326.0 | 4.3 | 4.9 | 4.1 |
| Wholesale and Retail Trade, Hotels & Restaurants | 1,197.1 | 1,588.8 | 19.4 | 23.8 | 5.8 |
| Other Services | 1,303.6 | 1,259.5 | 21.2 | 18.9 | -0.7 |
| Total | 6,162.7 | 6,671.3 | 100.0 | 100.0 | 1.6 |

Source: Economic Planning Unit

14.06 In terms of occupational category, the proportion of youths employed in the professional and technical category increased from 12.0 per cent in 2000 to 18.7 per cent in 2005, as shown in *Table 14-3*. In addition, the proportion of youths employed in the administrative and managerial category increased by 2.8 per cent, while those in the clerical and related workers category declined by 1.6 per cent during the same period, attributed to higher educational attainment of youths.

TABLE 14-3
YOUTH EMPLOYMENT BY OCCUPATION, 2000 AND 2005

| Occupation | '000 Persons | | % of Total | | Average Annual Growth Rate (%) |
|---|----------------|----------------|--------------|--------------|--------------------------------|
| | 2000 | 2005 | 2000 | 2005 | 8MP |
| Professional, Technical & Related Workers | 736.6 | 1,248.8 | 12.0 | 18.7 | 11.1 |
| Administrative & Managerial Workers | 223.9 | 425.5 | 3.6 | 6.4 | 13.7 |
| Clerical & Related Workers | 779.1 | 736.7 | 12.6 | 11.0 | -1.1 |
| Service Workers, Sales & Related Workers | 1,430.7 | 1,023.9 | 23.2 | 15.3 | -6.5 |
| Agriculture Workers | 764.9 | 654.7 | 12.4 | 9.8 | -3.1 |
| Production & Related Workers | 2,228.0 | 2,581.7 | 36.2 | 38.7 | 3.0 |
| Total | 6,163.2 | 6,671.3 | 100.0 | 100.0 | 1.6 |

Source: Economic Planning Unit

Youth Development Programmes

14.07 Youth development programmes such as leadership and skills training as well as entrepreneurial skills were implemented by various ministries through youth associations in cooperation with the private sector and non-governmental organisations (NGOs). To strengthen the management and implementation capacity of public sector agencies, the National Youth Development Action Plan was launched in 2004. The Action Plan placed emphasis on eleven core elements in youth development, which included the economic and social well being of youths, capacity building, leadership qualities, participation in the *Rakan Muda* programme, social integration and political awareness among youths.

Leadership Training

14.08 In line with the objective of moulding a generation of dynamic youths imbued with qualities such as discipline, positive values and good ethics, leadership training programmes were conducted at the national, state and district levels. During the Plan period, a total of 380,090 youths participated in leadership training programmes at the various youth skills training institutes. Schools and institutions of higher education continued to provide leadership training programmes covering aspects such as communication skills, negotiation skills, social interaction techniques and other aspects of character building. These programmes were also provided to youths in rural areas including those in land development schemes. A total of 24,500 rural youths participated in leadership training programmes organised by the Ministry of Rural and Regional Development, the Federal Land Development Authority as well as the Ministry of Agriculture and Agro-Based Industries.

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14.09 During the Plan period, new approaches were adopted to ensure effective implementation of *Rakan Muda* Programme. This included the planning as well as implementation of activities and programmes in consultation with youths to meet their expectations and needs. In addition, *Rakan Muda* motivators were recruited to encourage participation of youths at the grass root level in the programmes. A total of 10 *Pusat Rakan Muda* at the state and district levels were completed during the Plan period which facilitated and enhanced the implementation of this programme.

14.10 To instil the spirit of national unity and patriotism among youths, the *Program Latihan Khidmat Negara* (PLKN) was implemented in 2003. The three-month programme was also aimed at moulding Malaysian youths of all races into the future generation of leaders with sound values and strong character. The training modules covered areas such as physical fitness and endurance, their roles and responsibilities in nation building, essentials of good citizenship and accountability with emphasis on character building. As at the end of the Plan period, 135,700 youths were trained at 76 training camps established nationwide.

14.11 Youths were encouraged to participate in youth associations to enable them to be involved in the decision making process. The number of youth associations increased from 5,500 in 2000 to 8,000 in 2005, while their membership increased from 2.2 million to 2.8 million during the same period. However, this represented only 26 per cent of the total youth population in the 15-39 age-group, indicating the need to encourage greater participation of youths in these associations. To enable effective planning and management of youth development programmes, the membership of the National Youth Consultative Council (NYCC) was broadened beginning 2004. In this regard, representatives to the NYCC

were not restricted to leaders of youth associations only but extended to other groups such as the academicians, politicians and entrepreneurs.

14.12 Representation and participation in youth programmes at the international level provided better exposure and wider knowledge to youth leaders which helped to further develop their leadership qualities and skills. In this regard, about 1,250 youth leaders attended seminars and conferences as well as participated in work camps at the regional and international level during the Plan period. Youth leaders were also involved in activities organised under the International Youth Exchange Programme, thus exposing them to developments in participating countries such as Cambodia, Indonesia, Japan, Korea, Thailand and the United Kingdom. During the Plan period, more than 5,000 Malaysian youths participated in this Programme.

Skills Training

14.13 Skills training continued to be provided to meet the demand for workers in the manufacturing and construction sectors as well as those in the services sector in areas such as hospitality and information and communications technology (ICT). These various skills training institutes such as *Institut Kemahiran Belia Negara* (IKBN), *Institut Latihan Perindustrian* and *Pusat Giat MARA* provided training to 246,030 youths during the Plan period. Of this total, 137,940 youths were trained at diploma and certificate level in areas such as electrical and mechanical engineering, civil engineering, electronics, automotive and photography. Through the non-institutional training, 108,090 youths were trained in courses such as motor mechanics, computer maintenance, fashion designing, tailoring, bakery and hair styling. In addition, training in soft skills was also provided covering subjects such as interpersonal communication, effective English communication and ICT to enable them to gain employment.

14.14 Private training institutions also offered a wide range of skill courses for youths. These courses, which included production technology and ICT, ranged from basic to advanced level. During the Plan period, 130,000 youths were trained by private skills training institutes. In addition, collaboration with private sector companies provided wider opportunities for youths to gain exposure and training in areas such as automotive, air-conditioning, furniture making and landscaping.

Entrepreneurial Development

14.15 Entrepreneurial development programmes were carried out to nurture the entrepreneurial potential of youths and to enable them to participate actively in business enterprises as well as promote self-employment. Towards this end, *Majlis Amanah Rakyat* and training institutes such as *Institut Keusahawanan*

Belia Negara conducted training, seminars and short courses as well as provided advisory services to young and new entrepreneurs. A total of 79,740 youths benefited from these programmes at the state and district levels during the Plan period.

14.16 Measures were also undertaken to inculcate the spirit and culture of entrepreneurship among students in schools and institutions of higher education. The *Usahawan Muda* Programme, which involved the setting up of *Kedai Koperasi*, was implemented in schools with the cooperation of the Parent Teacher Association (PTA). Co-curricular activities, which incorporated elements of entrepreneurship were also carried out. Under the *Program Pembangunan Usahasiswa*, a total of 32,470 students in public institutions of higher education participated in various business activities such as *Kelab Keusahawanan Desasiswa* and *Pasar Pelajar*.

14.17 Recognising the use of ICT as an enabler to increase productivity, various measures were undertaken to encourage young entrepreneurs to utilise more knowledge-intensive applications in their businesses. In this regard, the *Program Pembangunan Usahawan Belia ICT* was conducted during the Plan period benefiting 25,710 youths. Under this programme, courses on computer literacy, software and computer science certification as well as seminars on entrepreneurial development were conducted to develop and enhance knowledge and understanding of ICT application among young entrepreneurs.

Preventive and Rehabilitative Programmes

14.18 Social problems such as drug addiction, incest and rape cases showed an increasing trend during the Plan period. Drug addiction among youths continued to increase from 24,940 cases in 2001 to 41,684 cases in 2005, while rape cases increased from 662 in 2001 to 919 in 2005. Recognising the seriousness of drug addiction and the correlation of drugs to social problems and crimes, preventive and rehabilitative programmes continued to be implemented by various government agencies and the NGOs to address social problems among youths such as loafing, gangsterism, violence, bullying, substance abuse, indiscipline and other undesirable behaviour. This included the establishment of a Special Cabinet Committee on Eradication of Drugs to ensure efficient coordination and implementation of drug eradication efforts.

14.19 During the Plan period, measures were also undertaken to improve the rehabilitation programmes at *Pusat Serenti* throughout the country. Awareness campaigns and exhibitions were carried out to enhance public cooperation in reducing drug problems particularly among youths and students. These included the *Belia Benci Dadah* campaign organised by the Ministry of Youth and Sports in cooperation with youth associations and the Say No to Drugs campaigns, which were undertaken in primary and secondary schools. Voluntary bodies

such as *Persatuan Pencegahan Dadah Malaysia* (PEMADAM) and *Persatuan Bekas-Bekas Penagih Malaysia* (PENGASIH) also played a vital role in the rehabilitation of drug addicts by providing counselling and spiritual guidance.

III. PROSPECTS, 2006-2010

14.20 Youth development programmes during the Ninth Plan period will emphasise on empowering youths to enable them to be more involved in nation building, promoting national unity and social integration as well as become role models in society. Efforts will be undertaken to equip youths with the necessary skills and qualities to ensure them of a better future and to meet the accelerated pace of economic development and the changes in the environment. In this regard, youth development policies and programmes will be reoriented to enhance their effectiveness. The strategic thrusts for the development of youths will be as follows:

- ❑ *empowering youths for the future through improved access to education and training;*
- ❑ *increasing participation of youths in youth organisations;*
- ❑ *inculcating the spirit of competitiveness among youths;*
- ❑ *strengthening the legal framework of youth development programmes; and*
- ❑ *promoting national unity and social integration.*

Youth Population and Employment

14.21 During the Plan period, the youth population is expected to increase by an average rate of 1.1 per cent per annum, from 11.10 million in 2005 to 11.65 million in the year 2010, as shown in *Table 14-1*. Recognising the role of youths in national development and to meet the demands of a knowledge-based economy, youths will be encouraged to continuously acquire a higher level of knowledge, develop positive thinking and attitudes as well as leadership and entrepreneurial skills. Towards this end, youths will be provided with greater access to education and training while developing them to be more talented, innovative, creative and excellent in their chosen fields.

14.22 The proportion of youths employed in the professional and technical occupational category is expected to be higher with the increase in the output of professional and technical graduates from institutions of higher education and skills training institutions as well as expansion in employment opportunities in the services and manufacturing sectors. Employment of youths as skilled workers will also be higher due to the increasing demand for these workers.

Youth Development Programmes

14.23 During the Plan period, youth development programmes will give greater focus for youths in the 15-30 age-group. To empower youths to participate actively in nation-building, their accessibility to education and training will be further enhanced while leadership and skills training, entrepreneurial development and healthy lifestyles programmes will be carried out more extensively. In addition, self-confidence, discipline and other positive elements of character building will be incorporated in these programmes. Measures will also be undertaken to increase their accessibility to life long learning programmes through distance education and non-formal education as an effort to improve their employment opportunities and quality of life.

14.24 A National Youth Act will be formulated to ensure effective implementation of youth development programmes and to facilitate and encourage greater participation of youths in youth associations. The Act will also incorporate inter-ministerial roles in youth development to ensure youth programmes are implemented in an integrated, coordinated and synergistic manner. To enable the Government to plan and implement target-specific youth development programmes more effectively, a profile on youth will be developed. In addition, the National Youth Research Institute will be established within existing facilities to undertake research in six areas, namely socialisation of youths, culture and religion, youth potentials and integrity, youth organisations, leadership and volunteerism, youth and education as well as youth and political awareness.

14.25 The implementation of youth development programmes during the Plan period will involve active participation of the private sector, NGOs and youth associations to complement public sector efforts. Recognising the important role of youths in building a nation for the future, the NGOs and youth associations will be entrusted to mobilise youths to fulfill the objectives of preserving national unity as well as economic and socio-political stability. In this regard, joint programmes between public and private sectors will be conducted targeting youths of various races.

Leadership Training

14.26 During the Plan period, efforts will continue to be undertaken to build a new breed of young leaders as prime movers of development. In this regard, the curriculum of leadership training programme will be strengthened to make it more proactive and relevant to future needs. It is estimated that about 100,000 youths, including NGO leaders, will be trained under this programme.

14.27 The Government will continue to develop and instil leadership qualities among youths by conducting courses and training on good values and positive attitudes. Special courses on values will also be conducted to mould youths as responsible citizens and role models in society. Greater awareness on the important role of youths in forging and promoting unity towards building a united Malaysian nation will be given priority in the leadership training programmes. To check racial polarisation among youths, more multi racial youth organisations will be established to allow for greater interaction among them. In addition, good moral values such as understanding, harmony, respect for the culture and tradition of other races, goodwill and trust will also be inculcated among the youths to enhance nation building efforts. The private sector will also be encouraged to contribute to youth training as part of their social responsibility. More active participation of youths at the international level will be promoted through inter-governmental and non-governmental institutions.

14.28 During the Plan period, the implementation of *Rakan Muda* Programmes will be strengthened to focus on specific target groups, particularly youths who are out of the education system and the unemployed youths as they are more vulnerable and easily influenced to be involved in negative and unhealthy activities. In this regard, *Rakan Muda* Programmes will focus on efforts to create role models among youths who are caring, skilled and dynamic. In addition, these programmes will also focus on enhancing cooperation amongst agencies involved in the social agenda. In cooperation with the National Unity and Integration Department, the *Rakan Muda Jiran Muda* Programme will be targeted to those below the age of 15 years and aimed at developing positive values as well as preventing them from being involved in unhealthy activities. About 300,000 children will be involved in this Programme. To ensure effective implementation of the *Rakan Muda* programmes, more *Penggerak Rakan Muda* will be appointed to attract a larger number of youths to participate in these programmes.

14.29 Collaboration efforts will also be undertaken with the private sector and NGOs to encourage a wider participation of their employees in the *Rakan Muda* programmes. In this regard, new *Rakan Muda* centres will be built, particularly in urban and industrial areas to provide sports and recreational facilities as well as counselling and advisory services to youths in this group.

14.30 A new programme, *Program Memperkasakan Tenaga Muda*, will be implemented specially for youths who are not selected for PLKN. Activities and modules under the PLKN will be carried out to ensure those who are not selected for the PLKN training be exposed to similar programmes. To better prepare students for the PLKN, the Government will incorporate this programme into the co-curricular and curriculum in secondary schools. The participants of the PLKN will be encouraged to join *Rakan Muda* Programmes to continuously nurture the spirit of volunteerism and solidarity amongst them.

Skills Training

14.31 To meet the requirements of a skilled labour force in the country, a more comprehensive skills training programme for youths will be undertaken. The range of skills training programmes will be expanded to include new areas such as building and aircraft maintenance and hotel management, as well as the introduction of new technical and vocational programmes. Training in soft skills such as effective communication, hospitality, creative thinking skills and business management will be given greater emphasis. Towards this end, community colleges, industrial training institutes and skills training institutes will be built while existing infrastructures and training facilities upgraded. These measures will cater for the training of about 300,000 youths during the Plan period. To increase the employability of rural youths, skills training opportunities will be increased, particularly for youths from the land development schemes.

14.32 The Government will continue to encourage the private sector to provide skills training for youths through collaboration and the forging of strategic partnerships. Through this approach, courses relevant to the industry will be identified and implemented to provide experience and hands-on training that will increase their employability. In this regard, training programmes implemented under the Hotel Apprenticeship Scheme and Non-Formal Skills Training Programme will be intensified. A total of 150,000 youths will be trained during the Plan period.

Entrepreneurial Development

14.33 In line with the objective of creating and establishing a commercial and industrial youth community, new business opportunities will also be made accessible to youths through strategic arrangements with private companies and privatised entities. Youths will be further trained to take advantage of existing franchise and vendor development programmes, the umbrella-concept marketing arrangements and venture capital schemes of large enterprises.

14.34 To assist youths in their businesses, seminars and courses on financial and business management, business opportunities and motivation will be conducted. These programmes will provide a head start for youths in business ventures and promote self-employment, particularly among fresh graduates.

14.35 The *Program Pembangunan Belia Tani* will be introduced during the Plan period to further encourage and attract more youths to undertake projects in the agriculture sector. The implementation of this programme will include the setting up of agro-based business ventures and encouraging the use of modern technologies thus creating a new and modern generation of young farmers. Components of the programme will include training and advisory services for

youths to undertake agro-based commercial activities. It is estimated that about 1,000 agro-entrepreneurs will be created among youths during the Plan period.

14.36 With the increasing application of ICT in business, the ICT Entrepreneur Development Programme for youths will be continued during the Plan period. The components of the programme will include courses and seminars in computer literacy as well as certification of computer science, IT development and promotional programmes. A total of 50,000 youths is expected to benefit from this programme.

Preventive and Rehabilitative Programmes

14.37 During the Plan period, the Government will continue to give emphasis on preventive and rehabilitative programmes to combat social problems among youths. Closer cooperation between the local communities and government agencies in stemming crimes among youths will be established. In addition, training programmes for youths in the high-risk crime group will be carried out to nurture them to become responsible citizens.

14.38 Concerted efforts will be undertaken to address drug addiction and trafficking among youths. In this regard, awareness programmes will be intensified which includes the *Belia Benci Dadah* campaign. A larger number of religious leaders will be enlisted to inculcate positive and spiritual values among youths, particularly on the negative impact of drug abuse and deviant behaviours. In addition, new approaches to reach out to these groups of youths will be adopted to ensure effective implementation of preventive and rehabilitation programmes.

14.39 Education on drug prevention and dissemination of information will be carried out to reduce the number of drug addicts and enhance community participation in the preventive and rehabilitative treatment efforts. Rehabilitation and training programmes will be improved to enhance the employability of the inmates and to reduce re-offending cases. More service centres will be established to provide individual, group and family counselling. These centres will be the main focus of integration between the Government agencies and the NGOs in developing a conducive environment to assimilate the drug addicts into the society.

14.40 As part of the long-term approach to tackle indiscipline in schools, an integrated campaign against gangsterism and secret society affiliations among students involving the Ministry of Education, Ministry of Housing and Local Government and police as well as PTAs will be launched. In addition, voluntary organisations such as PEMADAM, PENGASIH as well as other social and religious organisations will be encouraged to increase their participation in preventive and rehabilitative programmes.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

14.41 The various skills and leadership training programmes aimed at empowering youths will be undertaken by the Ministry of Youth and Sports, Ministry of Entrepreneur and Cooperative Development and Ministry of Human Resources. In this regard, a total of RM5.3 billion will be provided under the Ninth Plan, as shown in *Table 14-4*. Of this total, 75.1 per cent or RM4.1 billion will be provided for skills training while 9.3 per cent or RM509.5 million will be allocated for management training.

TABLE 14-4
**DEVELOPMENT EXPENDITURE AND ALLOCATION FOR
YOUTH DEVELOPMENT PROGRAMMES, 2001-2010**
(RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|-------------------------------|----------------------------|---------------------------|
| Leadership Training | 63.5 | 115.5 |
| Skills Training | 3,930.6 | 4,103.6 |
| Commercial Training | 158.6 | 179.5 |
| Management Training | 361.7 | 509.5 |
| Entrepreneurial Development | 40.1 | 20.0 |
| <i>Rakan Muda</i> | 304.5 | 334.0 |
| Preventive and Rehabilitation | 96.7 | 199.4 |
| Total | 4,955.7 | 5,461.5 |

Source: Economic Planning Unit

V. CONCLUSION

14.42 Youth development programmes during the Eighth Plan period were directed at producing a productive and disciplined young generation. This was achieved through the implementation of various skills and leadership training programmes at the IKBN and various other training institutes. During the Ninth Plan period, youth development programmes will continue to focus on skills training and entrepreneurial development to encourage self-employment among youths. They will be trained to be resilient and to withstand challenges in a competitive environment through on-the-job training and exposure to real work situations. Youth leadership programmes will give emphasis on the role of youths in society and fostering national unity with a sense of common and shared destiny.



FOSTERING FAMILY AND COMMUNITY DEVELOPMENT

15

I. INTRODUCTION

15.01 During the Eighth Plan period, family and community development programmes were implemented in line with the objective of creating a caring society that provide support for the development of other sectors of the economy. The implementation of these programmes contributed towards improving the general welfare of the people and a better quality of life.

15.02 During the Ninth Plan period, the implementation of family and community development programmes will give greater emphasis on building resilient families and a more caring society in order to achieve an optimal balance between material growth and societal development. In this regard, efforts towards strengthening the family unit, enhancing community participation and increasing the role of civil societies and non-governmental organisations (NGOs) towards cultivating a more tolerant and caring society will be undertaken. Concerted efforts will be undertaken to foster greater unity and integration among Malaysians to ensure social stability.

II. PROGRESS, 2001-2005

15.03 During the Eighth Plan period, the Government continued to undertake social development programmes aimed at strengthening family units as well as improving the quality of life of the people including children, people with disabilities and the elderly. Family development programmes were focused on building good family relationships and creating awareness as well as recognition of the family unit as an important social institution. The welfare and protection of children continued to be emphasised while facilities for people with disabilities and the elderly were improved and expanded to ensure quality care. Community development programmes were implemented with the participation of NGOs and the private sector.

Family Development

15.04 Efforts were undertaken to strengthen the family unit as the key to building peaceful, prosperous and stable communities. The establishment of women, family and community development councils in each state enabled the implementation of integrated family development programmes at the grass root level. In this regard, various preventive and advocacy programmes and activities were implemented in collaboration with NGOs, the private sector as well as education and training institutions. These activities were aimed at creating awareness on the importance and benefits of a happy and harmonious family as well as helping families cope with changes in the living environment.

15.05 The Family First campaign was launched at the national and state levels in 2003 to create awareness and recognition of the family as a social priority and fundamental unit of society, which should be protected and supported by the state and community. The Government implemented various family-friendly policies for public sector employees. These included a five-day working week to enable parents to spend quality time with their families, increasing paternity leave from three to seven days and providing three days compassionate leave during the demise of close family members.

15.06 The SMARTSTART package, which provided information and knowledge to newly-weds on their roles and responsibilities as well as the importance of nurturing their relationship, was developed during the Plan period. The package provided information and advice on seven key areas, namely marriage preparation, marriage, family health, pregnancy and childbirth, parenthood, managing family resources as well as managing stress and conflict. In addition, a standardised pre-marriage training module was developed in consultation with various religious organisations and NGOs to educate those planning to get married on their roles and responsibilities in marriage.

15.07 During the Plan period, the Government approved the establishment of one-stop family service and training centres or *Kompleks KASIH Keluarga* to provide programmes and services in strengthening the family unit including counselling, parenting skills and reproductive health services. In this regard, one complex was completed at Shah Alam, Selangor. In addition, two adolescent and youth centres known as *kafe@TEEN* were established on a pilot basis in Wilayah Persekutuan Kuala Lumpur and Butterworth, Pulau Pinang. The *kafe@TEEN* provided information and knowledge on adolescent sexuality and reproductive health as well as guidance and services tailored to adolescents.

Children

15.08 To safeguard the welfare and interest of children, efforts to ensure their protection, rehabilitation and development were continued. Towards this

end, the Child Act 2001 was enacted in 2001 through consolidating the Juvenile Courts Act 1947, the Women and Girls Protection Act 1973 and the Child Protection Act 1991. The enactment of this Act took into consideration the principles of the Convention on the Rights of the Child (CRC). This Act provided for the mandatory reporting by medical practitioners, family members and childcare providers on child abuse cases. In this regard, the reporting of child abuse cases increased from 1,036 in 2001 to 1,656 in 2005. The Act emphasised on parental responsibilities and involvement in the rehabilitation of the child and overcoming social disharmony within the family through the provision of interactive workshops. A special court known as the Court for Children and presided by a magistrate with two advisors from members of the public was established in 2002 to hear child-related cases.

15.09 Various efforts were undertaken to address the issue of violence against children including strengthening community participation in implementing prevention and rehabilitation programmes. Child Protection Teams and Child Activity Centres were established at the state and district levels to provide locally-based services, especially for high-risk families and children. These services included child-related activities, counseling for children and parents, parenting courses as well as childcare services aimed at providing the psychological and motivational support to those affected. During the Plan period, a total of 131 Child Protection Teams with 1,572 active members as well as 135 Child Activity Centres was set up. In addition, Suspected Child Abuse and Neglect (SCAN) teams were established at district and state hospitals to supervise and monitor child abuse cases referred to the hospitals. During the Plan period, a total of 14 SCAN teams was established at state hospitals and about 690 child abuse cases were reported.

15.10 The Child Care Centre Act 1984, which ensured a minimal standard of care for children in child care centres, was reviewed in 2005 to institute greater enforcement measures and to enhance quality child care. In addition, the public and private sectors were encouraged to establish child care facilities in the work place through the provision of various incentives such as grants and tax rebates. During the Plan period, 86 registered child care centres were established at the workplace while 3,197 child care providers were given training to enhance their capability in operating child care centres.

15.11 The Government continued to provide institutional care for orphans as well as abandoned, abused and neglected children. During the Plan period, three new *Rumah Kanak-Kanak* were established in providing care and protection for 320 children. In addition, seven *Rumah Tunas Harapan* were established, which enabled children in need of care and protection to live within a family environment. These homes were made possible through partnerships and collaborations with corporate bodies, the state governments and other related agencies such as the National Welfare Foundation, NGOs and community-based organisations. A total of 240 children benefited from this effort.

15.12 In line with the CRC, efforts to promote greater participation of children in the formulation and decision making process were undertaken. Capacity building efforts and empowering of children on children's issues and rights were carried out through the awareness and participation programmes that involved a total of 163 children during the Plan period. To further ensure that the voices of children are heard, children were involved in the evaluation of the first National Plan of Action (NPA) and the drafting of the second NPA (2006-2020) which took into consideration the elements of the CRC, namely child survival, protection, development and participation.

People with Disabilities

15.13 The Government continued to provide care and support for people with disabilities through various programmes. These included the provision of facilities to enable them to lead a normal life. To ensure that people with disabilities have access to these programmes, a campaign to educate and raise awareness on the need to register people with disabilities began in 2001. By the end of 2005, a total of 150,600 people with disabilities was registered with the Department of Social Welfare. The Government also provided benefits such as free medical consultation, medication and hospitalisation in government hospitals, discounts on travel fares, exemption of road tax, free travel documents, additional income tax relief, discounts on excise duty for purchase of national vehicles and discounts for the purchase of low cost houses.

15.14 Efforts to integrate the disabled into the mainstream activities of society were intensified through the community-based rehabilitation programme, which involved their families and communities and supported by relevant agencies such as health, education and social welfare. During the Plan period, 313 community-based rehabilitation centres were established benefiting 8,453 people with disabilities.

15.15 The Government continued to provide training and employment opportunities to assist people with disabilities to be self-reliant. The Bangi Industrial Training and Rehabilitation Centre provided training to 703 people with disabilities in computer programming, dressmaking and design, making of prosthetic and orthotic appliances and wheelchair manufacturing. About 30 per cent of the trainees joined the labour force while some were employed in shelter workshops managed by the Government and NGOs. To encourage the disabled to continue working to support themselves and their families, the Disabled Worker's Allowance of RM200 per month was provided beginning in 2004 to those earning less than RM750 a month. Launching grants up to a maximum of RM2,700 per person were also provided to encourage and assist people with disabilities to venture into small businesses whereby additional grants were also provided for those who undertook business expansion.

15.16 Efforts were undertaken to provide more disabled-friendly facilities such as information and communications technology (ICT) and barrier free facilities. Under the Integrated Public Housing Programme, housing developers are required to allocate 10 per cent of flats built to be fitted with the necessary features and facilities for the disabled. In addition, public transportation such as the light-rail transit and buses also incorporated features that would facilitate accessibility and mobility of persons with disabilities. The *Taman Sinar Harapan*, was completed in Jitra, Kedah making a total of seven homes to accommodate 1,080 people with disabilities. These homes were equipped with facilities that provided physiotherapy, occupational therapy, music therapy, medical rehabilitation as well as counseling to help residents lead meaningful lives.

Older Persons

15.17 Taking cognisance of the socio-economic implications of the increasing proportion of the elderly, programmes for the aged shifted from a welfare approach to a development approach to ensure active and productive ageing. Programmes introduced emphasised on community participation that included promotion of healthy lifestyles, social and recreational activities. These programmes also encouraged volunteerism among older persons as well as intergenerational activities, lifelong learning programmes and learning skills such as ICT to enable their continued contribution to family, society and country. This is in line with the National Plan of Action for Older Persons promulgated in 1989 that aims to provide a society of older persons that are independent and possess a high sense of self-worth and dignity.

15.18 The Government continued to undertake measures to encourage family members to take care of the elderly. To assist healthy and active older persons to enjoy more productive lives while their family members are out at work, day care centres were built. During the Plan period, 15 centres were completed and managed by NGOs that benefited 600 older persons.

15.19 Various amenities and privileges for older persons were introduced during the Plan period. These included the provision of special counters and seating areas by Government agencies that offered counter services while rebates of 50 per cent on fares for domestic air and rail travel were provided. Employment opportunities for older persons were provided by the Ministry of Human Resource whereby employers were allowed to claim 100 per cent tax rebate on retraining costs for older persons taken in as employees.

15.20 Provision of institutional services for the care and protection of older persons were continued with the establishment of nine homes for older persons and two homes for the chronically ill. In addition, two *Rumah Tunas Budi*, were built in collaboration with the private sector during the Plan period which provided

care for 40 older persons. NGOs complemented the Government's effort in providing institutional care through the provision of residential homes and cottages for older persons to enable them to continue living within their own communities.

Non-Governmental Organisations

15.21 Recognising the important role of NGOs in contributing to the social development of the country and enhancing the creation of caring societies, the Government continued to provide grants to assist them in implementing various community programmes and activities especially for the socially vulnerable groups of society. During the Plan period, grant allocation increased from RM14.9 million in 2001 to RM34 million in 2005 for 210 NGOs to implement their activities as well as undertake capacity building programmes for their volunteers and caregivers. A total of 855 care givers was trained to enable them to carry out their roles and responsibilities in a more effective manner.

Community Development

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15.22 During the Plan period, community development programmes continued to be undertaken in the rural and urban areas with the objective of fostering harmonious living and nurture the spirit of caring among the various communities as well as to inculcate positive values. In the rural areas, community development programmes were undertaken by Community Development Departments (KEMAS) to provide opportunities for the people, particularly the hardcore poor to improve their socioeconomic status. To prepare children of rural families for formal education, a total of 1,310 pre-school classes was set up during the Plan period, benefiting about 36,570 children.

15.23 In the urban areas, community development programmes were implemented to promote good neighbourliness and national unity. Programmes were implemented through the *Rukun Tetangga* committees set up in housing estates throughout the country. During the Plan period, a total of 780 *Rukun Tetangga* committees was established in urban areas, bringing the total to 3,065 committees with a membership of about eight million people. The scope of *Rukun Tetangga* programmes was expanded to include social outreach activities, which focused on specific target groups such as the marginalised groups and the needy including the disabled, single mothers, orphans as well as former drug addicts who needed attention and care from society.

15.24 To enhance the effectiveness of the *Rukun Tetangga* committees, training programmes on leadership, conflict management, basic skills of voluntary patrolling and counselling were organised. To develop a lifelong learning culture and create a knowledge society, members were also encouraged to participate in lifelong learning programmes conducted at the *Pusat Rukun Tetangga* and the

Pusat Aktiviti Perpaduan. During the Plan period, 42 new *Pusat Rukun Tetangga* and three *Pusat Aktiviti Perpaduan* were built throughout the country. To promote national unity and integration among the various races beginning from young, national unity pre-school classes continued to be established. During the Plan period, 250 pre-school classes were set up bringing the total to 1,396 benefiting about 38,040 children.

15.25 The National Social Policy (NSP) which provided the framework for social progress and balanced development through the synergistic efforts of the Government, the private sector and civil societies as well as the community was launched in 2003. To ensure effective implementation of the policy, an inter-ministerial council was established to monitor as well as to evaluate the performance of social development projects undertaken by various ministries and agencies within the framework of the NSP. The implementation of the NSP was further facilitated by the establishment of *Pusat Rujukan Sosial* which provided counseling services and information on social development programmes to serve the needs of the people. In addition, these centres acted as venues for community level meetings. During the Plan period, a total of 47 such centres was established throughout the country, which provided services for 38,820 people, particularly in the rural areas.

III. PROSPECTS, 2006-2010

15.26 During the Ninth Plan period, continued emphasis will be given towards building resilient families and creating a more caring Malaysian society. Towards this end, family development programmes will be implemented, particularly to promote greater community participation in caring for the socially vulnerable groups. In this regard, efforts by the public sector will be complemented by the private sector and NGOs through partnerships and joint programmes. Focused efforts will be given to foster national unity and closer integration among Malaysians through improved and well-coordinated programmes. The strategic thrusts in the Ninth Plan period will be as follows:

- ❑ *strengthening family institutions towards creating a resilient and more caring society;*
- ❑ *strengthening the social support delivery system;*
- ❑ *encouraging greater involvement of the local community and non-governmental organisations in social development effort; and*
- ❑ *enhancing community development and national unity.*

Strengthening Family Institutions

Family Development

15.27 Recognising that the family is the primary determinant of a nation that is healthy, dynamic, productive and resilient, programmes that contribute to the strengthening of the family unit will continue to be given emphasis. In view of the changing family structure and relationships, indicated by the increasing percentage of nuclear and dual income families, greater efforts will be undertaken to ensure that the role of the family as the basic socialising, stabilising and care agent for the young and the elderly is maintained. Towards this end, the National Family Policy will be formulated with the objective of developing and enhancing the family institution as well as promoting a family first concept. This policy will ensure the incorporation of family well-being initiatives in all policies, legislation, programmes, services as well as facilities.

15.28 Family development programmes will be revised to incorporate an integrated approach, targeting the different stages of the family life cycle and meeting the needs of every member as well as empowering them with knowledge and skills to meet the challenges of modern living. In this regard, efforts will continue to be undertaken to strengthen the family institution through the design, implementation and expansion of preventive, supportive and rehabilitative programmes. These programmes will emphasise a culture of mutual respect, caring and sharing of resources and responsibilities among family members. Towards this end, a module on grandparenting will be developed to give greater emphasis to intergenerational relationships and recognition of the role of grandparents in enhancing the family institutions, including the inculcation and preservation of cultural, religious and traditional values. In addition, efforts will also be undertaken to implement retraining programmes for counselors to enable them to continuously improve and upgrade their skills and knowledge.

15.29 Recognising the increasing participation of women in the labour force, steps will be undertaken to create awareness and provide knowledge to parents on the importance and need to balance work and family responsibilities. Towards this end, based on the existing family development modules, the Parenting@Work Programme will be developed to provide guidance on parenting skills, ensure stable and resilient family units as well as equip families to face modern day challenges. At the initial stage, this programme will be implemented in all government agencies at the federal and state levels.

15.30 Efforts will continue to be undertaken to implement programmes that inculcate character building and family values that contribute towards resilience, integrity, solidarity and cohesiveness of the family. Towards this end, family friendly services and programmes that contribute towards strengthening marriage,

inculcating family values and the equitable sharing of resources, responsibilities and tasks will be implemented. Pre-marriage courses will be conducted more extensively for couples intending to get married to educate them on their roles and responsibilities as well as ensure their readiness for marriage. Priority will be given to vulnerable and marginalised families so that they may assume their responsibilities within their families and community. In addition, the mass media will be required to place greater emphasis on promoting and disseminating positive values and information that are consistent with the nation's socio-cultural and family sensitivity to contribute towards individual and family development.

15.31 During the Plan period, more research on current and emerging population and family-related issues including the needs of special groups such as the elderly, single parents and adolescents will be undertaken. Results of these research activities will contribute to the formulation of relevant social policies and intervention programmes towards strengthening the family unit. In this regard, family development indicators will also be formulated to assess the impact of programmes on family well-being.

Strengthening Social Support Delivery System

Children

15.32 As the family is the fundamental unit of society and the natural environment for the growth and well-being of its members, particularly children, concerted efforts to strengthen the family institution and family support mechanisms to facilitate child welfare, protection, development and participation will be continued during the Ninth Plan period. These will include consolidating existing programmes, enhancing quality assurance as well as strengthening other support programmes including capacity building of personnel and upgrading of facilities.

15.33 As a follow-up to the first NPA in the 1990's, the second NPA (2006–2020) will be implemented to enhance the quality of life of children with emphasis on their protection, development and participation in line with the CRC and Vision 2020. An Early Childhood Care and Development Policy will be formulated to provide the policy framework for the future development of strategies and programmes that would ensure the total development of children in accordance to their rights and needs. The policy will address issues pertaining to their age group that spans from birth to six years.

15.34 Community participation will continue to be a major strategy in the prevention and rehabilitation programmes for children during the Plan period. The role of child protection teams, child welfare committees and court advisors for Court for Children will be enhanced through capacity building efforts that

facilitate their effective functioning in helping to protect the best interest of the child and undertake preventive and rehabilitative programmes to curb the many social problems of children. Specialised training programmes will be undertaken where all members will be given the knowledge and skills in dealing with children as well as knowledge on court proceedings, the provision of relevant acts and awareness of children's rights.

15.35 The Child Care Centre Act 1984 will be reviewed to further improve the provision of quality services in line with the principles of early childhood care and development. The establishment of the community child care centres will provide affordable and accessible quality child care facilities especially for the lower income groups in the urban areas who cannot afford to send their children to child care centres run by the private sector.

People with Disabilities

15.36 Programmes to integrate people with disabilities into society to enable them to lead a normal life will be further intensified. To ensure that people with disabilities are not marginalised, the registration process of people with disabilities will be strengthened for the proper planning of programmes and facilities. An online registration system will be implemented to enable the Government to know the extent of disabilities before formulating suitable programmes for the development of people with disabilities.

15.37 The People with Disabilities Act will be enacted to actively promote and protect the rights of the disabled to live with dignity and self-respect. The Act will ensure their rights to an inclusive society, greater access to education and vocational training, employment, barrier free environment as well as access to ICT.

15.38 Community based rehabilitation programmes have proven to be cost effective and an effective alternative to institutional rehabilitation of people with disabilities. In this regard, additional community based rehabilitation centres will be established during the Ninth Plan period. These community based rehabilitation centres will be developed as a one-stop service centre to provide more comprehensive services for people with disabilities. Among the services to be provided will be disability screening and detection, referral services, dissemination of information on disabilities, vocational training and job placement, registration of people with disabilities and advocacy.

Older Persons

15.39 Measures will be undertaken to provide for an environment for the elderly to remain healthy, active and secure while being able to age with

dignity and respect as well as leading independent and fulfilling lives as integral members of their families, communities and country. Programmes to create greater awareness among family members and the community in caring especially for the elderly will be undertaken. In this regard, values such as familial responsibilities, love and understanding for the elderly will be given greater emphasis. Community level participation will be enhanced through a strong network of community services and the creation of opportunities for their engagement in social and economic activities. A more coordinated effort in the implementation of development programmes for the elderly will be undertaken to ensure effective participation of the target group in national development efforts. In addition, the skills, experiences and contributions of senior citizens in national development will be promoted by facilitating partnerships between the Government, civil society, NGOs and the private sector.

15.40 To help families cope and enhance their role as effective and meaningful care givers to their ageing parents, a range of community support services including home help, home support and occupational therapy assessments will be made available and affordable. In addition, counseling services within the community will be encouraged to provide psychological knowledge and self-skills for older persons to enable them to be more competent to cope with the social, economic and psychological changes associated with ageing.

15.41 To ensure the overall well-being of society, continuous improvements to enhance delivery mechanisms will be undertaken in line with expectations of society for the provision of fast and efficient service. A social outreach programme to ensure groups in need are not left out of mainstream development will be undertaken as a proactive measure. The mobile welfare unit, *Unit Mayang* will be set up with the objective of making available welfare services direct to the community. The Unit will provide professional services such as counseling beside processing applications for financial aid and the making of payments, registration of people with disabilities, advocacy as well as disaster relief operations.

Financial Assistance

15.42 Development programmes for children, people with disabilities and the elderly during the Plan period will be enhanced with the provision of financial assistance such as *Bantuan Kanak-kanak*, *Bantuan Orang Tua*, *Bantuan Geran Pelancaran* and *Bantuan Alat Tiruan*. The assistance provided will benefit about 150,000 recipients during the Plan period.

Greater Involvement of Non-Governmental Organisations

15.43 Recognising the role of NGOs, the Government will continue to give the necessary support to enable NGOs to sustain and develop programmes

and facilities for the marginalised and socially vulnerable groups. In this respect, efforts to enhance capacity building of NGOs will be continued through human resource development programmes. To ensure quality care is provided to the target groups, the amendments to the Care Centre Act 1993 will facilitate registration of all institutions run by NGOs and strengthen enforcement of the Act. In addition, a guideline for the management of children's homes will be formulated as a quality assurance mechanism to determine and ensure quality and standards for children's homes run by NGOs.

Enhancing Community Development and National Unity

Community Development

15.44 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. In the rural areas, non-formal education which include family development classes on food and nutrition, family health and hygiene as well as home economics will be continued to further improve the quality of life of the rural community. The construction of new resource centres and community service centres will provide more opportunities for the rural families to be involved in community development programmes. The *Jawatankuasa Keselamatan dan Kemajuan Kampung* will be encouraged to cooperate with the private sector to implement community development projects.

15.45 In the urban areas, more *Rukun Tetangga* committees will be established and their scope of activities will be expanded to include the young through the *Rakan Muda* programmes. Intensive efforts will be undertaken by these committees to promote neighbourliness and foster community participation as well as assist in reducing crime in housing estates. Resident associations as well as social and recreational clubs will be further encouraged to extend their social outreach programmes to promote mutual respect and tolerance among the various communities.

15.46 To further promote and strengthen inter-racial cooperation and understanding among communities, profiles of residents within the particular housing area will be developed to ensure a more systematic approach towards the planning of activities and the initiation of efforts towards community development. Training in various areas such as conflict management and counseling will be conducted to enable members to handle challenges that they face in dealing with the community. The spirit of *gotong-royong* and the sense of commitment to achieve unity in a diverse and multi cultural society will be inculcated among members of the community through various programmes.

Income generating activities will be encouraged among members aimed at improving their economic well-being. More pre-school unity classes will be established during the Plan period to inculcate mutual respect, greater understanding and love for the country among the young.

15.47 Various unity programmes that encourage the involvement of people from different races will be continued to enable all level of societies to interact and better understand each other. This will include cultural activities at the federal and state levels and the celebration of festivals belonging to the various races in the country. Efforts will continue to be undertaken to educate and create awareness among the various communities that unity is an important and paramount agenda in all aspects of life and it needs to be practised, internalised and strengthened from time to time. In this regard, the role of the media will be greatly emphasised.

15.48 To ensure the successful implementation of the NSP, the Government will be committed to inculcate behavioral and mindset changes and instill the commitment at all levels of the government machinery and NGOs in addressing social issues. In this regard, concerted efforts involving the public and private sectors as well as the NGOs will be undertaken to identify more effective measures and approaches particularly in addressing social ills within the society. Existing mechanism and resources within the community will be utilised to the maximum to complement the Government's efforts in providing care and services to the target groups.

15.49 During the Plan period, the *Institut Sosial Malaysia* (ISM) will continue to train professional social workers and care givers with emphasis on providing quality care to the target groups. The National Standard for Social Work Competencies will be implemented to prepare social practitioners in facing challenges such as natural disasters, social security, population ageing and poverty eradication. ISM will become a training hub for social practitioners in the region.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

15.50 The Ministry of Women, Family and Community Development will continue to be the lead agency in the implementation of family and community development programmes. In addition, complementary programmes will be implemented by the Department of National Unity and National Integration as well as KEMAS.

15.51 During the Ninth Plan period, a sum of RM842.5 million will be allocated for family and community development programmes, as shown in *Table 15-1*. Of this total, 55 per cent will be allocated for welfare services programmes

which includes the care, protection and rehabilitation of children, people with disabilities and the elderly while 45 per cent will be allocated for community and family development programmes.

TABLE 15-1
**DEVELOPMENT EXPENDITURE AND ALLOCATION FOR FAMILY AND
 COMMUNITY DEVELOPMENT PROGRAMMES,
 2001-2010**
 (RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|-----------------------|----------------------------|---------------------------|
| Family Development | 19.1 | 30.1 |
| Welfare Services | 220.1 | 463.4 |
| Community Development | 429.6 | 264.0 |
| Unity and Integration | 70.0 | 85.0 |
| Total | 738.8 | 842.5 |

Source: Economic Planning Unit

V. CONCLUSION

15.52 Family and community development programmes during the Eighth Plan period were implemented with the aim of increasing its accessibility and coverage to a wider section of the Malaysian population for a better quality of life. Its contribution to the overall development of the economy and general well-being of society will continue to be emphasised during the Ninth Plan period through improvements in the delivery system and enhancement of capacity building programmes. Intensive efforts will be undertaken to foster as well as harness national unity and social integration, particularly among the younger generation.

ACHIEVING GROWTH WITH DISTRIBUTION

16

I. INTRODUCTION

16.01 Malaysia's economic development policies have been shaped by the Government's commitment in ensuring that the benefits of economic growth are shared equitably among all Malaysians. This commitment is built upon the realisation that greater equity in the distribution of income and opportunities for wealth creation is essential for sustained economic growth as well as for the maintenance of social stability and national unity.

16.02 Economic development since 1970 has been guided by the strategy of distribution through growth and the twin-pronged objectives of the New Economic Policy, namely the eradication of poverty irrespective of race and the restructuring of society to correct the identification of race with economic function. Progress towards meeting these objectives has been made, although success has been mixed. Progress in reducing absolute poverty has been exemplary. Living standards of almost all Malaysians have been raised. The number of Bumiputera professionals and skilled workers has increased in various occupations and sectors. The growth of the middle class, including Malays and other Bumiputera, has been accelerated.

16.03 Yet in recent years, inequality in income, including within each ethnic community, has been rising. Other dimensions of inequality are also displaying worrisome trends. Ethnic income disparity, although narrowing in relative terms in recent years, has continued to widen in absolute terms. Inequality between states and regions still remain wide and persistent. Economic growth has been a driving force for raising income and living standards, but it does not by itself ensure that the benefits of growth are equitably shared among all in society.

16.04 In the National Mission, the commitment to improve the distribution of the fruits of further economic growth is reaffirmed, as shown in *Box 16-1*. Implementation of distribution strategies will, however, emphasise measures to enhance capacity and improve competitiveness. Thus, in the Ninth Plan, stronger efforts will be put in place to constructively and productively improve distribution through growth. Emphasis will be given towards addressing persistent inequalities and improving distribution so as to achieve the ultimate objective of national unity and regional balance.

BOX 16-1

REAFFIRMING DISTRIBUTION IN MALAYSIA'S DEVELOPMENT AGENDA

A. Background

In the National Mission, the commitment to improve the distribution of the fruits of further economic growth is reaffirmed. This pledge is based on a commitment towards maintaining and strengthening national unity according to the provisions of the Rukunegara and as enshrined in the Constitution. It is also underpinned by an appreciation of the historical context as well as the economic and social challenges that Malaysia's multi-ethnic, multi-religious society continue to face at the national and international levels.

B. Imperatives For Reaffirming Distribution Within Development

Maintaining sustainable economic growth, promoting human development and strengthening national unity

New evidence suggests that persistently high inequalities can negatively affect the prospects of future growth of an economy. Essentially, persistent inequity is inimical to development while equity and prosperity are complementary. Greater equity can also reduce poverty, enhance economic growth, advance development, and deliver increased opportunities to the poorest groups in societies.

The evidence from many other developing and developed countries suggests that persistent and growing inequalities may eventually cause systemic problems and social instability in an economy unless addressed firmly, effectively and with great pragmatism and wisdom for the benefit of the nation as a whole.

A *growth with distribution* development policy is consistent with the provisions of the Charter of the United Nations, free market regime, human rights, democracy, rule of law and civil society. By implementing the distribution thrust together with the growth thrust in the development agenda, Malaysia is not only fulfilling its United Nations Millennium Development Goals commitment but also, in the process, addressing various aspects of economic and social inequalities, thereby promoting human development and climbing the scale of the annual United Nations Development Programme (UNDP) Human Development Index.

Meeting distribution targets that have not yet been fully met

While Malaysians enjoy a much higher quality of life now than in the past, income inequality among ethnic groups and between urban and rural areas is still sizeable and has increased in recent years. The progress in moving towards the distributional targets set earlier has been slower than projected due to the general economic slowdown arising from external shocks as well as some leakages.

Ensuring the effectiveness and full impact of distribution policies, programmes and projects in line with good governance practices

Cross-country evidence including from Malaysia has shown that inequality can be successfully addressed through an appropriate package of public policies, programmes and projects and defined priorities. Measures to reduce leakages will increase the full impact of development programmes and projects supporting economic growth and inequality reduction.

The greater emphasis being placed on good governance practices requires more effective and accountable distribution programmes and implementation processes to be put in place. Therefore, distribution policies, programmes and projects need to be carefully designed to ensure that they will complement and enhance both growth and distribution aspects simultaneously, as well as meet good governance standards.

C. Towards Growth With Distribution

The above factors, underpinned by evidence, provide a basis for an informed and more enlightened view towards the linkage between economic growth, inequality and distribution as well as the importance of equity as the foundation for sustained economic growth, human development, and the maintenance of national unity.

Malaysia will continue to pursue a development policy that emphasises growth with distribution. Distribution policies, programmes and projects will be better designed and carefully monitored so as to achieve greater economic growth as well as greater equity in economic opportunities and income and wealth distribution among all ethnic groups to ensure long-term sustainable development. Existing and past programmes will be reviewed and evaluated for their impact and effectiveness in achieving distributional targets, while the system of implementation will be reviewed and strengthened to better target beneficiaries and minimise leakages. Future programmes will be applied based on merit and need.

For Malaysia to pursue a *growth with distribution* development philosophy with any success, strong commitment between the government and all sectors of society, including the private sector, non-governmental organisations (NGOs), social groups and individuals, is required. All groups must recognise and appreciate that the distribution in this sense does not mean the redistribution of the existing wealth of the country, which is protected by the Federal Constitution, but the gradual and incremental distribution of future economic growth which all Malaysians will together contribute through genuine and active participation in the production process. It is a recognised fact that a development policy that does not take into consideration the majority of the population in the production and modernisation process is not a viable policy.

The successful adoption and implementation of a *growth with distribution* philosophy of development is a winning strategy for any country. In this respect, Malaysia has always been ahead of the curve and will continue to maintain this position for the benefit of all Malaysians, including future generations.

16.05 The focus of distribution strategies will be reoriented towards attaining income parity in the longer term by substantially lowering income disparities. Specifically, hardcore poverty will be fully eradicated and overall poverty halved to 2.8 per cent by the end of the Plan period. Effective participation of Bumiputera in the economy will be increased through effective employment restructuring in the private sector, through enhanced Bumiputera ownership of corporate asset holdings as well as commercial and residential property and intellectual property, and through the further development of the Bumiputera Commercial and Industrial Community (BCIC) and the creation of a Bumiputera Science and Technology Community (BSTC). Similarly, the participation of the Indian community in the economy will be enhanced. Ultimately, through the employment of various measures to enhance capacity and raise competitiveness, a high performance culture will be promoted among all Malaysians, including the Bumiputera community, to enable the nation to face global challenges.

II. PROGRESS, 2001-2005

16.06 During the Eighth Plan period, the implementation of more target-specific approaches reduced poverty in both the rural and urban areas. The focus of poverty eradication and quality of life improvement programmes was directed at the bottom 30 per cent of households. The number of Bumiputera professionals and skilled workers in various occupations and sectors increased, while the development of the BCIC accelerated the growth of the Bumiputera middle class.

Poverty Eradication

16.07 During the Plan period, the concept and measurement of poverty were reviewed to take into account the social and economic changes that have taken place in Malaysia since 1977 when the poverty line income (PLI) was first formulated. The review was also carried out to develop poverty measurements that reflect the difference in the cost of living between urban and rural areas, between states, as well as in the demographic pattern of each household. The statistics provide more accurate measures of the nature and extent of poverty in Malaysia. The 1977 and the 2005 methodologies are explained in *Box 16-2*.

16.08 *Hardcore Poverty*. The total number of hardcore poor households declined from 91,700 to 67,300, as shown in *Table 16-1*. The incidence of hardcore poverty among Bumiputera households was the highest at 1.9 per cent in 2004 compared with 0.1 per cent for the Chinese and 0.3 per cent for the Indians, as shown in *Table 16-2*.

16.09 During the Plan period, a total of RM589.5 million was expended on 10 *Skim Pembangunan Kesejahteraan Rakyat* (SPKR) programmes, which focused on economic and social projects involving the hardcore poor. In addition, non-governmental organisations (NGOs) particularly, *Amanah Ikhtiar Malaysia* (AIM) and various state-based *Yayasan Basmi Kemiskinan* provided financial and non-financial assistance to assist hardcore poor households increase their income through small business activities. AIM, through its 69 branches and 3,962 service centres throughout the country, provided micro-credit amounting to RM1.02 billion to 147,544 participants, mostly female and single mothers in rural areas.

BOX 16-2

MALAYSIA'S POVERTY LINE INCOME

The Poverty Line Income (PLI) was substantially revised in 2005. The PLI is made up of two components, that is the food PLI and the non-food PLI. The PLI is defined separately for each household in the household income survey (HIS) based on its size, demographic composition and its location (state and stratum). A household is considered poor if its income is less than its own PLI, that is, it lacks the resources to meet the basic needs of its individual members. A household is considered hardcore poor if its monthly household income is less than the food PLI. As food requirement is based on a nutritionally adequate diet, the hardcore poverty threshold income is much higher than the old definition of half the PLI.

The Food PLI

The food component of the revised PLI is based on the advice of nutritionists, dieticians and medical professionals. Individual daily kilocalorie requirements are met through a balanced diet, which include: cereals and cereal products (uncooked rice, wheat flour); chicken, eggs and fish; milk; oil and fats; sugar; vegetables and fruits; and pulses (dhal, green peas). Table A shows the food PLIs based on the two methodologies.

TABLE A

FOOD PLI BASED ON 1977 AND 2005 METHODOLOGIES (RM)

| <i>Region</i> | <i>1977 Methodology</i> | <i>2005 Methodology</i> |
|---------------------|-------------------------|-------------------------|
| Peninsular Malaysia | 272 | 398 |
| Sabah ¹ | 352 | 503 |
| Sarawak | 304 | 482 |
| Malaysia | 294 | 415 |

The Non-Food PLI

The expenditure pattern of non-food components of the PLI are based on the actual expenditure of the bottom 20 per cent expenditure group derived from the household expenditure survey (HES). Non-food components comprise clothing, housing, transport and other items.

Comparison of the 1977 and 2005 methodologies

Table B compares the PLI based on the two methodologies.

TABLE B
**COMPARISON OF PLI FOR 2004
(RM per month)**

| <i>Region</i> | <i>1977 Methodology</i> | <i>2005 Methodology</i> | | |
|---------------------|-----------------------------|-------------------------|--------------|----------------|
| | | <i>Urban</i> | <i>Rural</i> | <i>Overall</i> |
| Peninsular Malaysia | 543 | 663 | 657 | 661 |
| Sabah ¹ | 704 | 881 | 897 | 888 |
| Sarawak | 608 | 777 | 753 | 765 |
| Malaysia | 588 | 687 | 698 | 691 |

Table C compares the incidence of poverty and hardcore poverty based on the two methodologies.

TABLE C
**COMPARISON OF INCIDENCE OF POVERTY FOR 2004
(%)**

| <i>Region</i> | <i>Overall Poverty</i> | | <i>Hardcore Poverty</i> | |
|---------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | <i>1977 Methodology</i> | <i>2005 Methodology</i> | <i>1977 Methodology</i> | <i>2005 Methodology</i> |
| Peninsular Malaysia | 3.1 | 3.6 | 3.1 | 1.2 |
| Sabah ¹ | 16.5 | 23.0 | 2.9 | 6.5 |
| Sarawak | 3.8 | 7.5 | 0.4 | 1.1 |
| Malaysia | 4.4 | 5.7 | 0.7 | 1.2 |

Table D shows the incidence of poverty and hardcore poverty by state using the 2005 methodology.

TABLE D
MONTHLY PLI, INCIDENCE OF POVERTY AND HARDCORE
POVERTY, 2004

| State | Household Size | Overall Poverty ² | | | Hardcore Poverty ² | | |
|----------------------------|----------------|------------------------------|---------------------|---------------------------------------|-------------------------------|---------------------|--|
| | | Gross PLI (RM) | Per Capita PLI (RM) | Incidence of Poverty (%) ³ | Gross Food PLI (RM) | Per Capita PLI (RM) | Incidence of Hardcore Poverty (%) ⁴ |
| Johor | 4.3 | 634 | 151 | 2.0 | 384 | 91 | 0.3 |
| Kedah | 4.6 | 654 | 143 | 7.0 | 402 | 88 | 1.3 |
| Kelantan | 5.2 | 675 | 130 | 10.6 | 438 | 84 | 1.3 |
| Melaka | 4.4 | 650 | 151 | 1.8 | 385 | 89 | 0.2 |
| Negeri Sembilan | 4.2 | 598 | 146 | 1.4 | 371 | 90 | 0.2 |
| Pahang | 4.2 | 609 | 147 | 4.0 | 392 | 94 | 1.0 |
| Pulau Pinang | 4.1 | 615 | 152 | 0.3 | 373 | 91 | neg. ⁵ |
| Perak | 4.1 | 589 | 144 | 4.9 | 371 | 90 | 1.1 |
| Perlis | 4.2 | 587 | 140 | 6.3 | 367 | 87 | 1.7 |
| Selangor | 4.6 | 726 | 159 | 1.0 | 420 | 92 | neg. ⁵ |
| Terengganu | 5.0 | 734 | 148 | 15.4 | 469 | 94 | 4.4 |
| W.P. Kuala Lumpur | 3.9 | 713 | 189 | 1.5 | 373 | 98 | 0.2 |
| Peninsular Malaysia | 4.4 | 661 | 152 | 3.6 | 398 | 91 | 0.7 |
| Sabah ¹ | 5.2 | 888 | 173 | 23.0 | 503 | 97 | 6.5 |
| Sarawak | 4.6 | 765 | 167 | 7.5 | 482 | 105 | 1.1 |
| Malaysia | 4.5 | 691 | 155 | 5.7 | 415 | 93 | 1.2 |

Notes: ¹ Includes Wilayah Persekutuan Labuan.

² Based on 2005 methodology.

³ Based on gross PLI.

⁴ Based on gross food PLI.

⁵ Less than 0.05 per cent.

TABLE 16-1

**INCIDENCE OF POVERTY AND HARDCORE
POVERTY, 1999 AND 2004**

| | | 1999 | | | 2004 | | |
|--|---------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | Malaysia | Urban | Rural | Malaysia | Urban | Rural |
| Hardcore Poverty | | | | | | | |
| Incidence of Hardcore Poverty ¹ | (%) | 1.9 | 0.5 | 3.6 | 1.2 | 0.4 | 2.9 |
| Number of Hardcore Poor Households | ('000) | 91.7 | 11.9 | 79.8 | 67.3 | 14.1 | 53.2 |
| Poverty Gap ² | (%) | 0.4 | 0.1 | 0.8 | 0.2 | 0.1 | 0.6 |
| Overall Poverty | | | | | | | |
| Incidence of Poverty ³ | (%) | 8.5 | 3.3 | 14.8 | 5.7 | 2.5 | 11.9 |
| Number of Poor Households | ('000) | 409.3 | 86.1 | 323.2 | 311.3 | 91.6 | 219.7 |
| Poverty Gap | (%) | 2.3 | 0.8 | 4.0 | 1.4 | 0.6 | 3.0 |
| Total Households | ('000) | 4,800.0 | 2,612.5 | 2,187.5 | 5,459.4 | 3,605.9 | 1,853.5 |

Source: Economic Planning Unit and Department of Statistics – Household Income Surveys, 1999 and 2004

Notes: ¹ Refers to households with monthly gross income of less than the food PLI.

² Refers to the total income shortfall (expressed in proportion to the poverty line) of poor households.

³ Refers to households with monthly gross income below PLI.

TABLE 16-2

**INCIDENCE OF POVERTY AND HARDCORE POVERTY
BY ETHNIC GROUP, 1999 AND 2004
(%)**

| | 1999 | | | 2004 | | |
|-------------------------|-------------|------------|------------|------------|-------------------|------------|
| | Bumiputera | Chinese | Indians | Bumiputera | Chinese | Indians |
| Hardcore Poverty | 2.9 | 0.2 | 0.3 | 1.9 | 0.1 | 0.3 |
| Urban | 0.7 | 0.1 | 0.2 | 0.7 | neg. ¹ | 0.2 |
| Rural | 4.4 | 0.4 | 0.5 | 3.3 | 0.3 | 0.5 |
| Overall Poverty | 12.4 | 1.2 | 3.5 | 8.3 | 0.6 | 2.9 |
| Urban | 5.1 | 0.8 | 2.4 | 4.1 | 0.4 | 2.4 |
| Rural | 17.5 | 2.7 | 5.8 | 13.4 | 2.3 | 5.4 |
| Poverty Gap | 3.3 | 0.2 | 0.7 | 2.1 | 0.1 | 0.6 |

Source: Economic Planning Unit and Department of Statistics – Household Income Surveys, 1999 and 2004

Notes: ¹ Less than 0.05 per cent.

16.10 *Overall Poverty.* As a result of the successful implementation of poverty eradication programmes and favourable economic growth, the incidence of poverty among Malaysians decreased from 8.5 per cent in 1999 to 5.7 per cent in 2004 with a corresponding decline in the number of poor households from 409,300 to 311,300, as shown in *Table 16-1*. The mean income of poor households increased from RM656 in 1999 to RM764 in 2004, narrowing the poverty gap from 2.3 per cent in 1999 to 1.4 per cent in 2004. However, the poverty gap in rural areas was five times higher than in urban areas, indicating that poverty was much more severe in the rural areas.

16.11 *Rural Poverty.* The incidence of poverty in rural areas decreased from 14.8 per cent in 1999 to 11.9 per cent in 2004 while the number of poor households reduced by about 32.0 per cent from 323,200 to 219,700. Despite the decrease in the incidence of poverty and the number of poor rural households, poverty continued to be predominantly a rural phenomenon with 70.6 per cent of the poor residing in the rural areas.

16.12 *Urban Poverty.* The incidence of urban poverty declined from 3.3 per cent in 1999 to 2.5 per cent in 2004 while the number of urban poor households increased by 6.4 per cent to 91,600, mainly due to the increase in urban poverty in Sabah. A comprehensive registry of the urban poor and low income households in 60 urban centres was developed to assist formulation of target-specific programmes for the urban poor.

16.13 *Poverty by Ethnic Group.* All ethnic groups experienced a reduction in the incidence of poverty. However, poverty among Bumiputera remained by far the highest despite decreasing from 12.4 per cent in 1999 to 8.3 per cent in 2004. The incidence of poverty among the Indians declined from 3.5 per cent to 2.9 per cent while among the Chinese from 1.2 per cent to 0.6 per cent. The poverty gap among Bumiputera households was the widest at 2.1 per cent compared with the Chinese and Indian households at 0.1 per cent and 0.6 per cent, respectively. Inadequate skills and lower educational attainment were among the factors associated with poor households of all ethnic groups.

16.14 *Bumiputera in Sabah and Sarawak.* Based on the Household Income Survey (HIS) 1999, high incidence of poverty was recorded among the Kadazandusun, Bajau and Murut in Sabah and Bidayuh in Sarawak. In 2002, the special HIS on Bumiputera minorities in Sabah and Sarawak showed that the incidence of poverty was high among Orang Sungei, Rungus, Bisaya and Sulu or Suluk communities in Sabah and Bidayuh, Kenyah, Kayan, Kadayan, Penan and Lun Bawang communities in Sarawak. Among the programmes under the SPKR include income generating projects, education and training, housing assistance and human capital development. In addition, a total of 9,000 residential units in Sabah and 1,500 units in Sarawak was built under the

Program Perumahan Rakyat (PPR) to provide better housing facilities to the poor and low income households. During the Plan period, a total of 45,900 participants in Sabah and 40,500 in Sarawak benefited from various programmes under the SPKR.

16.15 During the Plan period, about 48,900 recipients in Sabah and 43,500 in Sarawak benefited from various welfare programmes such as allowance for disabled workers as well as assistance for the elderly and the destitute. In addition, AIM provided micro credit loan amounting to RM99 million benefiting 26,000 participants in Sabah and RM88 million for 17,000 participants in Sarawak. Efforts were also undertaken to improve infrastructure in the rural areas which included upgrading and construction of new rural and village roads. A total of RM279 million and RM286 million was expended for this purpose in Sabah and Sarawak, respectively.

16.16 *Orang Asli*. Efforts were undertaken to improve the quality of life of the Orang Asli through socio-economic programmes which included the provision of education and skills training, infrastructure facilities, electricity and water supply. By the end of 2005, a total of 9,350 houses was built under the *Program Perumahan Rakyat Termiskin* and the provision of electricity and water supply to Orang Asli villages covered 12,400 and 20,100 houses, respectively. In addition, the implementation of new land development and resettlement schemes, and other projects benefited 84,250 Orang Asli, approximately half of the Orang Asli population.

Income Distribution

16.17 The household income of all ethnic groups increased during the Plan period, as shown in *Table 16-3*. The income disparity ratio between Bumiputera and Chinese narrowed from 1:1.74 in 1999 to 1:1.64 in 2004, while the ratio between Bumiputera and Indians also reduced from 1:1.36 to 1:1.27. Although ethnic income disparity narrowed in relative terms, the disparity continued to widen in absolute terms. Meanwhile, the ratio between urban and rural households deteriorated from 1:1.81 in 1999 to 1:2.11 in 2004.

16.18 The income share of the bottom 40 per cent of households decreased from 14.0 per cent in 1999 to 13.5 per cent in 2004 while that of the top 20 per cent of households increased from 50.5 per cent to 51.2 per cent. Consequently, the Gini coefficient worsened from 0.452 in 1999 to 0.462 in 2004. All ethnic groups recorded an increase in the Gini coefficient during the period. The inequality among Bumiputera was the highest compared with the Chinese and Indians.

16.19 In 2004, paid employment constituted two thirds or 68.0 per cent of all household income; for the Indian households 74.3 per cent, for the Bumiputera 71.2 per cent, and for the Chinese 62.1 per cent. About 23.0 per cent of income

TABLE 16-3

**MEAN MONTHLY GROSS HOUSEHOLD INCOME AND
GINI COEFFICIENT BY ETHNIC GROUP AND STRATA,
1999 AND 2004**

| Ethnic Group and Strata | In Current Prices (RM) | | Average Annual Growth Rate (%) | In Constant 1999 Prices (RM) | | Average Annual Growth Rate (%) | Gini Coefficient | |
|----------------------------|---------------------------|--------------|--------------------------------------|---------------------------------|--------------|--------------------------------------|---------------------|--------------|
| | 1999 | 2004 | 2000-2004 | 1999 | 2004 | 2000-2004 | 1999 | 2004 |
| Bumiputera | 1,984 | 2,711 | 6.4 | 1,984 | 2,522 | 4.9 | 0.433 | 0.452 |
| Chinese | 3,456 | 4,437 | 5.1 | 3,456 | 4,127 | 3.6 | 0.434 | 0.446 |
| Indians | 2,702 | 3,456 | 5.0 | 2,702 | 3,215 | 3.5 | 0.413 | 0.425 |
| Others | 1,371 | 2,312 | 11.0 | 1,371 | 2,150 | 9.4 | 0.393 | 0.462 |
| Malaysia | 2,472 | 3,249 | 5.6 | 2,472 | 3,022 | 4.1 | 0.452 | 0.462 |
| Urban | 3,103 | 3,956 | 5.0 | 3,103 | 3,680 | 3.5 | 0.432 | 0.444 |
| Rural | 1,718 | 1,875 | 1.8 | 1,718 | 1,744 | 0.3 | 0.421 | 0.397 |

Source: Department of Statistics – Household Income Surveys, 1999 and 2004

earned by the Chinese was generated from self-employment compared with 14.0 per cent and 11.0 per cent for Bumiputera and Indians, respectively. This shows that for overcoming ethnic income disparities the central focus must be on the status and earnings in paid employment.

Employment Restructuring

16.20 The share of Bumiputera employed in the senior officials and managers category remained low at 37.1 per cent in 2005, as shown in *Table 16-4*. Excluding lecturers, pre-university and secondary school teachers as well as writers and artists, the proportion of Bumiputera in the professionals category was 47.5 per cent in 2005 compared with 77.6 per cent among the Chinese and 69.2 per cent for the Indians. The share of Bumiputera professionals registered in the eight selected occupations increased from 35.5 per cent in 2000 to 38.8 per cent in 2005, as shown in *Table 16-5*. The share of Bumiputera professionals was the lowest among accountants.

16.21 A study on the employment pattern of Bumiputera in 2005 consisting 1,825 employees in 594 firms in the private sector, indicated that the proportion of Bumiputera employed in the top and middle-level categories, namely, managers, professionals, and technicians and sub-professionals was 48.0 per cent, 64.0 per cent and 53.0 per cent, respectively. The percentage of Bumiputera chief executive officers (CEOs) was 20.0 per cent compared with 70.4 per cent for the Chinese. The sectors covered by the study were namely, ICT, manufacturing, tourism, distributive trade and biotechnology.

TABLE 16-4
EMPLOYMENT BY OCCUPATION AND ETHNIC GROUP¹, 2000 AND 2005

| Occupation | 2000 | | | | | | 2005 | | | | | | | | | | | | | |
|---|-------------------------|--------------|-------------------------|--------------|----------------------|--------------|----------------------|--------------|--------------------------|--------------|-------------------------|--------------|-------------------------|--------------|----------------------|--------------|----------------------|--------------|--------------------------|--------------|
| | Bumiputera | | Chinese | | Indians | | Others | | Total | | Bumiputera | | Chinese | | Indians | | Others | | Total | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Senior Officials & Managers % of Total | 230.8 36.6 | 4.8 | 351.8 55.8 | 12.7 | 41.9 6.6 | 5.4 | 5.6 0.9 | 3.3 | 630.1 100.0 | 7.4 | 278.2 37.1 | 5.4 | 413.6 55.1 | 14.0 | 53.4 7.1 | 6.3 | 5.4 0.7 | 3.3 | 750.6 100.0 | 8.2 |
| Professionals % of Total | 298.1 57.3 | 6.2 | 174.5 33.5 | 6.3 | 41.1 7.9 | 5.3 | 6.8 1.3 | 4.0 | 520.5 100.0 | 6.1 | 314.2 58.5 | 6.1 | 171.3 31.9 | 5.8 | 44.1 8.2 | 5.2 | 7.1 1.3 | 4.3 | 536.7 100.0 | 5.9 |
| Lecturers, Pre-University & Secondary School Teachers and Writers & Artists % of Total | 158.6 74.4 | 3.3 | 38.8 18.2 | 1.4 | 12.4 5.8 | 1.6 | 3.4 1.6 | 2.0 | 213.2 100.0 | 2.5 | 164.8 74.9 | 3.2 | 38.4 17.4 | 1.3 | 13.6 6.2 | 1.6 | 3.3 1.5 | 2.0 | 220.1 100.0 | 2.4 |
| Technicians & Associate Professionals % of Total | 649.0 59.6 | 13.5 | 329.7 30.2 | 11.9 | 103.2 9.5 | 13.3 | 8.0 0.7 | 4.7 | 1,089.8 100.0 | 12.8 | 752.1 59.5 | 14.6 | 375.2 29.7 | 12.7 | 126.3 10.0 | 14.9 | 9.7 0.8 | 5.9 | 1,263.3 100.0 | 13.9 |
| Primary School Teachers and Nurses % of Total | 230.8 71.1 | 4.8 | 69.3 21.4 | 2.5 | 20.9 6.5 | 2.7 | 3.4 1.1 | 2.0 | 324.4 100.0 | 3.8 | 252.4 70.6 | 4.9 | 76.8 21.5 | 2.6 | 24.6 6.9 | 2.9 | 3.8 1.1 | 2.3 | 357.6 100.0 | 3.9 |
| Clerical Workers % of Total | 495.2 56.6 | 10.3 | 310.3 35.4 | 11.2 | 65.2 7.4 | 8.4 | 4.8 0.5 | 2.8 | 875.3 100.0 | 10.3 | 546.0 56.7 | 10.6 | 330.8 34.3 | 11.2 | 81.4 8.4 | 9.6 | 5.1 0.5 | 3.1 | 963.4 100.0 | 10.6 |
| Service Workers and Shop & Market Sales Workers % of Total | 610.5 51.2 | 12.7 | 484.8 40.6 | 17.5 | 86.9 7.3 | 11.2 | 10.6 0.9 | 6.2 | 1,192.8 100.0 | 14.0 | 721.2 51.5 | 14.0 | 555.3 39.6 | 18.8 | 112.8 8.0 | 13.3 | 12.3 0.9 | 7.5 | 1,401.6 100.0 | 15.4 |
| Skilled Agricultural & Fishery Workers % of Total | 908.6 77.1 | 18.9 | 163.4 13.9 | 5.9 | 64.4 5.5 | 8.3 | 42.1 3.6 | 24.7 | 1,178.5 100.0 | 13.8 | 783.0 80.8 | 15.2 | 109.3 11.3 | 3.7 | 41.5 4.3 | 4.9 | 35.8 3.7 | 21.8 | 969.6 100.0 | 10.6 |
| Craft & Related Trade Workers % of Total | 379.8 44.8 | 7.9 | 398.9 47.1 | 14.4 | 58.2 6.9 | 7.5 | 10.1 1.2 | 5.9 | 846.9 100.0 | 9.9 | 448.2 46.0 | 8.7 | 434.2 44.6 | 14.7 | 79.7 8.2 | 9.4 | 11.3 1.2 | 6.9 | 973.4 100.0 | 10.7 |
| Plant & Machine Operators & Assemblers % of Total | 774.0 60.2 | 16.1 | 324.1 25.2 | 11.7 | 161.3 12.5 | 20.8 | 26.4 2.1 | 15.5 | 1,285.8 100.0 | 15.1 | 798.4 60.4 | 15.5 | 327.9 24.8 | 11.1 | 170.4 12.9 | 20.1 | 24.9 1.9 | 15.2 | 1,321.7 100.0 | 14.5 |
| Elementary Occupations % of Total | 461.5 51.1 | 9.6 | 232.7 25.7 | 8.4 | 153.6 17.0 | 19.8 | 56.1 6.2 | 32.9 | 903.9 100.0 | 10.6 | 510.0 54.4 | 9.9 | 236.3 25.2 | 8.0 | 138.2 14.7 | 16.3 | 52.5 5.6 | 32.0 | 937.0 100.0 | 10.3 |
| Total % of Total | 4,807.3 56.4 | 100.0 | 2,770.2 32.5 | 100.0 | 775.6 9.1 | 100.0 | 170.5 2.0 | 100.0 | 8,523.6 100.0 | 100.0 | 5,151.2 56.5 | 100.0 | 2,954.0 32.4 | 100.0 | 847.9 9.3 | 100.0 | 164.1 1.8 | 100.0 | 9,117.2 100.0 | 100.0 |
| Labour Force % of Total | 5,036.6 57.1 | | 2,813.8 31.9 | | 793.8 9.0 | | 176.4 2.0 | | 8,820.6 100.0 | | 5,441.4 57.2 | | 3,025.1 31.8 | | 875.2 9.2 | | 171.2 1.8 | | 9,512.9 100.0 | |
| Unemployment % of Total | 229.3 77.2 | | 43.6 14.7 | | 18.2 6.1 | | 5.9 2.0 | | 297.0 100.0 | | 290.2 73.3 | | 71.1 18.0 | | 27.3 6.9 | | 7.1 1.8 | | 395.7 100.0 | |
| Unemployment Rate (%) | 4.6 | | 1.5 | | 2.3 | | 3.4 | | 3.4 | | 5.3 | | 2.4 | | 3.1 | | 4.1 | | 4.2 | |

Source: Department of Statistics – Labour Force Surveys, 2000 and 2005

Notes: ¹ Excludes non-citizens.

TABLE 16-5
REGISTERED PROFESSIONALS BY ETHNIC GROUP, 2000 AND 2005

| Profession | 2000 | | | | | 2005 | | | | | Net Increase, 2001-2005 | | | | |
|-----------------------------------|----------------|----------------|---------------|--------------|-----------------|----------------|----------------|---------------|--------------|-----------------|-------------------------|---------------|--------------|------------|---------------|
| | Bumiputera | Chinese | Indians | Others | Total | Bumiputera | Chinese | Indians | Others | Total | Bumiputera | Chinese | Indians | Others | Total |
| Accountants % of Total | 2,673 17.1 | 11,944 76.2 | 883 5.6 | 178 1.1 | 15,678 100.0 | 4,498 20.8 | 15,892 73.6 | 941 4.4 | 258 1.2 | 21,589 100.0 | 1,825 | 3,948 | 58 | 80 | 5,911 |
| Professionals % of Total | | | | | | 961 6.2 | 13,541 87.9 | 798 5.2 | 102 0.7 | 15,402 100.0 | | | | | |
| Architects % of Total | 1,152 42.1 | 1,539 56.2 | 41 1.5 | 6 0.2 | 2,738 100.0 | 1,358 45.3 | 1,594 53.1 | 43 1.4 | 6 0.2 | 3,001 100.0 | 206 | 55 | 2 | 0 | 263 |
| Professionals % of Total | 450 29.8 | 1,034 68.4 | 23 1.5 | 4 0.3 | 1,511 100.0 | 557 33.7 | 1,066 64.5 | 26 1.6 | 4 0.2 | 1,653 100.0 | 107 | 32 | 3 | 0 | 142 |
| Doctors % of Total | 4,570 36.8 | 3,855 31.0 | 3,697 29.7 | 306 2.5 | 12,428 100.0 | 5,720 36.7 | 4,657 29.9 | 4,142 26.6 | 1,055 6.8 | 15,574 100.0 | 1,150 | 802 | 445 | 749 | 3,146 |
| Dentists % of Total | 790 35.2 | 952 42.4 | 460 20.5 | 43 1.9 | 2,245 100.0 | 1,159 44.4 | 920 35.3 | 480 18.4 | 49 1.9 | 2,608 100.0 | 369 | -32 | 20 | 6 | 363 |
| Veterinary Surgeons % of Total | 428 41.7 | 284 27.7 | 281 27.4 | 33 3.2 | 1,026 100.0 | 522 39.0 | 431 32.2 | 332 24.8 | 54 4.0 | 1,339 100.0 | 94 | 147 | 51 | 21 | 313 |
| Engineers % of Total | 15,334 42.6 | 18,416 51.1 | 1,864 5.2 | 405 1.1 | 36,019 100.0 | 22,623 46.0 | 23,432 47.6 | 2,648 5.4 | 498 1.0 | 49,201 100.0 | 7,289 | 5,016 | 784 | 93 | 13,182 |
| Professionals % of Total | 2,461 25.0 | 6,536 66.5 | 636 6.5 | 198 2.0 | 9,831 100.0 | 3,326 28.9 | 7,283 63.2 | 726 6.3 | 188 1.6 | 11,523 100.0 | 865 | 747 | 90 | -10 | 1,692 |
| Surveyors % of Total | 1,298 45.1 | 1,426 49.6 | 97 3.4 | 56 1.9 | 2,877 100.0 | 2,069 48.2 | 2,017 47.0 | 136 3.2 | 68 1.6 | 4,290 100.0 | 771 | 591 | 39 | 12 | 1,413 |
| Professionals % of Total | 713 42.5 | 876 52.2 | 58 3.5 | 30 1.8 | 1,677 100.0 | 975 47.2 | 989 47.9 | 70 3.4 | 31 1.5 | 2,065 100.0 | 262 | 113 | 12 | 1 | 388 |
| Lawyers % of Total | 3,111 32.3 | 3,860 40.1 | 2,586 26.8 | 76 0.8 | 9,633 100.0 | 4,465 38.0 | 4,354 37.1 | 2,834 24.1 | 97 0.8 | 11,750 100.0 | 1,354 | 494 | 248 | 21 | 2,117 |
| Total | 29,356 | 42,276 | 9,909 | 1,103 | 82,644 | 42,414 | 53,297 | 11,556 | 2,085 | 109,352 | 13,058 | 11,021 | 1,647 | 982 | 26,708 |
| % of Total | 35.5 | 51.2 | 12.0 | 1.3 | 100.0 | 38.8 | 48.7 | 10.6 | 1.9 | 100.0 | | | | | |

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

TABLE 16-6

**OWNERSHIP OF SHARE CAPITAL¹ (AT PAR VALUE)
OF LIMITED COMPANIES, 2000 AND 2004**

| Ownership Group | RM million | | % of Total | | Average Annual Growth Rate (%) 2001-2004 |
|-----------------------------|------------------|------------------|--------------|--------------|---|
| | 2000 | 2004 | 2000 | 2004 | |
| Bumiputera | 62,976.0 | 100,037.2 | 18.9 | 18.9 | 12.3 |
| Individuals | 47,343.6 | 79,449.9 | 14.2 | 15.0 | 13.8 |
| Institutions ² | 9,830.0 | 11,890.7 | 3.0 | 2.2 | 4.9 |
| Trust Agencies ³ | 5,802.4 | 8,696.6 | 1.7 | 1.7 | 10.6 |
| Non-Bumiputera | 137,412.8 | 214,972.8 | 41.3 | 40.6 | 11.8 |
| Chinese | 129,318.3 | 206,682.9 | 38.9 | 39.0 | 12.4 |
| Indians | 5,136.8 | 6,392.6 | 1.5 | 1.2 | 5.6 |
| Others | 2,957.7 | 1,897.3 | 0.9 | 0.4 | -10.5 |
| Nominee Companies | 28,119.4 | 42,479.1 | 8.5 | 8.0 | 10.9 |
| Foreigners | 103,909.4 | 172,279.6 | 31.3 | 32.5 | 13.5 |
| Total | 332,417.6 | 529,768.7 | 100.0 | 100.0 | 12.4 |

Source: Companies Commission of Malaysia

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

² Refers to shares held through institutions channeling Bumiputera funds such as the *Permodalan Nasional Berhad* (PNB) unit trust schemes, *Amanah Saham MARA*, *Lembaga Tabung Haji*, *Lembaga Tabung Angkatan Tentera* and *Koperasi Polis*.

³ Refers to shares held through trust agencies such as PNB, *Perbadanan Usahawan Nasional Berhad*, *Perbadanan Nasional Berhad*, *Majlis Amanah Rakyat* (MARA), *Bank Pembangunan Malaysia Berhad* and State Economic Development Corporations.

Restructuring of Ownership and Control of the Corporate Sector

16.22 Bumiputera ownership of share capital at par value increased from RM63 billion in 2000 to RM100 billion in 2004, as shown in *Table 16-6*. The proportion of Bumiputera equity ownership, however, remained unchanged at 18.9 per cent. Meanwhile, the share capital of the Chinese increased to more than double that of Bumiputera. The share of equity ownership held by the Indians declined from 1.5 per cent to 1.2 per cent although their share increased by RM1.3 billion. In contrast, foreign equity ownership increased from 31.3 per cent to 32.5 per cent.

16.23 The proportion of Bumiputera companies in all economic sectors remained very low, as shown in *Table 16-7*. The highest proportion of equity controlled by Bumiputera was in construction at 35.2 per cent followed by transportation and wholesale and retail trade at 26.7 per cent and 20.4 per cent, respectively. Privatization remained an active mechanism in enhancing Bumiputera equity ownership and participation in the corporate sector. Bumiputera ownership of the share capital at par value in privatized projects increased from RM5.5 billion upon privatization to RM14.9 billion in 2005 or 14.9 per cent of total equity held by Bumiputera.

16.24 Inequality in the ownership of non-financial assets remains sizeable. A survey on the ownership of commercial buildings and premises in all the urban centres throughout the country in 2005 revealed that Bumiputera ownership of properties was low compared with non-Bumiputera. Bumiputera owned only 11.7 per cent of the various types of business premises, as shown in *Table 16-8*. Bumiputera ownership of industrial premises and business complexes was also low at 4.8 per cent and 11.7 per cent, respectively.

16.25 During the Plan period, a total of 365 applications for listing was approved by the Securities Commission. Of this, only 41 applications or 11.2 per cent were from Bumiputera companies and the remaining from non-Bumiputera companies, including foreigners. In terms of the total funds raised by means of initial public offering (IPO), RM815 million or 14.9 per cent of the total funds was raised by Bumiputera companies compared with RM4.7 billion or 85.1 per cent by non-Bumiputera and foreign companies.

16.26 During the Plan period, measures were introduced to encourage potential entrepreneurs among the Indian community to participate in various entrepreneurial development programmes. Business licences were also provided to ensure greater participation of the Indian community in business to increase their equity ownership in the corporate sector. Opportunities were also given to Indian youth to acquire skills and knowledge in basic business management. *Pusat Giat MARA* nationwide trained 1,100 Indian youth in various skills, beginning 2004.

Development of the BCIC

16.27 The implementation of the BCIC programmes was strengthened during the Plan period. Yet the progress in the development of the BCIC has been below expectations. A total of 114,770 Bumiputera entrepreneurs participated in training and business development programmes such as the vendor development programme, franchise development programme, venture capital scheme and *Projek Usahawan Bumiputera Dalam Bidang Peruncitan* (PROSPER).

16.28 The *vendor development programme* created 135 new vendors, of which 100 Bumiputera enterprises were appointed as vendors to privately-owned companies while another 35 were selected to provide parts, supplies and services to Government-linked companies (GLCs). During the Plan period, the *franchise development programme* attracted 228 Bumiputera entrepreneurs as franchisees in various businesses including food, child-learning centres and automotive service centres. At the same time, a total of 114 franchisors was registered, of which 29 were Bumiputera. The main reason for the shortfall in these programmes was the small number of private enterprises willing to be anchor companies in commercial expansion.

TABLE 16-7
**OWNERSHIP OF SHARE CAPITAL¹ (AT PAR VALUE) OF LIMITED COMPANIES
BY ETHNIC GROUP AND SECTOR, 2004**
(%)

| Ownership Group | Agriculture | Mining | Manufacturing | Utility | Construction | Wholesale & Retail Trade | Transportation | Finance | Services | Others | Total |
|--------------------------|--------------|--------------|---------------|--------------|--------------|--------------------------|----------------|--------------|--------------|--------------|--------------|
| Bumiputera | 16.4 | 12.3 | 8.1 | 6.3 | 35.2 | 20.4 | 26.7 | 12.5 | 18.7 | 24.3 | 18.9 |
| Non-Bumiputera | 54.0 | 39.8 | 25.3 | 9.2 | 44.0 | 53.3 | 30.6 | 10.5 | 40.9 | 48.6 | 40.6 |
| Chinese | 52.9 | 39.5 | 24.5 | 8.9 | 42.6 | 50.7 | 27.7 | 10.2 | 39.5 | 45.7 | 39.0 |
| Indians | 0.8 | 0.2 | 0.6 | 0.2 | 1.1 | 2.0 | 2.5 | 0.3 | 1.1 | 1.8 | 1.2 |
| Others | 0.2 | 0.1 | 0.1 | 0.1 | 0.3 | 0.6 | 0.4 | 0.04 | 0.2 | 1.1 | 0.4 |
| Nominee Companies | 6.6 | 25.4 | 1.9 | 17.2 | 5.9 | 0.7 | 11.4 | 17.5 | 10.9 | 3.9 | 8.0 |
| Foreigners | 23.0 | 22.5 | 64.7 | 67.3 | 14.9 | 25.6 | 31.3 | 59.5 | 29.5 | 23.2 | 32.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Companies Commission of Malaysia

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

TABLE 16-8
OWNERSHIP OF COMMERCIAL BUILDINGS AND PREMISES BY ETHNIC GROUP, 2005

| Type of Building/Premise | Unit | | | | % of Total | | | | |
|--------------------------|---------------|----------------|---------------|---------------|----------------|-------------|-----------------|------------|--------------|
| | Bumiputera | Chinese | Indians | Others | Total | Bumiputera | Chinese Indians | Others | Total |
| Building | 24,374 | 139,052 | 10,388 | 17,773 | 191,587 | 12.7 | 72.6 | 5.4 | 100.0 |
| One Floor | 10,433 | 20,122 | 2,212 | 2,185 | 34,952 | 29.8 | 57.6 | 6.3 | 100.0 |
| Two Floors | 8,733 | 67,233 | 4,354 | 7,303 | 87,623 | 10.0 | 76.7 | 5.0 | 100.0 |
| Three Floors | 2,201 | 26,792 | 1,582 | 4,474 | 35,049 | 6.3 | 76.4 | 4.5 | 100.0 |
| More Than Three Floors | 3,007 | 24,905 | 2,240 | 3,811 | 33,963 | 8.9 | 73.3 | 6.6 | 100.0 |
| Business Complex | 3,207 | 19,072 | 568 | 4,651 | 27,498 | 11.7 | 69.4 | 2.1 | 100.0 |
| Industrial Premise | 1,480 | 21,514 | 446 | 7,118 | 30,558 | 4.8 | 70.4 | 1.5 | 100.0 |
| Hotel | 313 | 1,519 | 71 | 289 | 2,192 | 14.3 | 69.3 | 3.2 | 100.0 |
| Total | 29,374 | 181,157 | 11,473 | 29,831 | 251,835 | 11.7 | 71.9 | 4.6 | 100.0 |

Source: Economic Planning Unit

Notes: Based on 87 per cent responses from local authorities.

16.29 Under PROSPER, the *Perbadanan Usahawan Nasional Berhad* (PUNB) approved investments to 884 Bumiputera retail traders with a total project cost of RM233.2 million, of which 48 per cent was financed through PUNB. These businesses generated annual sales of RM350 million and provided employment opportunities to about 3,580 people. Apart from encouraging the establishment of more Bumiputera retailers in new townships and residential areas, the project succeeded in promoting Bumiputera entrepreneurs in businesses where Bumiputera participation was low such as automotive service centres, hardware stores, as well as laundry and dry cleaning. Under the *venture capital scheme*, PUNB focused its attention on rehabilitating existing participating companies severely affected by the 1997-98 financial crisis, and as a result was only able to develop 14 new Bumiputera enterprises with a total investment of only RM14.4 million.

16.30 Measures were also undertaken to develop Bumiputera entrepreneurs in Sabah and Sarawak through the provision of various types of business and industrial premises. In this regard, a total of RM45 million in Sabah and RM54 million in Sarawak was expended during the Plan period.

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III. PROSPECTS, 2006-2010

16.31 During the Ninth Plan period, the distributional agenda will be pursued more firmly so as to ensure the achievement of a more equitable distribution of the benefits of economic development by all Malaysians. Distributional strategies will be focused on creating a more balanced and equitable participation among and within ethnic groups primarily through capacity building and raising of competitiveness. This is based on the premise that in the current economic context, the levels of income and prosperity of individuals and households, as well as of ethnic and regional groups, are largely determined by their participation in the productive system and gains from self-employment. Under the Ninth Plan, apart from focusing on achieving results in the areas of poverty as well as income and wealth disparity, close attention will be given to the impact of policies, programmes and projects on employment, particularly in terms of its effectiveness and productivity in the growth process and its distribution of opportunities and rewards.

16.32 To better direct efforts, specific targets for distribution will be set for the Ninth Plan period:

- *eradicating hardcore poverty and halving overall poverty to 2.8 per cent by 2010;*
- *reducing income disparity ratio between Bumiputera and Chinese to 1:1.50 and between Bumiputera and Indians to 1:1.15 in 2010; and*
- *increasing Bumiputera ownership of share capital between 20 and 25 per cent by 2010, in order to reach the target of at least 30 per cent by 2020.*

16.33 The distributional strategies will be reoriented towards attaining income parity through the following key thrusts:

- ❑ *increasing the income share of the bottom 40 per cent of all households by increasing their productivity through human capital development;*
- ❑ *creating an enabling environment to promote greater involvement of the NGOs and the private sector in poverty eradication;*
- ❑ *reducing inequality in wealth ownership, including in non-financial assets;*
- ❑ *developing a more competitive and productive BCIC through the creation of self-reliant and sustainable Bumiputera entrepreneurs and resilient Bumiputera small and medium enterprises;*
- ❑ *expanding access to education and training programmes to increase the number of Bumiputera managers and professionals, particularly in the private sector;*
- ❑ *intensifying employment restructuring programmes towards reducing identification of ethnic group with occupation and income in order to enhance integration; and*
- ❑ *enhancing the database and monitoring mechanism for effective implementation of the distributional agenda.*

16.34 All government agencies will be required to ensure that their policies and programmes take into account the implications on distribution. A more effective implementation and monitoring mechanism emphasising outcome and impact will be put in place, supported by improved database and enhanced coordination among relevant ministries and agencies to ensure the successful implementation of the distributional agenda. An improved system of targeting beneficiaries and minimising leakages will also be instituted.

Poverty Eradication

16.35 During the Plan period, efforts will be undertaken to eradicate pockets of poverty among the disadvantaged groups, in particular the Orang Asli in Peninsular Malaysia. The thrust of poverty eradication strategies will focus on eradicating hardcore poverty and halving overall poverty by the end of 2010. New and improved institutional mechanisms and specific social welfare programmes will be pursued to ensure that hardcore poverty continues to be eradicated beyond 2010. In addition, measures will be undertaken to reduce poverty in the rural and urban areas as well as among Bumiputera in Sabah and Sarawak through income generating projects and employment opportunities. Only the elderly, poor single parents, handicapped and destitute who are unable to participate in gainful economic activities will continue to receive outright assistance.

16.36 *Hardcore Poverty.* The coverage of the packaged programmes under the SPKR will be extended to all target groups, particularly in areas with a high concentration of the hardcore poor. These programmes, including *Program Peningkatan Ekonomi, Program Pembangunan Infrastruktur Asas* and *Program Pembangunan Insan*, will give more emphasis to human capital development and capacity building. These programmes bring benefits to the participants on a sustainable basis.

16.37 Access to credit facilities will be improved further to enable the target groups to actively participate in more productive economic activities. Towards this end, AIM's operations in eradicating hardcore poverty will be further strengthened. By 2010, AIM is expected to extend micro-credit facilities to an additional 69,200 participants and increasing its members to 203,200. To improve coverage and service delivery to the hardcore poor, AIM will concentrate its operations in states with high number of hardcore poor households, in particular Sabah, Terengganu and Perak. In addition, other NGOs and the private sector will be encouraged to initiate programmes and projects that provide opportunities to the target groups to increase their income. Efforts will be undertaken to update and integrate the urban and rural hardcore poor registry to ensure all poverty eradication programmes reach the target groups.

16.38 *Overall Poverty.* Programmes will be strengthened to build and enhance the capacity of the poor within the working age group to enable them to participate in more productive economic activities. These programmes will include education and training in specific skills and knowledge as well as inculcation and reinforcement of positive values including good work ethics and self-confidence. To increase access of poor households to education and training, support programmes such as provision of textbooks, scholarship and allowance and supplementary food will be continued. More hostels will be provided to accommodate students from poor families. Programmes and projects under the SPKR and the Integrated Development Programme for Urban Communities will be enhanced further to ensure its effectiveness in increasing employment and income as well as improving the quality of life of the poor and the low-income households.

16.39 A more enabling environment will be created to further encourage NGOs and the private sector to provide wider opportunities to the poor to improve their livelihood. Financial institutions will be encouraged to provide innovative and pro-poor financing facilities. To enhance the quality and sustainability of programmes, participation of the target groups as well as communities will be encouraged in project identification and implementation.

16.40 During the Plan period, measures will be undertaken to improve the management of Islamic-based institutions, especially those relating to *zakat*, *wakaf* and *baitulmal*, and develop these institutions into effective mechanism

for outright assistance to the targeted poor. The success of the *Pusat Pungutan Zakat* of the Wilayah Persekutuan Kuala Lumpur will be replicated as a model for *zakat* collection to be implemented in the other states.

16.41 Poverty eradication initiatives by the public sector, NGOs and the private sector will be streamlined, while coordination and monitoring will be enhanced at all levels, including setting deliverable targets for all implementing parties to ensure greater impact and sustainability of the programmes. Towards this end, a national poverty database, integrating both the rural and urban poverty registry and using a common definition of income, will be established to improve the quality of the database on the poor and hardcore poor households. This database, supplemented by data collected from various implementing agencies, including the NGOs, will be used by all implementing agencies as the main data source of their target groups. In addition, poverty mapping will be developed in selected urban and rural areas to assist in designing programmes to meet the needs of the different target groups.

16.42 *Rural Poverty.* Rural development will continue as a key strategy for poverty eradication in the rural areas. In this regard, rural communities will be given better access to new technologies and modern farming methods as well as off-farm economic activities. Modernisation and commercialisation of agricultural activities through greater utilisation of higher yielding clones will increase productivity and income among the poor. Farmers and smallholders will continue to be provided with better agricultural support services to encourage them to venture into larger scale farming activities to increase productivity and income.

16.43 Training programmes and credit facilities will be made accessible, especially to those involved in agro-based economic activities. Farmers and fishermen will be encouraged to supplement their economic activities in aquaculture, livestock rearing and food processing as well as agro-based businesses and entrepreneurship. Farmers involved in tobacco cultivation will also be encouraged to venture into these activities as well as in the cultivation of other alternative crops to supplement their income, as the cultivated areas and income from tobacco is expected to decrease.

16.44 Land development schemes and establishment of rural growth centres, particularly in Sabah and Sarawak, will continue to provide greater employment opportunities for the rural poor. Consolidation and rehabilitation of smallholdings will also benefit poor farmers in rural areas. During the Plan period, a total of 387,500 hectares of rubber and oil palm areas will be replanted and 102,700 hectares of land consolidated and rehabilitated by various agencies, including the Rubber Industry Smallholder Development Authority (RISDA), FELCRA Berhad and the Sabah Rubber Industry Board, to benefit poor smallholders.

16.45 *Urban Poverty.* During the Plan period, efforts to eradicate urban poverty will be guided by the Urban Poverty Strategic Action Plan. All programmes and projects under the Integrated Development Programme for Urban Communities will be consolidated and expanded under the *Program Pembasmian Kemiskinan Bandar* (PPKB). The components of the programme include housing for the poor, income generating activities, education and training as well as establishment of *Pusat Sejahtera* as information and resource centres for the poor. The resettlement of squatters in the urban areas into public funded low-cost housing and other infrastructure projects will be continued through an integrated development approach.

16.46 *Bumiputera in Sabah and Sarawak.* Target specific programmes will be implemented during the Plan period to eradicate poverty based on the findings of the study undertaken in 2005. Measures will be undertaken to provide employment and income-generating activities to reduce the high incidence of poverty among the Orang Sungei, Rungus, Bisaya and Sulu or Suluk communities in Sabah and Bidayuh, Kenyah, Kayan, Kadayan, Penan and Lun Bawang communities in Sarawak. Under the SPKR, a total of RM189 million will be allocated to Sabah and RM139 million for Sarawak to address the high incidence of poverty among the Bumiputera.

16.47 During the Plan period, more effective measures will be undertaken to increase income and improve the quality of life of the poor, particularly through improvements in the agricultural subsectors in Sabah and Sarawak. Cocoa, pepper and sago smallholders will be provided with financial assistance to rehabilitate their farms through estate-based concept as well as in related agro-based processing activities. New land development schemes and rural growth centres will be developed to provide greater employment and income opportunities as well as better infrastructure and other amenities for the rural poor. A total of RM446 million and RM702 million will be provided to upgrade rural and village roads in Sabah and Sarawak, respectively. In addition, Sabah and Sarawak will be allocated a total of RM340 million and RM396 million, respectively, for rural water supply. In Sabah, the Federal Land Development Authority (FELDA) will undertake target-specific measures to address hardcore poverty involving 2,000 households. At the same time, a total of RM150 million will be allocated through FELCRA Berhad for agriculture development programme in Sarawak. In addition, programmes under AIM will be expanded to alleviate overall poverty and eradicate hardcore poverty among the Bumiputera in these states.

16.48 *Orang Asli.* During the Plan period, a comprehensive development plan will be implemented to address the high incidence of poverty among the Orang Asli. The plan will include strategies and programmes to increase income and improve quality of life through the implementation of economic projects as well as resettlement and development of human capital. Focus will be given to

increase access of the Orang Asli to income generating projects such as cultivation of food crops, handicraft and tourism as well as provision of employment opportunities, infrastructure and other basic amenities. Towards this end, delivery of poverty eradication programmes and initiatives will be improved to ensure greater benefits to the poor. The NGOs, in particular AIM, will be encouraged to extend their programmes and initiatives to eradicate poverty and hardcore poverty among these disadvantaged groups. The SPKR will also be extended further as part of the target-specific programmes to eradicate poverty among these groups in the rural areas.

Income Distribution

16.49 To achieve income parity in the longer term, efforts will be undertaken to reduce the income gaps among ethnic communities as well as between rural and urban areas to achieve a more equitable distribution of the fruits of further economic growth in the country. In this regard, income generating activities and employment opportunities will be created to narrow the income gap between Bumiputera and Chinese from 1:1.64 in 2004 to 1:1.50 in 2010. The income gap between Bumiputera and Indians is targeted to be reduced from 1:1.27 in 2004 to 1:1.15 in 2010.

16.50 Besides poverty eradication efforts, the focus of distributional strategies and programmes will be on the creation of a bigger and more prosperous Bumiputera middle-income group through human capital development. Current measures will be further strengthened and new effective instruments identified for the expansion of the Bumiputera middle-income group. These will include intensification of the employment restructuring programmes to create a greater number of successful entrepreneurs, increasing ownership and wealth among the Bumiputera community, enhancing education and training as well as providing more opportunities for Bumiputera to competitively gain employment in higher paying occupations, particularly at managerial, professional and technical levels. In addition, income enhancing measures for the poor and lower income households will be broadened to include the bottom 40 per cent of households, of which Bumiputera constituted 76.0 per cent in 2004, to enable them to move up to higher income categories.

16.51 Factors associated with labour quality and resource utilisation will be given greater attention as these factors significantly influence productivity and income earning capacities in the modern economic activities. Additional training will be made available, particularly to the unemployed graduates to enable them to meet the needs of the job market. At the same time, the upgrading and establishment of more training colleges, especially in the rural areas, will provide greater opportunities for the rural communities.

16.52 To reduce income imbalance between the rural and urban areas and between the less developed and more developed states, rural development will be intensified through the modernisation and commercialisation of agricultural activities as well as diversification of the rural economy. The modernisation and the creation of new economic activities in the rural areas, particularly through the One District One Industry programme and development of rural industrial estates, will provide greater opportunities to rural households to be gainfully employed in high productivity sectors.

16.53 The development of rural entrepreneurs will be implemented in a more systematic and focused manner guided by the Master Plan for the Development of Rural Entrepreneurs. Programmes to increase awareness and utilisation of Information and Communications Technology (ICT) among the rural households will be implemented to bridge the digital divide as well as expand opportunities to rural households to participate and integrate into modern economic activities. Measures to promote ICT literacy among the rural population and disadvantaged groups will enable them to improve access to essential information and services as well as foster self-employment and entrepreneurship among the poorer sections of the population.

Employment Restructuring

16.54 During the Plan period, more intensified efforts will be undertaken to ensure that the employment pattern at all levels of occupation and in all sectors of the economy reflects the ethnic composition of the population. The private sector is expected to be more involved in accelerating the growth of Bumiputera employment and restructuring their employment pattern. Public and private sector cooperation for the advancement of Bumiputera employment will be initiated and implemented. The progress in employment restructuring to reflect the racial composition of the population will be closely monitored at various levels, although targets will not be micro-managed and will primarily be viewed on an overall basis.

16.55 Education and training will remain as an important strategy to meet the objectives of increasing Bumiputera employment in the professional, managerial and other high-income occupations, particularly in the services and other modern and high productivity sectors. During the Plan period, the enrolment in *Universiti Teknologi MARA* (UiTM) will be expanded, including through a franchise system with Bumiputera private institutions of higher education to provide more places to Bumiputera students. Measures will be implemented to further accelerate the shift and absorption of Bumiputera secondary school leavers and graduates into the dynamic sectors and into high-income occupational categories.

16.56 Focus will be given to create a BSTC and enhance Bumiputera participation in technology-based subsectors such as biotechnology, ICT and advanced manufacturing. Efforts will be intensified to improve the performance of Bumiputera students especially in subjects such as science, mathematics and the English language as well as increase their number in critical courses in the universities. Besides assistance given to overall top students, scholarships and loans will be given to qualified Bumiputera students to study in local public and private institutions of higher education as well as in reputable institutions abroad.

16.57 Steps will also be taken to provide opportunities to Bumiputera graduates to participate in various BCIC programmes to enable them to be self-employed. In this regard, the Graduate Entrepreneurship Scheme will be expanded and strengthened and other self-employment assistance will be provided including training, technical advice, financial support, market information and new technology.

16.58 The private sector and GLCs will be encouraged to provide opportunities and assistance to Bumiputera to acquire professional qualifications as well as employment. In addition, stronger measures will be undertaken to increase non-Bumiputera participation in the public service sector in the categories of occupation where they are not well represented.

Wealth Ownership

16.59 While the Government remains committed to ensure the attainment of at least 30 per cent Bumiputera equity ownership, this will only be achievable within a longer time frame. In this regard, the 30 per cent target for Bumiputera ownership in the corporate sector as well as the 3.0 per cent target for the Indian community will be extended to 2020. Moreover, in the current economic context, other factors apart from equity ownership have gained salience as measures of wealth ownership. Therefore, during the Plan period, the focus of distribution programmes will be expanded beyond mere equity ownership of share capital to include other aspects of wealth ownership, in particular Bumiputera ownership of productive assets, both physical and non-physical. In line with this, policies and programmes that expand Bumiputera ownership of residential and commercial urban property, intellectual property rights, as well as commercial enterprises, particularly SMEs, will be undertaken.

16.60 During the Plan period, *Permodalan Nasional Berhad* (PNB), through awareness and education programmes, will encourage more Bumiputera to actively participate in unit trust schemes. PNB will provide a wider choice of products to attract more Bumiputera investors. Special attention will be given to increase participation in unit trust schemes among the Bumiputera in Sabah and Sarawak.

16.61 Bumiputera trust agencies and GLCs will play a more active role in increasing Bumiputera commercial properties in urban areas. The *Yayasan Amanah Hartanah Bumiputera*, with an initial capital of RM2.0 billion, will spearhead efforts to enhance Bumiputera property ownership in strategic locations, particularly in urban areas. *Perbadanan UDA* will be reestablished to complement the efforts of the *Yayasan* in identifying and purchasing commercial properties, especially in major towns, and in providing greater opportunities in prime business locations for Bumiputera entrepreneurs. The expansion of Bumiputera entrepreneurship and ownership of commercial enterprises, particularly SMEs, will be pursued.

16.62 *Wakaf, baitulmal* and *zakat* resources will be appropriately mobilised towards enhancing the development of Bumiputera and other Muslims during the Plan period. Emphasis will be given to develop *wakaf* land within the commercial urban areas in the Johor Bahru, Klang Valley and Pulau Pinang. The development programme will involve integrated redevelopment of housing settlements with infrastructure and economic facilities, including business and industrial premises on *wakaf* land. The *Jabatan Wakaf, Zakat dan Haji* will coordinate the establishment of a new entity with the participation of State Religious Islamic Councils to implement programmes to develop *wakaf* and *baitulmal* land into viable economic investments and thus, contribute to the development of the BCIC. In addition, the database on *wakaf, zakat* and *baitulmal* resources will be enhanced.

16.63 Restructuring programmes to increase asset ownership of Bumiputera will also encompass specific measures to increase ownership by Bumiputera in Sabah and Sarawak. Towards this end, an action plan will be developed to implement various programmes such as unit trust schemes, entrepreneurship development and skills training programmes as well as provision of financing facilities. Development of native and customary land in Sabah and Sarawak will be undertaken to benefit Bumiputera through the development of commercial and other suitable projects.

16.64 Additional measures will be undertaken to increase the Indian equity ownership to 3.0 per cent by 2020. More opportunities will be provided to the Indian community to participate in selected unit trust schemes. To further encourage the Indian community to venture into business, financial assistance as well as training programmes will be made more accessible to potential and capable entrepreneurs. During the Plan period, opportunities will continue to be given to school leavers among the low-income Indian households to participate in various skills training courses at *Pusat Giat MARA*. In addition, *Pusat Putra*, a new skills training institution, will be established to assist youth, particularly Indians to acquire relevant skills, especially in ICT and auto-mechanics.

Second Phase of BCIC Development

16.65 The development of BCIC will remain a key thrust in the Ninth Plan to ensure effective Bumiputera participation in the economy and continue efforts at restructuring of society to eliminate the identification of race with economic function. In line with the strategy to expand Bumiputera wealth ownership in terms of commercial enterprises, the second phase of the BCIC development programme, with active involvement of the private sector, will focus on expediting the development of self-reliant, sustainable and competitive Bumiputera entrepreneurs and the creation of strong Bumiputera SMEs. During this phase, the development of the BCIC will be further enhanced by encouraging the growth of business linkages and clusters among Bumiputera enterprises, between Bumiputera and non-Bumiputera enterprises, and between GLCs and Bumiputera enterprises. In addition, the role of trust agencies, GLCs and cooperatives will be further strengthened to enhance their capacity and capability to effectively implement the BCIC strategies and programmes.

16.66 To ensure a strong and sustainable presence of Bumiputera in the commercial and industrial sectors, a new approach that emphasises not only the quantity of Bumiputera entrepreneurs produced, but more importantly their quality in terms of productivity and competitiveness will be adopted. In this regard, the Government will encourage entrepreneurs to develop their capabilities and build up a track record in order to be more resilient in facing the challenges of a competitive business environment. During the Plan period, existing programmes will be directed towards facilitating the upward mobility of entrepreneurs to a higher level or category. In addition, a special programme will be implemented with emphasis on transforming selected Bumiputera SMEs with annual sales value between RM1 million to RM25 million into bigger enterprises. To support the growth of Bumiputera SMEs, measures will also be taken to discourage government agencies such as State Economic Development Corporations (SEDCs) and GLCs from directly competing with them for business opportunities.

16.67 The Government will continue to provide the necessary support and undertake selective intervention to assist capable and competent Bumiputera entrepreneurs, including through product and quality (P&Q) enhancement, technical training, marketing and promotion as well as research and development (R&D) programmes. Bumiputera enterprises will be encouraged to undertake R&D activities to enhance their product quality and production capacity. Wide-ranging assistance including financing facilities, product enhancement, marketing and promotion will also be provided to these Bumiputera entrepreneurs. Other assistance and facilities will also be provided based on business needs and requirements.

16.68 To assist greater participation of Bumiputera in new growth areas, particularly in the services, manufacturing and agricultural and agro-based

sectors, steps will be taken to increase the entry of Bumiputera entrepreneurs into selected services subsectors such as transport and logistics, automotive workshops, distributive trade, professional and business services, tourism as well as resource-based industries and businesses based on *halal*, herbal and pharmaceutical products. In the manufacturing sector, emphasis will be given to strategic and high technology industries such as ICT, biotechnology, photonics, nanotechnology, advanced manufacturing and precision engineering. The Government, in tandem with the appropriate GLCs, will facilitate the entry of Bumiputera into the new growth areas through the development of new packaged programmes, which include financing schemes to nurture promising Bumiputera entrepreneurs and technopreneurs. In addition, existing qualified and high-performing Bumiputera professionals in high technology industries will be identified and encouraged to become leading participants of these programmes. At the same time, more flexible employment policies will be formulated to encourage greater mobility of Bumiputera R&D personnel in public research institutions to venture into these new growth sectors.

16.69 The functions and roles of trust agencies, particularly the SEDCs and *Majlis Amanah Rakyat* (MARA), will be enhanced to strengthen their position in fostering the development of Bumiputera, particularly SMEs. SEDCs will be encouraged to spearhead the creation of Bumiputera entrepreneurs in new areas, particularly in sectors or activities where Bumiputera participation is minimal.

16.70 Bumiputera cooperatives with potential and capability will be encouraged to venture into business activities and to participate in the development of BCIC. In this regard, the Malaysia Cooperative Commission will undertake measures to develop cooperative entrepreneurship such as the provision of financial facilities for start-ups and expansion of existing cooperatives; creation of cooperative hubs as one-stop shopping centres to house and market products of cooperative entrepreneurs; as well as provision of training and guidance to small-scale cooperative entrepreneurs. In addition, cooperative entrepreneurship acculturation programme will also be implemented to inculcate and strengthen values of cooperative entrepreneurship among cooperators at all levels, particularly in school cooperatives.

16.71 The existing BCIC programmes, particularly the packaged programmes such as franchise and vendor development will be further strengthened to increase the number of viable Bumiputera entrepreneurs. In line with its new role in franchise development, *Perbadanan Nasional Berhad* (PNS) will develop Bumiputera franchisees and local franchise products through R&D, acquire selected franchises from overseas as well as increase public awareness in the business of franchising. The vendor development programme will be expanded to include more industries to generate new opportunities for competitive Bumiputera

enterprises. The monitoring and coordinating mechanism will be reactivated to ensure effective implementation of the programme.

16.72 New initiatives will be adopted by PUNB to develop more resilient Bumiputera SMEs under the venture capital scheme. In this regard, PUNB will ensure a more balanced investment portfolio between start-ups, high growth businesses and expanding companies, as well as shift its investment focus to companies involved in manufacturing end-products, knowledge-based and selected services sectors. To enhance the participation of Bumiputera retailers through PROSPER, PUNB will develop more concept shops in collaboration with experienced Bumiputera entrepreneurs as well as promote networking with PNS in strengthening the system of concept shops prior to being franchised. In addition, the scope of PROSPER will be widened to increase the number of viable Bumiputera SMEs in strategic industries, including in wholesaling.

16.73 The Government will continue to assist Bumiputera entrepreneurs in Sabah and Sarawak. In terms of business and industrial premises, a total of RM68 million will be allocated for Sabah and RM72 million for Sarawak during the Plan period. At the same time, other assistance will be provided by various implementing agencies including trust agencies and GLCs as well as chambers of commerce and trade associations through training, R&D and technical support, credit and product promotion.

16.74 To promote greater self-reliance and competitiveness among Bumiputera entrepreneurs, measures will be undertaken to make them more sustainable, resilient, self-reliant and successful. Entrepreneurial training programmes will be intensified. Such training programmes will also emphasise inculcation of positive values, attitudes as well as a high performance culture. Towards this end, the *Institut Keusahawanan Negara* (INSKEN) will be the focal point to undertake and coordinate training programmes for all implementing agencies involved in entrepreneurial development. In this regard, training programmes conducted by INSKEN will emphasise on knowledge-based training to ensure greater impact.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

16.75 For the implementation of poverty and income distribution programmes and projects, the lead ministries responsible for poverty in rural areas are the Ministry of Rural and Regional Development, the Ministry of Agriculture and Agro-Based Industry and the Ministry of Women, Family and Community Development; and for urban poverty, the Ministry of Housing and Local Government. Other agencies involved in anti-poverty and income enhancement programmes

include *Jabatan Hal Ehwal Orang Asli*, FELDA, RISDA, FELCRA Berhad, Department of Social Welfare and the respective State Economic Planning Units.

16.76 The lead agencies to implement employment restructuring programmes are the Public Service Department, the Ministry of Education, the Ministry of Higher Education, the Ministry of Human Resources and the Ministry of Entrepreneur and Cooperative Development (MECD). In the case of enhancing wealth ownership and developing BCIC, the lead ministries are MECD, Ministry of International Trade and Industry, Ministry of Finance and Economic Planning Unit, Prime Minister's Department. In the Ninth Plan, the allocation for distribution programmes is shown in *Table 16-9*.

TABLE 16-9

**DEVELOPMENT ALLOCATION FOR DISTRIBUTIONAL PROGRAMMES,
2006 - 2010
(RM million)**

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| <i>Programme</i> | <i>Allocation</i> |
|---|-------------------|
| Poverty Alleviation | 4,465.3 |
| <i>Skim Pembangunan Kesejahteraan Rakyat</i> | 340.8 |
| <i>Program Pembasmian Kemiskinan Bandar</i> | 50.0 |
| Rubber and Oil Palm Replanting Scheme | 1,047.8 |
| Land Consolidation and Rehabilitation | 1,004.3 |
| Regional Development | 510.9 |
| Redevelopment of Traditional and New Villages | 235.0 |
| Development of Orang Asli | 361.8 |
| Agriculture Entrepreneurial Development | 414.7 |
| Development of Customary and Native Land | 100.0 |
| Other Programmes | 400.0 |
| Restructuring of Society | 7,058.8 |
| Development of BCIC | 1,371.9 |
| Financing Facilities | 1,220.0 |
| Education and Training | 2,216.9 |
| <i>Yayasan Amanah Hartanah Bumiputera</i> | 2,000.0 |
| Development of <i>Wakaf/Baitulmal</i> Land | 250.0 |
| Total | 11,524.1 |

Source: Economic Planning Unit

V. CONCLUSION

16.77 Considerable progress was achieved during the Eighth Plan period in reducing poverty, narrowing income imbalance between ethnic groups and increasing Bumiputera participation in key occupations and sectors of the economy. During the Ninth Plan period, the distributional agenda will focus on moving towards income parity through eradication of poverty and restructuring of society. Through more targeted anti-poverty programmes, it is expected that hardcore poverty will be eradicated and overall poverty halved to 2.8 per cent by 2010. Distributional strategies will continue to be pursued to ensure more balanced and equitable participation in economic opportunities among the various ethnic groups. Greater emphasis will be given in reducing income inequalities and narrowing the urban-rural income disparity, as well as advancing employment restructuring and increasing Bumiputera employment in professional and high-paying occupations. In addition, disparities in wealth ownership will be reduced and the development of BCIC will enter a second, more enhanced, phase.

16.78 Due to its importance, the Government will ensure that implementation of all distribution programmes and projects will be closely overseen by a strengthened monitoring mechanism within the Economic Planning Unit and Implementation Coordination Unit of the Prime Minister's Department. All relevant ministries and agencies will be required to ensure that their policies and programmes contribute towards a more equitable distribution of income, wealth and other economic opportunities. An improved system of targeting beneficiaries and minimising leakages will also be instituted to achieve the growth with distribution objectives.



ATTAINING BALANCED REGIONAL DEVELOPMENT

17

I. INTRODUCTION

17.01 During the Eighth Plan period, all states recorded economic growth and increase in the mean monthly household income. The quality of life also improved in the rural and urban areas. However, in terms of regional balance, little progress was made in reducing development gaps between regions, states as well as rural and urban areas.

17.02 Achieving balanced regional development will remain as one of the key objectives of national development during the Ninth Plan. Measures will be undertaken to reduce disparities in development between regions and states as well as between rural and urban areas. In this regard, the development of transborder areas between states will be emphasised while the development of existing growth centres within states will be intensified. Emphasis will also be given to develop rural growth centres and urban conurbations¹ by generating income-creating activities and improving the quality of life. The development of states in the ASEAN sub-regional growth triangles will be further enhanced through increased trade, investment and tourism using the existing ASEAN sub-regional and bilateral arrangements.

II. PROGRESS, 2001-2005

17.03 During the Eighth Plan period, the focus of regional development was to raise the standard of living and quality of life as well as attain balanced social and economic development across regions and states. All states recorded economic growth and as a result of which the standard of living in rural and urban areas improved. Nevertheless, development gaps between states and rural-urban disparities widened during the period.

¹ Conurbation is an urban area comprising a number of cities or towns, which through population growth and expansion, have physically merged to form one continuous, built up area. The extent of the conurbation is demarcated by travel time from the employment centers of core cities, that is, 45 minutes for the main conurbation and 30 minutes for other conurbations.

Development by Region

17.04 Based on the Development Composite Index (DCI), the *central region* which comprises Melaka, Negeri Sembilan, Selangor and Wilayah Persekutuan Kuala Lumpur was the most developed region in 2005. Sabah and the states in the *eastern region* which comprises Kelantan, Pahang and Terengganu were the least developed regions. Wilayah Persekutuan Kuala Lumpur ranked the highest DCI followed by Pulau Pinang, Melaka and Selangor indicating a higher level of economic activity and quality of life in 2005, as shown in *Table 17-1*. The states of Sabah, Kelantan and Terengganu remained at the lower end. Besides DCI, the development gaps between regions and states were identified in terms of the level gross domestic product (GDP), and its growth, household income and incidence of poverty as well as attractiveness to new investment in manufacturing.

TABLE 17-1

DEVELOPMENT COMPOSITE INDEX¹ BY STATE, 2005

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| State | Economic Index | Social Index | Development Composite Index | Rank |
|----------------------------------|----------------|--------------|-----------------------------|------|
| Northern Region | | | | |
| Kedah | 95.5 | 100.2 | 97.8 | 9 |
| Perak | 99.7 | 101.2 | 100.4 | 7 |
| Perlis | 95.0 | 104.9 | 99.9 | 8 |
| Pulau Pinang | 109.0 | 102.4 | 105.7 | 2 |
| Central Region | | | | |
| Melaka | 106.4 | 102.1 | 104.2 | 3 |
| Negeri Sembilan | 101.8 | 102.9 | 102.3 | 5 |
| Selangor ² | 108.4 | 98.0 | 103.2 | 4 |
| Wilayah Persekutuan Kuala Lumpur | 114.4 | 104.8 | 109.6 | 1 |
| Southern Region | | | | |
| Johor | 102.9 | 98.1 | 100.5 | 6 |
| Eastern Region | | | | |
| Kelantan | 91.9 | 94.4 | 93.1 | 13 |
| Pahang | 96.3 | 99.0 | 97.6 | 10 |
| Terengganu | 91.5 | 100.8 | 96.2 | 12 |
| Sabah³ | 82.8 | 97.2 | 90.0 | 14 |
| Sarawak | 94.8 | 98.4 | 96.6 | 11 |
| Malaysia | 100.0 | 100.0 | 100.0 | |

Source: Economic Planning Unit

Notes: ¹ The DCI 2005 is based on 16 indicators.

² Includes Wilayah Persekutuan Putrajaya.

³ Includes Wilayah Persekutuan Labuan.

17.05 *Gross Domestic Product.* The *central region* accounted for 41.1 per cent of the national GDP in 2005 with manufacturing and services sectors as major contributors. Meanwhile, the *eastern region* which is agriculture-based, accounted for only 11.5 per cent of the national GDP. In terms of states, Selangor accounted for the largest share of the national GDP at 23.0 per cent in 2005 with the manufacturing and services sectors accounting for 53.5 per cent and 41.2 per cent, respectively.

17.06 *Growth of Gross Domestic Product.* In terms of the average growth rate of GDP in constant prices, the *central region* and *southern region* as well as Sarawak recorded growth rates higher than the national average of 4.5 per cent during the Plan period, as shown in *Table 17-2*. The *eastern region* recorded the lowest GDP growth rate of 3.5 per cent per annum. The GDP growth by state indicated that Selangor registered the fastest growth followed by Johor and Pulau Pinang, while Kelantan recorded the lowest growth.

TABLE 17-2
GROWTH RATE OF GROSS DOMESTIC PRODUCT BY STATE¹,
2001-2010

| State | Average Annual Growth Rate (%) | |
|----------------------------------|--------------------------------|------------|
| | 8MP | 9MP |
| Northern Region | 4.4 | 5.9 |
| Kedah | 4.1 | 5.9 |
| Perak | 4.1 | 5.7 |
| Perlis | 3.4 | 5.3 |
| Pulau Pinang | 5.0 | 6.1 |
| Central Region | 4.6 | 6.2 |
| Melaka | 4.2 | 6.0 |
| Negeri Sembilan | 3.8 | 5.8 |
| Selangor ² | 5.2 | 6.4 |
| Wilayah Persekutuan Kuala Lumpur | 3.8 | 6.1 |
| Southern Region | | |
| Johor | 5.1 | 6.2 |
| Eastern Region | 3.5 | 5.7 |
| Kelantan | 3.3 | 5.2 |
| Pahang | 3.9 | 5.9 |
| Terengganu | 3.4 | 5.7 |
| Sabah³ | 4.3 | 5.8 |
| Sarawak | 4.6 | 6.1 |
| Malaysia | 4.5 | 6.0 |

Source: Economic Planning Unit

Notes: ¹ Based on 1987 prices.

² Includes Wilayah Persekutuan Putrajaya.

³ Includes Wilayah Persekutuan Labuan.

17.07 *Household Income and Incidence of Poverty.* The average mean monthly household income increased from RM2,472 in 1999 to RM3,249 in 2004, growing at 5.6 per cent per annum, as shown in *Table 17-3*. The highest mean monthly income was recorded in Selangor at RM5,175 while Kelantan recorded the lowest at RM1,829 in 2004. However, the income gap between the state with the lowest income and the state with the highest income narrowed from 1: 3.12 in 1999 to 1: 2.83 in 2004. All states except Wilayah Persekutuan Kuala Lumpur recorded a decline in the incidence of poverty in 2004, based on the new poverty line income. The incidence of poverty remained high in the less developed states of Sabah, Terengganu and Kelantan.

TABLE 17-3

MEAN MONTHLY HOUSEHOLD INCOME AND INCIDENCE OF POVERTY BY STATE, 1999 AND 2004

| State | Mean Monthly Household Income | | | Incidence of Poverty (%) | |
|----------------------------------|-------------------------------|--------------|--------------------------------|--------------------------|------------|
| | RM | | Average Annual Growth Rate (%) | 1999 | 2004 |
| | 1999 | 2004 | 2000-2004 | | |
| Northern Region | | | | | |
| Kedah | 1,612 | 2,126 | 5.7 | 14.2 | 7.0 |
| Perak | 1,743 | 2,207 | 4.8 | 6.8 | 4.9 |
| Perlis | 1,431 | 2,046 | 7.4 | 13.6 | 6.3 |
| Pulau Pinang | 3,128 | 3,531 | 2.5 | 0.7 | 0.3 |
| Central Region | | | | | |
| Melaka | 2,260 | 2,792 | 4.3 | 2.9 | 1.8 |
| Negeri Sembilan | 2,335 | 2,886 | 4.3 | 4.1 | 1.4 |
| Selangor ¹ | 3,702 | 5,175 | 6.9 | 1.9 | 1.0 |
| Wilayah Persekutuan Kuala Lumpur | 4,105 | 5,011 | 4.1 | 0.4 | 1.5 |
| Southern Region | | | | | |
| Johor | 2,646 | 3,076 | 3.1 | 3.1 | 2.0 |
| Eastern Region | | | | | |
| Kelantan | 1,314 | 1,829 | 6.8 | 25.2 | 10.6 |
| Pahang | 1,482 | 2,410 | 10.2 | 9.8 | 4.0 |
| Terengganu | 1,599 | 1,984 | 4.4 | 22.7 | 15.4 |
| Sabah² | 1,905 | 2,487 | 5.5 | 23.4 | 23.0 |
| Sarawak | 2,276 | 2,725 | 3.7 | 10.9 | 7.5 |
| Malaysia | 2,472 | 3,249 | 5.6 | 8.5 | 5.7 |

Source: Department of Statistics, Household Income Surveys, 1999 & 2004

Notes: ¹ Includes Wilayah Persekutuan Putrajaya.

² Includes Wilayah Persekutuan Labuan.

17.08 *Direction of Investment.* The development gaps between states are also reflected in the attractiveness to new manufacturing investment in certain states. During the Plan period, the direction of investment was skewed towards the more developed states. Selangor, Johor, Pulau Pinang and Melaka remained as the major choices of location for both domestic and foreign investment due to the availability of adequate and good infrastructure, proximity to air and sea hubs, financial centres and support services. A total of 4,807 manufacturing projects was approved with a proposed capital investment of RM132.4 billion of which RM73.6 billion or 55.6 per cent were intended for these four states, as shown in *Table 17-4*. Among the less developed states, Sarawak was the exception as it ranked third after Selangor and Johor in terms of new manufacturing investment approved during the period. Meanwhile, Perlis and Kelantan attracted the least investment at RM83.0 million and RM474.9 million, respectively.

TABLE 17-4
APPROVED MANUFACTURING PROJECTS BY STATE,
2001-2005

| <i>State</i> | <i>Number of Projects</i> | <i>Potential Employment</i> | <i>Capital Investment (RM million)</i> |
|----------------------------------|---------------------------|-----------------------------|--|
| Northern Region | | | |
| Kedah | 275 | 30,398 | 9,118.8 |
| Perak | 265 | 22,715 | 6,955.5 |
| Perlis | 13 | 781 | 83.0 |
| Pulau Pinang | 663 | 69,146 | 14,997.0 |
| Central Region | | | |
| Melaka | 205 | 24,677 | 10,317.0 |
| Negeri Sembilan | 184 | 12,898 | 6,327.7 |
| Selangor ¹ | 1,517 | 105,422 | 29,245.3 |
| Wilayah Persekutuan Kuala Lumpur | 111 | 6,424 | 2,041.8 |
| Southern Region | | | |
| Johor | 1,091 | 117,993 | 19,031.1 |
| Eastern Region | | | |
| Kelantan | 40 | 2,163 | 474.9 |
| Pahang | 88 | 9,212 | 4,739.1 |
| Terengganu | 31 | 2,068 | 5,706.6 |
| Sabah | 145 | 10,765 | 6,834.5 |
| Wilayah Persekutuan Labuan | 4 | 227 | 41.8 |
| Sarawak | 175 | 19,672 | 16,443.0 |
| Malaysia | 4,807 | 434,561 | 132,357.0 |

Source: Malaysian Industrial Development Authority (MIDA)

Notes: ¹ Includes Wilayah Persekutuan Putrajaya.

Rural-Urban Divide

17.09 During the Plan period, the population living in the rural areas increased from 8.93 million in 2000 to 9.90 million in 2005. However, its share declined from 38.0 per cent of total population in 2000 to 37.0 per cent in 2005, attributed to urbanisation and out-migration of the younger population looking for better economic opportunities in the urban areas.

17.10 Efforts were undertaken to create a more conducive environment in the rural areas in order to attract investments and maintain the tranquillity of the countryside living with the full range of basic and quality infrastructure and social services. Various programmes were undertaken to improve the quality of infrastructure and services in the rural areas. These included human and institutional development, anti-poverty programmes, provision of basic infrastructure, utilities and social amenities, rural entrepreneurship and industrialisation programmes, education and health services, communication network, as well as land and regional development.

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17.11 The land and regional development programmes contributed to the development of rural areas. These include the building of factories and low cost houses in 119 villages and 27 new townships. Meanwhile, a total of 2,146,710 hectares of land was rehabilitated and developed.

17.12 As a result of efforts to develop the rural areas, the mean monthly household income in the rural areas increased from RM1,718 in 1999 to RM1,875 in 2004 while the incidence of poverty decreased from 14.8 per cent to 11.9 per cent. However, the incidence of poverty in rural areas was still high compared with the incidence of poverty in urban areas. Overall, despite giving emphasis to rural development during the Plan period, the rural-urban divide widened, particularly in terms of income disparity which increased from 1:1.81 in 1999 to 1:2.11 in 2004.

17.13 Urban population increased from 14.57 million or 62.0 per cent in 2000 to 16.85 million or 63.0 per cent in 2005, as shown in *Table 17-5*. The rate of urbanisation in Selangor, Pulau Pinang, Wilayah Persekutuan Labuan, Melaka and Johor was higher than the national urbanisation rate, mainly due to the availability of more jobs and business opportunities. On a regional basis, urban population in the *central region* was the highest at 6.98 million in 2005 while Sarawak was the lowest at 1.16 million.

17.14 During the Plan period, the urban development strategies emphasised on improving the quality of urban services to ensure that urban areas are more liveable with its residents enjoying a higher quality of life. These included improving urban planning and management, providing utilities and social amenities,

TABLE 17-5

POPULATION¹ AND URBANISATION RATE BY STATE, 2000-2010

| State | Population (million) | | | Urbanisation Rate (%) | | | Average Annual Growth Rate of Urban Population(%) | |
|----------------------------------|----------------------|--------------|--------------|-----------------------|-------------|-------------|---|------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | 9MP |
| Northern Region | | | | | | | | |
| Kedah | 1.67 | 1.85 | 2.04 | 39.1 | 39.8 | 40.3 | 2.4 | 2.2 |
| Perak | 2.09 | 2.28 | 2.44 | 59.1 | 59.3 | 59.3 | 1.6 | 1.6 |
| Perlis | 0.21 | 0.23 | 0.25 | 34.0 | 35.1 | 35.9 | 2.2 | 2.2 |
| Pulau Pinang | 1.33 | 1.50 | 1.60 | 79.7 | 79.8 | 80.0 | 2.0 | 1.9 |
| Central Region | | | | | | | | |
| Melaka | 0.65 | 0.72 | 0.79 | 67.5 | 70.6 | 73.4 | 2.9 | 2.7 |
| Negeri Sembilan | 0.87 | 0.96 | 1.03 | 54.9 | 56.3 | 57.4 | 2.3 | 2.1 |
| Selangor ² | 4.19 | 4.87 | 5.31 | 87.7 | 88.4 | 89.1 | 2.7 | 2.4 |
| Wilayah Persekutuan Kuala Lumpur | 1.42 | 1.62 | 1.70 | 100.0 | 100.0 | 100.0 | 1.9 | 1.5 |
| Southern Region | | | | | | | | |
| Johor | 2.76 | 3.17 | 3.46 | 64.8 | 66.5 | 67.7 | 2.9 | 2.6 |
| Eastern Region | | | | | | | | |
| Kelantan | 1.36 | 1.51 | 1.67 | 33.5 | 33.4 | 33.3 | 2.0 | 2.1 |
| Pahang | 1.30 | 1.45 | 1.57 | 42.0 | 43.5 | 44.6 | 2.7 | 2.5 |
| Terengganu | 0.90 | 1.02 | 1.12 | 49.4 | 49.8 | 50.3 | 2.6 | 2.6 |
| Sabah | 2.60 | 3.13 | 3.33 | 48.1 | 49.8 | 51.6 | 3.1 | 2.9 |
| Wilayah Persekutuan Labuan | 0.08 | 0.09 | 0.09 | 76.3 | 77.6 | 78.6 | 2.2 | 1.8 |
| Sarawak | 2.07 | 2.34 | 2.56 | 48.1 | 49.5 | 50.6 | 2.8 | 2.4 |
| Malaysia | 23.49 | 26.75 | 28.96 | 62.0 | 63.0 | 63.8 | 2.5 | 2.3 |

Source: Economic Planning Unit and Department of Statistics

Notes: ¹ Population data refer to mid-year population.

² Includes Wilayah Persekutuan Putrajaya.

enhancing delivery of services as well as eradicating poverty. In addition, efforts were made to ensure that urban areas are safe and crime-free.

17.15 As a result of the expansion in urban-based economic activities, the mean monthly income of urban households increased by 27.5 per cent from RM3,103 in 1999 to RM3,956 in 2004. The incidence of urban poverty declined from 3.3 per cent in 1999 to 2.5 per cent in 2004.

ASEAN Sub-Regional Cooperation

17.16 In line with the regional development strategies as well as to enhance development along the international boundaries, various joint efforts were undertaken with neighbouring countries. This was carried out through the ASEAN

sub-regional cooperation mechanism, namely the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT), the Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA) and the Malaysia-Thailand Committee on the Joint Development Strategy for Border Areas (JDS). The private sector took a leading role in the development of joint venture projects while the governments of the participating countries facilitated their efforts.

17.17 Various projects were implemented under IMT-GT and BIMP-EAGA arrangements. The major achievements include:

- provision of fiscal tax exemptions for Indonesians travelling within IMT-GT and BIMP-EAGA areas to improve people mobility and tourism;
- improvement of air linkages between towns in participating states and provinces. Among the air links that were established in the IMT-GT include flights between KLIA and Medan, Pekanbaru, Padang, Palembang and Hat Yai; between Pulau Pinang and Medan; and between Melaka and Pekanbaru. In BIMP-EAGA, air links were established between Tawau-Tarakan and Kuching-Pontianak; and
- establishment of more sea routes in IMT-GT such as Pulau Pinang-Belawan, Pulau Pinang-Kantang, Langkawi-Satun, Melaka-Dumai and Melaka-Pekanbaru. In BIMP-EAGA, the sea routes include Sandakan-Zamboanga, Sandakan-Tawi-Tawi, Tawau-Nunukan, Tawau-Tarakan and Wilayah Persekutuan Labuan-Muara.

17.18 The JDS, which was formed in 2004 during the bilateral meeting between the Prime Ministers of Malaysia and Thailand, is tasked to undertake joint planning and implementation of development projects along the border areas. The objective is to foster the spirit of partnership and bring prosperity and improve the quality of life in the areas covering Perlis, Kedah, Kelantan and Pengkalan Hulu of Perak in Malaysia and Satun, Songkhla, Yala, Narathiwat and Pattani in Thailand. The JDS Action Plan, which is the basis for cooperation, was adopted in August 2004, covering nine priority areas namely, basic infrastructure and transportation, human resource development, tourism, culture, trade and investment, agriculture, finance, energy and disaster relief.

17.19 Among the projects under JDS initiated during the Plan period was the initial works on the construction of the Customs, Immigration and Quarantine (CIQ) complex in Durian Burong, Kedah which began in 2004. In addition, a bridge linking Bukit Bunga in Malaysia with Buketa in Thailand, was jointly planned based on equal cost sharing basis.

III. PROSPECTS, 2006-2010

17.20 During the Ninth Plan period, greater emphasis will be placed on ensuring balanced regional development by further diversifying the economic base of states to attract investments, create more job opportunities and generate higher income. In addition, measures will be undertaken to reduce the development gaps between states as well as between rural and urban areas. The main thrusts for balanced regional development are as follows:

- ❑ *accelerating development in lesser developed states by creating economic opportunities and improving infrastructure, social facilities and amenities to narrow the rural-urban divide;*
- ❑ *improving the quality of life through improved delivery system in rural and urban areas;*
- ❑ *establishing new regional development authorities (RDAs) in Sabah and Sarawak to coordinate and implement integrated rural and regional development efforts;*
- ❑ *developing growth centres and growth corridors transcending state boundaries to ensure higher economic growth in less developed areas; and*
- ❑ *enhancing development of border states through ASEAN sub-regional development cooperation in IMT-GT, BIMP-EAGA and JDS.*

Development by Region

17.21 The main objective of balanced development during the Plan period will be to narrow development gaps between regions, states as well as between rural and urban areas. Measures will be undertaken to reduce disparities in terms of per capita income and household income, incidence of poverty in the less developed states and disparities in terms of infrastructure and utilities between the states in the Peninsular and between the Peninsular, Sabah and Sarawak.

17.22 To ensure higher economic growth among states, measures will be undertaken to focus development efforts in growth centres of respective states as well as in transborder areas involving two or more states. Among the transborder areas, the Northern Terengganu-Southern Kelantan-Western Pahang Zone has been identified as a new focus area of development for the Eastern Corridor states. In addition, the Northern Peninsular Development Zone of

Kedah, Perlis, Seberang Prai in Pulau Pinang and northern Perak has been identified to spearhead the development of food industries including *halal* hubs. As for Sabah and Sarawak, the focus areas of development will be around new rural growth centres as well as in transborder areas. Other major growth centres identified include the South Johor Economic Region (SJER) as the focus area for development in the *southern region*.

17.23 During the Plan period, to reduce regional imbalance, emphasis will be given to develop states that are categorised below the national average in terms of DCI. In this regard, specific programmes will be implemented to enhance development in the lagging areas. More allocation will be given for the development of the less developed states.

17.24 Several major projects will be implemented to spur development in the *northern region*. For this purpose, the region will receive a development allocation of RM23.8 billion or 11.9 per cent in the Ninth Plan, compared with RM20.8 billion in the Eighth Plan. These include the Trans-Eastern Kedah Hinterland Highway in Kedah. This highway will open up the eastern corridor of Kedah and northern Perak for development and provide economic opportunities to the population in the area. In addition, an integrated *halal* hub and permanent food production parks will be established in Kedah. The expansion of Kulim Hi-Tech Park will further stimulate industrial growth in the State. For Pulau Pinang, some of the projects include the construction of the Pulau Pinang Outer Ring Road, the design and construction of the second bridge as well as the establishment of new growth areas. For Perak, one of the major development projects is the construction of the national food terminal in Ipoh while for Perlis is the establishment of an integrated *halal* hub.

17.25 Despite being the most developed region in the country, the *central region* continues to require projects to meet its development needs. Hence, a total of RM56.2 billion or 28.1 per cent will be allocated to the region. This is to finance infrastructural works such as the construction of several federal roads, including the Banting-Taiping Coastal Highway. For Negeri Sembilan, the focus will be the development of Bandar Baru Nilai as a new biotechnology centre as well as the Gemas and Jelai area as a beef valley. For Melaka, development projects include upgrading of Melaka airport to handle narrow-bodied jets to boost tourism.

17.26 The state of Johor will receive an allocation of RM10.2 billion or 5.1 per cent which is higher compared with RM9.2 billion in the Eighth Plan. Major development projects will be carried out in the SJER, encompassing a triangle that stretches from Mukim Serkat in the west to Pasir Gudang in the east and from Kulai in the north down to Johor Bahru in the south. This triangle encapsulates Johor's logistic hub, which include two international seaports and an international

airport. Major projects in SJER will be largely driven by the private sector under a masterplan that will be implemented by a single coordinating authority. Among the projects to be implemented include the construction of the bridge to replace the Johor Causeway and the extension of the Senai airport runway to support Senai as an integrated logistics hub for the *southern region*. Several other catalyst projects have also been identified. The development of Bandar Nusajaya as the new state administrative centre, as well as the development of an education hub, a centre for creative industries and nearby tourist resorts will further spur the development in the State. The development of this project will be coordinated by Khazanah Nasional under the leadership and support of the Federal and Johor State Governments.

17.27 For the *eastern region* states, a total of RM22.3 billion or 11.2 per cent will be allocated for development in the Ninth Plan compared with RM14.3 billion in the Eighth Plan. Infrastructure projects will be the focus of the development for the region. Among the projects are the Simpang Pulai-Gua Musang-Kuala Terengganu Road, which will provide the third trunk road link to the Eastern Corridor, and the East Coast Highway Phase 2 in Terengganu. In addition, the Kuala Terengganu airport will be upgraded to handle wide-bodied aircraft that will boost tourism and industrial developments. To further spur the development in northern Terengganu as well as provide more educational opportunities, the main campus of a new university will be located in Besut. In addition, a new university will be established in Kelantan during the Plan period. For Pahang, development projects will include permanent food production parks, a palm oil industrial cluster and an integrated *halal* hub.

17.28 A total of RM13.4 billion or 6.7 per cent will be allocated for development projects in Sarawak, higher compared with RM12.8 billion allocated in the Eighth Plan. Development projects in the State include the upgrading of Oya-Mukah-Balingan Road and the new Sibul-Bawang-Assan-Seredeng Road as well as the Integrated Deep Sea Fishing Complex in Tanjung Manis. This coastal road project will act as a catalyst for the development of the tourism industry in the State. The large-scale planting of oil palm and rubber will further enhance the agriculture sector in Sarawak. To facilitate further downstream agro-based industrial activities, a palm oil industrial cluster will be developed in the State.

17.29 Sabah will receive a higher allocation of RM15.7 billion or 7.8 per cent compared with RM13.2 billion in the Eighth Plan. The completion of Sepulut-Kalabakan Road and Sipitang-Tenom Road will further improve linkages to the hinterland of Sabah and support agricultural development. Other projects include the development of a palm oil industrial cluster that will generate more downstream processing of palm oil in the State and measures to attain self-sufficiency in rice and beef production.

17.30 The Government will continue to provide basic infrastructure in the less developed regions. To complement this effort, the private sector will be encouraged to play a more active role by investing in the existing and potential growth areas.

Narrowing Rural-Urban Divide

17.31 During the Plan period, efforts will be undertaken to enhance the socio-economic development of the rural population as well as minimise the development gap between rural and urban areas. Among the issues and challenges faced in narrowing the rural-urban divide include rural-urban income disparity, which has widened from 1:1.81 in 1999 to 1:2.11 in 2004, the high incidence of rural poverty especially in less developed states, the need to identify poor and hardcore poor in rural and urban areas, lack of job opportunities in the rural areas, digital divide and the lack of coordination and overlapping functions of agencies in rural development.

17.32 *Rural Development.* To narrow development gap, strategies to develop rural areas will include strengthening the institutional framework, promoting rural growth centres, increasing economic activities, providing more infrastructure and social amenities as well as enhancing human capital development. This includes attracting more investments, creating more job opportunities and higher value added activities as well as providing skills training for youth. The leadership qualities in institutions involved in rural development, particularly at the grass roots level will be strengthened. Hence, with these strategies, the rural-urban income disparity is expected to be narrowed to 1:2.0 in 2010.

17.33 The role of district offices will be reviewed and strengthened to improve coordination and implementation of rural and regional development programmes and projects. New RDAs will be established in Sabah and Sarawak to create more income generating activities in the interior areas.

17.34 Viable rural growth centres with critical mass will be identified and developed to ensure balanced regional development. The rural economic base will be diversified through the development of resource-based manufacturing, craft-based industries, value added downstream agriculture-based activities, eco-tourism and forestry. In this respect, basic infrastructure as well as social amenities in rural areas will be provided, including in the interiors of Sabah and Sarawak.

17.35 Rural industries that will be developed during the Plan period include handicraft, forest-based, ceramic, textile and metal-based projects. New agricultural activities including food processing into semi-and finished products will be developed to increase the income of the rural population, particularly the youth.

Production and marketing processes will be improved through the provision of training, equipment and micro-credit financing. Programmes will be undertaken to strengthen community participation in development projects at the village level.

17.36 Accessibility to ICT in the rural areas will be improved to narrow the digital divide. More schools in the rural areas will be provided with ICT facilities to enhance computer-based learning and improve ICT literacy among students. Existing telecentres will be upgraded to “Community Knowledge Centres” that provide a wider range of economic and social information to communities, serve as one stop centres to access government services and e-learning and act as an information resource exchange. Emphasis will also be given to change the mindset of rural communities towards ICT usage and adoption through building awareness and implementing empowerment programmes. Programmes will also be initiated to ensure sufficient availability of up-to-date content in *Bahasa Melayu* and other local languages so as to enable the wider usage of ICT applications.

17.37 To improve health services in the rural areas, more mobile clinics will be provided with minor surgery facilities using telehealth services and modern equipment. With this approach, the rural areas will have better access to health services and higher quality care. In addition, teleconsultation services will be expanded to enable the provision of specialist services for the rural population especially in Sabah and Sarawak.

17.38 Skills training programmes for youths will be provided in the rural areas to enhance their employability. In this regard, activities to inculcate self-esteem, self-reliance as well as promote lifelong learning among the rural population will be continued.

17.39 *Urban Development.* The proportion of the urban population is expected to increase to 63.8 per cent of the total population in 2010. This is due to the migration of the younger population from the rural areas, expansion of urban boundaries and increasing opportunities available in the urban areas. To ensure that urban areas are well planned and residents enjoy a better quality of life, urban areas will be developed based on a hierarchy growth conurbation, namely national, regional, intermediate and urban centre, as shown in *Chart 17-1*. Urban renewal programmes will be undertaken to redevelop areas that have physically deteriorated or were poorly planned. At the same time, infrastructure facilities in the traditional and new villages will be improved.

17.40 Towns with special features such as heritage, tourism and border trading will be further developed. These include Bukit Kayu Hitam in Kedah, Port

CHART 17-1

HIERARCHY OF CONURBATIONS

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Source: Department of Town and Country Planning, Peninsular Malaysia

Dickson in Negeri Sembilan, Kerteh in Terengganu, Cyberjaya in Selangor, Pengkalan Hulu, Taiping and Teluk Intan in Perak. The socio-economic role of the traditional villages will be enhanced by designating functions relying upon inherent advantages of the surrounding areas such as linkages to special feature towns, nature tourist attraction areas and coastal tourism towns or agriculture areas.

Enhancing ASEAN Sub-Regional Cooperation

17.41 The ASEAN sub-regional cooperation will be given greater priority in the Ninth Plan. Through this cooperation, it is envisaged that trade, investment and tourism will be increased among the states and provinces involved. In this regard, the participating states will identify projects, particularly to attain benefit from sub-regional cooperation. Strategies to harness economic complementarities and promote efficient utilisation of resources in the sub-regions will be further enhanced. Cross border facilitation and infrastructure links will be improved to facilitate trade and business transactions.

17.42 For both IMT-GT and BIMP-EAGA regions, the Malaysian private sector is encouraged to continue promoting trade, investment and tourism in the region, with the government playing a facilitating role. A roadmap to development will be formulated to chart the development of IMT-GT for the next five years, including drawing up a socio-economic profile of all member states and provinces in the sub-region. To further promote barter trade in the IMT-GT, barter trade facilities will be developed in every member state in Malaysia.

17.43 The BIMP-EAGA Roadmap to Development will be implemented with the focus on areas such as agro-industry, tourism and infrastructure facilities. Priority will also be given to the implementation of projects like the virgin coconut oil industry, ginger industry, the *halal* livestock projects, palm oil industrial cluster and business development services. To quantify IMT-GT and BIMP-EAGA activities, a database on trade, investment and tourism will be established. In addition, infrastructure projects such as the Pan-Borneo Highway, ferry services, air linkages and ICT facilities will be enhanced to improve transportation linkages within BIMP-EAGA. In order to enhance business confidence, steps will be jointly taken to address security challenges in the sub-region.

17.44 During the Plan period, the implementation of projects identified in the Malaysia-Thailand JDS Action Plan will be accelerated. These include the opening of the CIQ complex at Durian Burong-Ban Prakob area and the completion of the bridge linking Bukit Bunga in Malaysia and Buketa in Thailand which will spur economic activities in these areas. Other projects are the promotion of joint

tour packages, the joint development of ornamental fish project in Padang Terap, Kedah and the skills training programme identified in the Action Plan to be provided by GiatMARA Centres for trainees from the southern provinces of Thailand. At the same time, three studies will be undertaken jointly, namely on the establishment of a special economic zone at Bukit Kayu Hitam-Sadao and feasibility studies on proposed bridge projects between Pengkalan Kubor-Tak Bai and between Rantau Panjang-Sungai Golok.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

17.45 To support regional and rural development, the main agencies involved are the Ministry of Agriculture and Agro-Based Industry, the Ministry of Rural and Regional Development, the Ministry of Education, the Ministry of Human Resources, the Ministry of Youth and Sports, the Ministry of Health, the Ministry of Entrepreneurial and Cooperative Development, the Ministry of International Trade and Industry, the Ministry of Works, the Ministry of Energy, Water and Communications and state government agencies. In terms of allocation, a total of RM28.4 billion will be allocated through various ministries and under numerous programmes for rural development, as shown in *Table 17-6*.

TABLE 17-6
**DEVELOPMENT EXPENDITURE AND ALLOCATION FOR
RURAL DEVELOPMENT PROJECTS, 2001-2010**
(RM billion)

| <i>Programme/Project</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|--------------------------|----------------------------|---------------------------|
| Economic Projects | 5.9 | 10.1 |
| Education and Training | 10.4 | 10.2 |
| Health | 0.9 | 2.0 |
| Road | 2.3 | 3.6 |
| Water Supply | 0.7 | 1.2 |
| Electricity Supply | 0.6 | 1.0 |
| Housing | 0.2 | 0.3 |
| Total | 21.0 | 28.4 |

Source: Economic Planning Unit

V. CONCLUSION

17.46 During the Eighth Plan period, efforts were undertaken to promote balanced regional development. Despite all states recording economic growth, the development gaps between regions, states and rural-urban areas remained wide. During the Ninth Plan period, measures will be undertaken to accelerate the development of less developed states, particularly in northern Peninsular Malaysia, the Eastern Corridor, Sabah and Sarawak to attain regional balance and reduce development gaps. Development efforts will also be focused in transborder areas involving two or more states. In addition, the SJER has been identified as the focus area of development in the *southern region*. In addition, to ensure a more coordinated and integrated regional and rural development programmes in Sabah and Sarawak, new RDAs will be established in these two states. Rural development will be intensified to increase income and improve the quality of life of the rural population as well as reduce the rural-urban development gap. In terms of ASEAN sub-regional cooperation, steps will be intensified to promote development in the sub-regions, so that the less developed areas will be able to catch up with the other developed areas of the country.



IMPROVING INFRASTRUCTURE, UTILITIES AND URBAN TRANSPORTATION

18

I. INTRODUCTION

18.01 Infrastructure and utilities development during the Eighth Plan period contributed to the expansion of the transportation, water supply and sewerage networks. Infrastructure projects contributed to economic growth through its linkages and spillover benefits. Measures were undertaken to increase the efficiency and reliability of infrastructure facilities and services to support trade and business activities as well as improve the quality of life.

18.02 The thrust for infrastructure and utilities development in the Ninth Plan period will focus on increasing the coverage of the networks and optimising the utilisation of existing facilities to support economic activities. Increasing accessibility to infrastructure facilities in rural areas, better integration of transport modes and services as well as higher quality and reliability of the water supply system will be the thrust in the planning and implementation of infrastructure projects. Measures will be implemented to improve multimodal public transport, particularly in urban centres, to reduce traffic congestion and air pollution. Environmental considerations will be emphasised in project planning and implementation to ensure sustainable development.

II. PROGRESS, 2001-2005

18.03 Recognising that efficient and reliable infrastructure facilities and services were vital to support economic development, infrastructure development continued to be given priority during the Eighth Plan period. A total of RM38.7 billion was expended to increase the capacity as well as upgrade and refurbish the infrastructure and utilities networks to meet rising demand and improve service delivery.

Roads

18.04 The road development programme was implemented based on a three-pronged strategy, namely to increase capacity, provide access to rural and new development areas as well as improve road safety. A total of RM18.5 billion was

expended on road development while 22 projects costing RM4 billion were undertaken through the deferred payment scheme. Several major roads such as the East Coast Highway Phase 1 from Karak to Kuantan in Pahang, Muar Bypass Road in Johor, Nangoh-Kanibungan Road in Sabah and Tanjung Kidurung-Suai-Bakam Road in Sarawak were completed to support the development of the eastern corridor of Peninsular Malaysia as well as Sabah and Sarawak. Under the privatization programme, about RM4 billion was invested to complete four toll roads and initiate six new projects.

18.05 Under the road safety programme, 34 accident-prone spots were improved while 280 slope failures were repaired to ensure safety of road users. In addition, 122 kilometres of motorcycle lanes were constructed along major roads to reduce accidents. Better coordinated safety campaigns were undertaken to promote a road safety culture, which 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 4.2 deaths in 2005.

18.06 Emphasis was also given to improve the accessibility of rural areas, whereby RM714 million was spent to construct 340 kilometres of rural roads with minimum JKR-R3¹ standard. In addition, RM1.6 billion was spent to construct and maintain 500 kilometres of village roads benefiting about 2.5 million people.

18.07 The rapid rate of new road construction improved road connectivity and the total road length increased from 66,391 kilometres in 2000 to 77,673 kilometres in 2005. In tandem with this, the National Road Development Index (RDI) increased from 0.75 to 0.85. Most of the states in Peninsular Malaysia recorded a higher RDI compared with the national index, as shown in *Table 18-1*.

Urban Transport

18.08 Urban transportation strategies focused on the development of an integrated, efficient and reliable public transport system to encourage a modal shift from using private vehicles to public transport, particularly in the Klang Valley. Measures undertaken included the restructuring of the public transport system through the *Integrasi dan Penyusunan Semula Pengangkutan Awam di Lembah Klang* (INSPAK) programme. Under the INSPAK programme, bus services were improved, particularly to support the urban rail systems, thereby optimising the potential of the rail systems as the backbone for public transport services in the Klang Valley. Infrastructure projects that improved connectivity between urban rail transit stations were implemented such as construction of overhead pedestrian bridges and covered walkways. During the Plan period, the average daily ridership for all urban rail services increased, as shown in *Table 18-2*.

¹ JKR-R3 standard roads have a minimum width of 3 metres and speed limit of 70 kilometres per hour.

TABLE 18-1
ROAD DEVELOPMENT INDICATORS, 2000-2005

| State | Road Length (Km) | | Road Density ¹ | | Road Service Level ² | | Road Development Index ³ | |
|---------------------|------------------|-----------------|---------------------------|-------------|---------------------------------|-------------|-------------------------------------|-------------|
| | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 |
| Johor | 6,780.3 | 7,179.0 | 0.34 | 0.36 | 2.45 | 2.31 | 0.91 | 0.91 |
| Kedah | 5,469.8 | 5,494.8 | 0.58 | 0.58 | 3.27 | 2.97 | 1.36 | 1.32 |
| Kelantan | 2,704.4 | 2,843.6 | 0.18 | 0.19 | 1.99 | 1.89 | 0.60 | 0.60 |
| Melaka | 1,698.4 | 2,013.3 | 1.03 | 1.22 | 2.63 | 2.82 | 1.64 | 1.86 |
| Negeri Sembilan | 3,842.6 | 4,162.3 | 0.58 | 0.63 | 4.44 | 4.40 | 1.60 | 1.66 |
| Pahang | 7,753.4 | 7,791.6 | 0.22 | 0.22 | 5.98 | 5.46 | 1.14 | 1.09 |
| Perak | 5,017.0 | 7,058.0 | 0.24 | 0.34 | 2.40 | 3.13 | 0.76 | 1.03 |
| Perlis | 544.6 | 716.1 | 0.67 | 0.88 | 2.62 | 3.19 | 1.33 | 1.68 |
| Pulau Pinang | 1,736.2 | 2,098.6 | 1.64 | 1.99 | 1.30 | 1.43 | 1.48 | 1.69 |
| Sabah | 10,975.1 | 16,090.7 | 0.15 | 0.22 | 4.22 | 5.49 | 0.80 | 1.10 |
| Sarawak | 6,228.6 | 6,471.6 | 0.05 | 0.05 | 3.01 | 2.80 | 0.39 | 0.38 |
| Selangor | 7,871.3 | 9,815.0 | 0.99 | 1.23 | 1.88 | 2.07 | 1.36 | 1.60 |
| Terengganu | 4,345.7 | 4,515.4 | 0.34 | 0.35 | 4.81 | 4.44 | 1.27 | 1.24 |
| Wilayah Persekutuan | 1,423.4 | 1,423.4 | 3.67 | 3.67 | 0.95 | 0.87 | 1.87 | 1.79 |
| Malaysia | 66,390.8 | 77,673.4 | 0.20 | 0.24 | 2.83 | 2.97 | 0.75 | 0.85 |

Source: Economic Planning Unit

Notes: ¹ Measures road lane length over the total area.

² Measures total road lane length per 1,000 population.

³ Measures the level of road development taking into account both area and population size of the country.

TABLE 18-2
AVERAGE DAILY RIDERSHIP ON URBAN RAIL SERVICES,
2001-2005

| | 2001 | 2002 | 2003 | 2004 | 2005 |
|-------------------------------------|---------|---------|---------|---------|---------|
| STAR LRT (Ampang/Sri Petaling Line) | 88,801 | 91,702 | 107,082 | 120,426 | 125,208 |
| PUTRA LRT (Kelana Jaya Line) | 143,778 | 149,105 | 154,869 | 160,361 | 165,695 |
| KLIA Express and KLIA Transit | - | 4,983 | 7,323 | 9,990 | 12,075 |
| KL Monorail | - | - | 23,872 | 33,837 | 44,442 |
| KTM Komuter | 57,339 | 60,504 | 67,522 | 74,960 | 85,733 |

Source: Economic Planning Unit

18.09 The National Transport Policy and Strategy Study, which was completed in 2003, provided an inventory and status of transport and transport-related plans, studies as well as projects undertaken by the Government. The Study highlighted that current policy statements were mostly mode-specific and related only to the development of individual transport modes. In this regard, the needs and issues in developing a comprehensive national transport policy, including urban transport, were identified.

18.10 The Integrated Transport Information System (ITIS) project, covering 243 square kilometres of Kuala Lumpur City and its surrounding area, was completed by the end of 2005. Public transport operators and other road users were able to utilise the ITIS to obtain real-time information on traffic situations as well as track the location of their vehicle to plan their journey effectively. The real-time information was accessible from the ITIS website, ITIS call centre, visual display boards and over the radio.

18.11 Major urban road projects implemented to improve traffic flow in Kuala Lumpur included the Stormwater Management and Road Tunnel (SMART) project as well as the Kampung Pandan-Sultan Ismail and Jalan Mahameru-Jalan Sentul flyovers. Other road projects that commenced construction included grade separated interchanges at Jalan Tebrau-Pasir Gudang in Johor and Karamuning, Kota Kinabalu in Sabah as well as the Butterworth Outer Ring Road (BORR) in Pulau Pinang.

Rail Transport

18.12 The railway subsector development was focused on enhancing the efficiency and quality of rail services to provide safe, efficient, reliable and integrated rail services for passengers and goods. Major projects undertaken to upgrade railway infrastructure included the Rawang-Ipoh electrified double tracking project, track and bridge rehabilitation works, modernisation of signalling and communications systems as well as purchase of rolling stock. Dedicated rail connections from Kempas to the Port of Tanjung Pelepas (PTP), Johor and from Kerteh to Kuantan Port were completed. However, the completion of the Rawang-Ipoh double tracking project was rescheduled from October 2004 to December 2007.

18.13 A corporate restructuring exercise was undertaken to improve the operational viability of *Keretapi Tanah Melayu Berhad* (KTMB). The exercise involved, among others, the reorganisation of KTMB into three major strategic business units (SBU), namely Freight, Inter-city and *Komuter* to operate as autonomous business entities while the corporate headquarters provided support in terms of policy formulation and strategic directions. The Freight SBU remained the major contributor to the total revenue of KTMB.

18.14 To improve rail services in Sabah, an upgrading project from Tanjung Aru to Tenom was jointly implemented by KTMB and the Sabah State Railway. The replacement of sleepers and minor repairs of rolling stock were completed in 2003 while the upgrading and strengthening of tracks, bridges and stations as well as signalling and communications systems commenced in 2005.

Ports

18.15 Development of ports continued to focus on increasing capacity, upgrading equipment and facilities as well as enhancing the efficiency of port and port-

TABLE 18-3
**PORT CAPACITY, NUMBER OF BERTHS, CRANES,
 SHIP CALLS AND VOLUME OF CARGO HANDLED AT PORTS¹,
 2000-2010**

| | 2000 | 2005 | 2010 |
|--|----------|----------|-----------|
| Port Capacity (million tonnes) | 324.9 | 443.3 | 570.0 |
| Number of Berths | 221.0 | 233.0 | 242.0 |
| Number of Cranes ² | 131.0 | 217.0 | 265.0 |
| Number of Ship Calls | 81,313.0 | 98,345.0 | 130,000.0 |
| Volume of Cargo Handled (million tonnes) | 223.9 | 369.4 | 539.0 |
| General | 23.3 | 44.7 | 47.0 |
| Liquid Bulk | 87.5 | 103.8 | 202.0 |
| Dry Bulk | 28.6 | 38.2 | 44.0 |
| Containerised Cargo | 84.5 | 182.7 | 246.0 |
| Container (million TEUs) | 4.9 | 12.1 | 18.0 |

Source: Economic Planning Unit

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, Tanjung Bruas, Port Dickson, Kerteh, Sungai Udang, Tanjung Lempung and Labuan.

² Includes gantry and multipurpose cranes.

related services. Major projects undertaken to expand the capacity of ports included the construction of additional berths at West Port of Port Klang, PTP, Penang Port and Kuantan Port as well as a container terminal and oil jetty in Sepangar Bay, Sabah and the Second Inner Harbour Basin of Bintulu Port in Sarawak.

18.16 The volume of cargo handled at ports increased from 223.9 million tonnes in 2000 to 369.4 million tonnes in 2005, as shown in *Table 18-3*. Among the major ports, Port Klang registered an increase of 57 per cent from 70 million tonnes in 2000 to 110 million tonnes in 2005 while PTP registered an increase of 102 per cent from 29.5 million tonnes to 59.6 million tonnes. Port Klang and PTP were ranked 13th and 16th in the world in 2004 in terms of volume of containers handled as reported in the Containerisation International Yearbook 2005.

18.17 Rivers were utilised for transportation as well as promotion of tourism, particularly in Sarawak and Melaka. Express boat terminals and jetties were built and upgraded to enhance the safety and convenience of river transportation in Sarawak. A project to clean and beautify the Melaka River was also implemented including the construction of river embankments, pedestrian walkways and bridges.

Airports

18.18 During the Plan period, the number of passengers handled at airports increased from 32.9 million in 2000 to 42.8 million in 2005. Airport facilities were

enhanced to meet the increasing air traffic demand. In Sarawak, new airports were built in Limbang and Bintulu while the Miri and Sibul airports were upgraded to complement other modes of transport, particularly to the rural areas. Upgrading works on the Alor Setar and Kota Bharu airports were also completed.

18.19 Efforts to promote KL International Airport (KLIA) as an aviation hub resulted in increased frequencies by existing airlines as well as new airlines commencing operations. The number of passengers handled at KLIA increased from 16.8 million in 2000 to 23.2 million in 2005. In a survey conducted by the Airports Council International (ACI) and International Air Transport Association (IATA) in 2005 on customer satisfaction, KLIA was ranked third in the best airport worldwide category and first in the 15-25 million passengers per year category.

Water Supply

18.20 Among the major projects undertaken to ensure adequate and sustainable water supply to meet domestic and industrial water demand were the Rasa Phase II Water Treatment Plant (WTP) and Bukit Badong Phase II WTP in Selangor, Gadek WTP in Melaka, Gemencheh WTP in Negeri Sembilan and Bintulu WTP in Sarawak. The construction of four dams was also completed, namely the Beris Dam in Kedah, Chereh Dam in Pahang, Jus Dam in Melaka and Kelalong Dam in Sarawak. The production capacity increased from 11,917 million litres per day (mld) in 2000 to 14,226 mld in 2005. Water supply coverage increased from 92 per cent to 95 per cent during the same period.

18.21 A total of RM640 million was expended to reduce non-revenue water (NRW). Measures undertaken included the replacement of 3,380 kilometres of old pipes and old water meters and the reduction of water pilferages as well as the rehabilitation and upgrading of water distribution systems and WTPs. The national NRW rate decreased from 40 per cent in 2000 to 38 per cent in 2005.

18.22 In line with the policy of providing potable water to rural areas, a total of RM734 million was expended for the *Bekalan Air Luar Bandar* (BALB) programme. This programme comprised the construction of pipe connections from public water mains to rural areas, upgrading of existing WTPs and water supply systems as well as the construction of reticulation systems. The programme also included the implementation of alternative water supply systems. The BALB programme benefited 41,000 people in Peninsular Malaysia, 207,000 in Sabah and 106,000 in Sarawak.

18.23 The Federal Constitution was amended in January 2005 to transfer matters related to water supply services from the State List to the Concurrent List. The amendment enabled the Federal Government to regulate water supply services while ownership and control of water resources, dams and catchment areas remained with the state governments. Two bills were drafted, aimed at

creating an effective and efficient water services industry and the formation of the *Suruhanjaya Perkhidmatan Air Negara* (SPAN) as the water services regulator.

Sewerage

18.24 One of the major projects implemented to provide efficient, reliable and environmentally safe sewerage services was the National Sewerage Project (NSP). The construction of Phase 1 of the NSP, which comprised five projects in Kuala Lumpur and Selangor, began in 2004. The construction of several sewerage treatment plants (STPs) was completed such as the plants in Bayan Baru, Kuala Terengganu, Port Dickson as well as in Padang Mat Sirat and Pantai Tengah in Langkawi. Other sewerage facilities such as septic tanks and communal treatment plants were also constructed and existing systems were upgraded and rehabilitated. The population served by these sewerage facilities increased from 6.7 million in 2000 to 8.1 million in 2005.

Flood Mitigation

18.25 A total of RM1.8 billion was expended to reduce flood hazards, especially in urban areas. In the Klang Valley, efforts undertaken to reduce floods included the construction of SMART, Batu and Jinjang flood retention ponds as well as flood diversions. The frequent flooding problems along Sungai Muda and within the towns of Baling, Kuala Ketil and Sik in Kedah were addressed with the implementation of the Sungai Muda Phase 1 project that involved river improvement works and the construction of a barrage. Other major flood mitigation projects undertaken included the Sungai Perai and Bertam-Kepala Batas projects in Pulau Pinang and the Sungai Air Hitam and Sungai Rasau projects in Selangor.

Export of Expertise

18.26 The Government facilitated Malaysian construction firms to venture overseas, capitalising on the capacity and capability acquired from infrastructure development in the country. A total of 76 construction firms undertook 316 projects overseas worth RM17.6 billion, mainly in the South Asian and the Middle East regions.

III. PROSPECTS, 2006-2010

18.27 The thrust of infrastructure development during the Ninth Plan period will be on greater utilisation of existing facilities with emphasis on better delivery and quality of services, expansion of networks to underserved areas as well as capacity expansion. In this regard, infrastructure will be developed to facilitate the growth of other sectors and be guided by the following strategies:

- ❑ *enhancing accessibility to quality infrastructure facilities in rural areas to reduce the development gap between urban and rural areas;*

- ❑ *providing efficient and reliable services to ensure optimal utilisation of infrastructure facilities as well as improving the safety and comfort of users;*
- ❑ *optimising the use of resources, particularly water, through sustainable management and better infrastructure facilities;*
- ❑ *encouraging the use of public transport as the preferred mode of travel, particularly in urban areas, by promoting seamless integration of various transport modes;*
- ❑ *increasing the competency and capability of service providers of infrastructure services; and*
- ❑ *encouraging the export of expertise in construction and project management.*

Roads

PAGE

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18.28 The road development programme will be undertaken with emphasis on improving accessibility to less developed areas, particularly those with potential for tourism, agriculture development and rural growth centres. The review of the Highway Network Development Plan (HNDP), which is expected to be completed in 2006, will identify priority projects to improve the national road network in Peninsular Malaysia. The review will also identify road projects that can be implemented under the privatization programme. Another study will be undertaken to identify the road networks required to expedite development of Sabah and Sarawak.

18.29 Under the rural roads programme, more roads with minimum JKR-R3 standard will be constructed to improve transportation of agriculture produce. In addition, the programme will be expanded to connect resettlement areas to rural industrial areas and estates, particularly in Sabah and Sarawak, to enhance the mobility of the rural population to work in these areas. This will contribute towards reducing the development gap between urban and rural areas.

18.30 Road safety will be emphasised by improving the physical aspects of roads and inculcating good road ethics among users. Measures will continue to be undertaken to improve accident-prone spots on major roads as well as state and local authority roads. These include the straightening of roads, providing lanes for over-taking and improving road markings. Reinforcement works will be implemented on slope failures to prevent landslides. More pedestrian crossings will be provided, especially in the vicinity of schools. Road safety programmes will be intensified to reduce accidents including more stringent enforcement of traffic regulations.

Urban Transport

18.31 The development of urban transport will focus on encouraging a modal shift from private vehicles to public transport to alleviate traffic congestion. In the Klang Valley, the usage of public transport has declined from 34 per cent in 1985 to 16 per cent in 2003. In this regard, measures will be implemented to improve the public to private transport split and achieve a ratio of 30:70. These include the expansion of Light Rail Transit (LRT) and *Komuter* services, procurement of more rolling stock and buses, enhancement of stations as well as park and ride facilities. In addition, integrated transport terminals will be constructed as transit hubs to enable inter-city passengers to access the central areas of Kuala Lumpur by urban rail systems.

18.32 A commission will be established to regulate public transport systems in the Klang Valley. The commission will also be responsible for the planning, coordinating and licensing of all public transport modes in the Klang Valley.

18.33 Several urban roads will be constructed or upgraded to improve traffic flows and dispersal in major cities. These include the construction of ring roads and bypasses in Georgetown, Pulau Pinang; Seremban, Negeri Sembilan; and Johor Bahru, Johor. The SMART project in Kuala Lumpur is scheduled for completion in December 2006. The motorway section of the tunnel is expected to ease traffic congestion at the southern gateway to Kuala Lumpur.

18.34 The growing need for an efficient, affordable and safe transport system requires an orderly and integrated long-term transport policy. Towards this end, the national transport policy will outline the objectives and strategic directions of the transport sector, its relationship with other sectors as well as future development.

Rail Transport

18.35 During the Plan period, the development of rail transport will focus on increasing operational efficiency as well as promoting rail transport as a major mode of freight transportation and an efficient alternative inter-city transport for passengers. Towards this end, rail infrastructure will be upgraded and the communications system modernised. These include the track realignment and improvement works from Taiping to Padang Rengas, rehabilitation and strengthening of tracks and bridges as well as computerising the signalling systems. Spur lines will be constructed to provide dedicated freight services from industrial areas to major cities and ports. In addition, rolling stock will be refurbished and new ones procured. New stations will also be built to serve new growth areas as well as replace old ones. However, old stations, which have heritage value, will be restored.

18.36 Rail services in Sabah will be enhanced with the completion of the rehabilitation and upgrading programme of rail infrastructure, rolling stock as well as signalling and communications system from Tanjung Aru to Tenom. This programme will improve safety of the rail services as well as reduce travel time between the two destinations by half. It will also increase access to rural areas as well as support agriculture development and tourism along this corridor.

Ports

18.37 Efforts to enhance the performance and productivity of ports will be continued in view of the stiff competition from regional ports. Measures to be undertaken include promotions to attract more main line operators and forging strategic alliances with international ports as well as further develop ancillary services. To improve turnaround time at ports, additional gantry cranes and other operating equipment will be purchased and cargo storage facilities upgraded. Approach channels and port basins will be dredged to enable very large vessels to call as well as free trade zones developed to enhance port operations. Malaysian ports will continue to forge cooperation with international ports to enhance networking as well as attract more main line operators to call, particularly at Port Klang and PTP.

18.38 The use of information and communications technology (ICT) will be intensified and expanded to further improve the efficiency of ports. In this regard, electronic documentation systems will be extended to smaller ports and usage of ICT in port operations will also be increased such as e-billing and e-commerce.

18.39 Focus will continue to be given to improving navigational safety and reducing sea pollution. Measures to be undertaken include the upgrading and expansion of the navigational safety system as well as intensifying the monitoring of vessel movements. Disposal of wrecks as well as dredging works will also be undertaken. Surveillance on Malaysian territorial waters will be further strengthened when the *Agensi Penguatkuasa Maritim Malaysia* (APMM), which was established in 2005, increases its personnel and acquires additional ships.

18.40 River transport will continue to support the socio-economic and cultural development of Sarawak. In this regard, a study will be conducted to identify the potentials of developing inland water transport as an efficient alternative mode of transportation as well as promoting tourism.

Airports

18.41 Passenger traffic is forecasted to grow at an average rate of 5.8 per cent per annum to 54.5 million passengers in 2010, as shown in *Table 18-4*. The forecasted growth in air traffic will require the continued expansion of airport capacity and facilities. KLIA is expected to reach its capacity limit of 25 million passengers per annum (mppa) by 2008. Work to increase the capacity

to 45 mppa is scheduled to commence during the Plan period. Upgrading works on Kuching, Kota Kinabalu, Labuan and Kuala Terengganu airports will be completed by the end of the Plan period. Accessibility to the interior of Sarawak will also be improved with the expansion of existing airstrips.

TABLE 18-4
TRAFFIC AT MALAYSIAN AIRPORTS, 2000-2010

| <i>Traffic</i> | 2000 | 2005 | 2010 |
|---|----------------|------------------|------------------|
| Passengers ('000) | | | |
| Domestic | 19,838 | 25,639 | 30,418 |
| International | 13,066 | 17,189 | 24,086 |
| Total | 32,904 | 42,828 | 54,504 |
| Cargo (tonnes) | | | |
| Domestic | 122,098 | 197,783 | 268,086 |
| International | 653,045 | 809,031 | 1,213,415 |
| Total | 775,143 | 1,006,814 | 1,481,501 |
| Commercial Aircraft Movements (number) | | | |
| Domestic | 282,435 | 344,630 | 416,855 |
| International | 98,978 | 137,378 | 194,640 |
| Total | 381,413 | 482,008 | 611,495 |

Source: Malaysia Airports Holdings Berhad, Senai Airport Terminal Services Sdn. Bhd.

18.42 The expected increase in flight frequencies will require sophisticated air traffic control equipment. Communications and navigation equipment for air traffic control such as radar, flight processing and voice recording equipment as well as aeronautical information systems will be upgraded to enable more accurate and efficient handling of air traffic. Satellite equipment and digital communications will be used to further increase flight safety as well as conform to International Civil Aviation Organisation (ICAO) requirements. Compliance with these requirements is important to attract more airlines to fly into Malaysia. Continuous training of air traffic control personnel will also be emphasised to increase their competency.

18.43 In line with the trend towards liberalisation of air services, the Government will continue to negotiate for additional traffic rights under the liberal or open sky policy with key countries including member states of the European Union. More air services agreements will increase connectivity, which will facilitate trade and tourism. In this regard, ASEAN airlines will have unrestricted access to ASEAN capitals by 2008.

18.44 During the Plan period, Malaysia Airlines (MAS) will focus on building a more viable and sustainable network and increasing its market share in the regional market. This will involve increasing capacity and frequency as well as route rationalisation and establishing new destinations.

Water Supply

18.45 Efforts will be undertaken to conserve the quantity and improve the quality of existing water resources as well as identify potential water resources to be developed to ensure adequate and sustainable supply of water. Water demand for domestic and industrial use is expected to increase at an average rate of 6.6 per cent per annum to 16,270 mld in 2010, as shown in *Table 18-5*. The construction of new dams, water intakes, WTPs and distribution systems will be undertaken. With the expansion in capacity, the water supply coverage is expected to increase to 96.8 per cent, as shown in *Table 18-6*.

TABLE 18-5
**PRODUCTION CAPACITY AND QUANTITY OF WATER SUPPLY,
 2000-2010**
 (Mld)

| State | 2000 | | 2005 | | 2010 | |
|-----------------------|---------------------|--------------------------|---------------------|--------------------------|---------------------|--------------------------|
| | Production Capacity | Quantity of Water Supply | Production Capacity | Quantity of Water Supply | Production Capacity | Quantity of Water Supply |
| Johor | 1,285 | 1,158 | 1,436 | 1,325 | 1,747 | 1,489 |
| Kedah | 988 | 804 | 1,194 | 1,098 | 1,904 | 1,175 |
| Kelantan | 214 | 212 | 276 | 239 | 448 | 401 |
| Melaka | 386 | 324 | 405 | 398 | 661 | 572 |
| Negeri Sembilan | 528 | 490 | 702 | 620 | 722 | 665 |
| Pahang | 762 | 500 | 912 | 676 | 1,340 | 1,187 |
| Perak | 969 | 812 | 1,306 | 897 | 1,595 | 1,567 |
| Perlis | 91 | 84 | 102 | 92 | 225 | 123 |
| Pulau Pinang | 1,050 | 741 | 1,166 | 802 | 1,227 | 1,003 |
| Sabah | 718 | 706 | 761 | 740 | 1,201 | 1,004 |
| Sarawak ¹ | 918 | 602 | 948 | 745 | 1,166 | 1,050 |
| Selangor ² | 3,437 | 2,858 | 4,390 | 3,740 | 5,150 | 5,000 |
| Terengganu | 511 | 334 | 568 | 400 | 1,036 | 986 |
| Labuan | 60 | 30 | 60 | 34 | 60 | 49 |
| Malaysia | 11,917 | 9,655 | 14,226 | 11,806 | 18,482 | 16,271 |

Source: Water Supply Department, Ministry of Energy, Water and Communications, Malaysia

Notes: ¹ Includes partly treated water to rural areas.

² Includes Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya.

18.46 The efficiency of water supply will be improved through the NRW reduction programme. Measures to be undertaken include strict enforcement against water theft, pipe and meter replacements, Geographical Information System (GIS) mapping of distribution networks, rehabilitation of distribution systems and upgrading of existing WTPs as well as setting up operation centres. The national NRW rate is expected to decrease to 30 per cent in 2010, as shown in *Table 18-7*.

TABLE 18-6
URBAN AND RURAL WATER SUPPLY COVERAGE, 2000-2010
(% of population)

| State | 2000 | | | 2005 | | | 2010 | | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Urban | Rural | Total | Urban | Rural | Total | Urban | Rural | Total |
| Johor | 100.0 | 98.0 | 99.0 | 100.0 | 99.0 | 99.5 | 100.0 | 100.0 | 100.0 |
| Kedah | 100.0 | 97.0 | 98.0 | 100.0 | 99.0 | 99.5 | 100.0 | 100.0 | 100.0 |
| Kelantan | 63.0 | 48.0 | 53.0 | 80.0 | 60.0 | 70.0 | 85.0 | 70.0 | 78.0 |
| Melaka | 100.0 | 99.0 | 99.0 | 100.0 | 99.5 | 99.8 | 100.0 | 100.0 | 100.0 |
| Negeri Sembilan | 100.0 | 99.0 | 99.0 | 100.0 | 99.5 | 99.8 | 100.0 | 100.0 | 100.0 |
| Pahang | 98.0 | 89.0 | 93.0 | 99.0 | 92.0 | 95.5 | 100.0 | 100.0 | 100.0 |
| Perak | 100.0 | 99.0 | 99.0 | 100.0 | 99.5 | 99.8 | 100.0 | 100.0 | 100.0 |
| Perlis | 100.0 | 97.0 | 98.0 | 100.0 | 99.0 | 99.5 | 100.0 | 100.0 | 100.0 |
| Pulau Pinang | 100.0 | 99.0 | 99.0 | 100.0 | 99.5 | 99.8 | 100.0 | 100.0 | 100.0 |
| Sabah | 89.0 | 60.0 | 74.0 | 90.0 | 61.0 | 75.5 | 92.0 | 70.0 | 81.0 |
| Sarawak ¹ | 100.0 | 92.0 | 96.0 | 100.0 | 92.0 | 96.0 | 100.0 | 95.0 | 98.0 |
| Selangor ² | 100.0 | 98.0 | 99.0 | 100.0 | 99.0 | 99.5 | 100.0 | 99.5 | 100.0 |
| Terengganu | 84.0 | 78.0 | 81.0 | 100.0 | 92.0 | 96.0 | 100.0 | 98.0 | 99.0 |
| 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 | 98.0 | 92.0 | 95.0 | 98.0 | 95.2 | 96.8 |

Source: Water Supply Department, Ministry of Energy, Water and Communications, Malaysia

Notes: ¹ Includes partly treated water to rural areas.

² Includes Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya.

TABLE 18-7
NON-REVENUE WATER, 2000-2010

| State | 2000 | | 2005 | | 2010 | |
|-----------------------|-----------|--------------|-----------|--------------|-----------|--------------|
| | % | Mld | % | Mld | % | Mld |
| Johor | 32 | 371 | 36 | 477 | 35 | 521 |
| Kedah | 46 | 370 | 41 | 450 | 36 | 423 |
| Kelantan | 44 | 93 | 41 | 98 | 36 | 144 |
| Melaka | 31 | 100 | 33 | 131 | 30 | 172 |
| Negeri Sembilan | 45 | 221 | 50 | 310 | 45 | 299 |
| Pahang | 38 | 190 | 47 | 318 | 40 | 475 |
| Perak | 38 | 309 | 30 | 269 | 28 | 439 |
| Perlis | 44 | 37 | 37 | 38 | 35 | 43 |
| Pulau Pinang | 23 | 170 | 19 | 152 | 17 | 171 |
| Sabah | 72 | 508 | 55 | 407 | 45 | 452 |
| Sarawak ¹ | 30 | 181 | 25 | 186 | 23 | 242 |
| Selangor ² | 42 | 1,200 | 37 | 1,414 | 23 | 1,130 |
| Terengganu | 39 | 130 | 30 | 120 | 29 | 286 |
| Labuan | 32 | 45 | 20 | 32 | 20 | 45 |
| Malaysia | 40 | 3,925 | 38 | 4,402 | 30 | 4,842 |

Source: Water Supply Department, Ministry of Energy, Water and Communications, Malaysia

Notes: ¹ Includes partly treated water to rural areas.

² Includes Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya.

18.47 The development of inter-state and inter-basin water transfers will be given priority to address water shortage and uneven distribution of water resources in the country. The Inter-State Raw Water Transfer Project from Pahang to Selangor (Pahang-Selangor ISRWT), which will commence construction during the Plan period, is expected to address the increasing water demand in Selangor, Kuala Lumpur and Putrajaya. In addition to the NRW reduction programme, the protection of water resources, rainwater harvesting, the use of water from stormwater management ponds for non-potable purposes and development of groundwater will be promoted as interim measures to address the anticipated shortage of water in Selangor, Kuala Lumpur and Putrajaya.

18.48 To increase accessibility to potable water in rural areas, priority will be given to states with low supply coverage such as Sabah, Sarawak, Pahang, Kelantan, Terengganu and Kedah. Emphasis will be given to isolated areas such as villages of *Orang Asli* and other indigenous groups, small estates and rural schools. In this regard, groundwater abstraction, rainwater harvesting and gravity feed water supply systems will be implemented. The groundwater exploration and development programme will also be undertaken to supply water to other water shortage areas and for irrigation. The use of horizontal wells, underground dams and groundwater accumulated from padi fields will be promoted.

18.49 The Integrated Water Resources Management (IWRM) approach will be promoted to achieve sustainable water resources development. The National Study for the Effective Implementation of Integrated Water Resources Management in Malaysia, which commenced in 2005, is scheduled for completion during the Plan period. The study will formulate action plans and programmes to raise awareness on IWRM and achieve efficient and sustainable water resources management. IWRM will also involve the management of physical resources as well as reforming systems and practices to enable people to reap sustainable and equitable benefits from these resources.

18.50 Non-structural measures to improve water supply services will continue to be implemented including the promotion of wise use of water. More campaigns will be conducted to raise awareness on the importance of water conservation. Consumers will be encouraged to use water saving devices and appliances such as the dual-flushing system while state governments will be encouraged to amend their Water Enactments with respect to the installation of 6-litre toilet flushing systems in buildings. The Guidelines for Installing a Rainwater Collection and Utilisation System will be revised to improve the practical aspects of collecting rainwater. These measures are expected to reduce water demand and contribute towards environmental conservation.

18.51 The SPAN will be operationalised during the Plan period to regulate water supply and sewerage services in Peninsular Malaysia. Water service providers and owners of water service systems will be licensed by SPAN and

required to comply with its service standards and key performance indicators. In addition, the Water Asset Management Company (WAMCO) will be established to develop future water supply infrastructure.

Sewerage

18.52 Sewerage services will continue to be expanded to ensure the quality of effluent discharged into receiving water bodies comply with environmental standards and safeguard public health. Upgrading, rehabilitation and refurbishment of existing sewerage treatment systems, which are in the catchments of public water supply systems, will continue to be given priority. The programme on rationalisation of sewerage systems will be continued. Small and scattered STPs will be decommissioned after the construction of centralised STPs within their catchment areas to reduce the high cost of operation and maintenance.

18.53 Awareness campaigns on the importance of managing wastewater and sewerage systems for maintaining cleanliness and protecting the environment as well as water resources will be intensified. Research and development on reuse of sludge for industrial, agricultural and landscape purposes as well as wastewater reclamation for non-potable purposes will be undertaken. The provisions in the Sewerage Services Act, 1993, which mandates properties within 30 metres of centralised sewerage systems be connected to the system, will be fully enforced. The increase in connections to the centralised system will facilitate the improvement of public and environmental health as well as effectiveness of the centralised STPs.

Flood Mitigation

18.54 Continuous efforts will be undertaken to reduce flood hazards in the Klang Valley as well as other flood prone areas throughout the country with the implementation of both structural measures such as the construction of flood retention ponds, river improvement works and flood diversions as well as non-structural measures such as landuse controls and integrated flood forecasting, warning and response systems. New flood mitigation works will be undertaken for Kota Bharu and other selected areas along Sungai Kelantan in Kelantan. Floodplain management and the implementation of the *Manual Saliran Mesra Alam* (MSMA) for Malaysia, a controlling water at source approach that also addresses erosion and siltation problems, will be extended to new development areas throughout the country. These measures will contribute to the reduction of flood losses and improvement of river water quality.

Export of Expertise

18.55 Efforts will be intensified to facilitate the private sector to export local expertise, particularly in the construction sector. Greater coordination will be

undertaken among various agencies such as the Construction Industry Development Board Malaysia, Professional Services Development Corporation and ministries in exploring new markets in the Middle East and Eastern Europe, which are rapidly expanding their infrastructure facilities.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

18.56 Infrastructure and utilities development will be undertaken through the coordinated efforts of ministries and agencies. Road development will be undertaken by the Ministry of Works. Transport-related projects including road safety will be undertaken by the Ministry of Transport. The Ministry of Energy, Water and Communications will spearhead water supply and sewerage services development while the Ministry of Rural and Regional Development will undertake the rural roads and BALB programmes. The Ministry of Natural Resources and Environment will oversee the implementation of flood mitigation projects. A total of RM46.8 billion will be allocated to develop the respective subsectors, as shown in *Table 18-8*.

TABLE 18-8
**DEVELOPMENT EXPENDITURE AND ALLOCATION FOR
INFRASTRUCTURE AND UTILITIES, 2001-2010**
(RM million)

| <i>Sector</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|--------------------------|----------------------------|---------------------------|
| Transport | 30,936.5 | 30,304.4 |
| Roads | 18,451.4 | 17,303.1 |
| Urban Transport | 706.6 | 1,565.5 |
| Rail | 5,270.1 | 3,634.9 |
| Ports | 2,443.0 | 1,290.0 |
| Airports | 1,779.3 | 2,868.5 |
| Rural Roads ¹ | 2,286.1 | 3,642.4 |
| Utilities | 7,752.7 | 16,540.5 |
| Water Supply | 3,882.9 | 8,203.6 |
| Sewerage | 1,347.9 | 3,132.8 |
| Rural Water | 733.9 | 1,206.5 |
| Flood Mitigation | 1,788.0 | 3,997.6 |
| Total | 38,689.2 | 46,844.9 |

Source: Economic Planning Unit

Notes: ¹ Includes village roads.

V. CONCLUSION

18.57 During the Eighth Plan period, the capacity of the infrastructure and utilities networks was expanded to meet the increasing demand of users as well as stimulate growth through its linkages and spillover benefits. The public transport system in the Klang Valley was restructured through the implementation of the INSPAK programme. Infrastructure and utilities development during the Ninth Plan period will emphasise the provision of more facilities to rural areas as well as improving delivery of services to support economic activities and improve the quality of life. Road safety will be emphasised by improving the physical aspects of roads and inculcating good road ethics among users. Public transport facilities and services will be upgraded and further integrated to encourage a modal shift from private vehicle usage to public transport. Efficiency of water supply services will be improved with the establishment of SPAN as well as the implementation of the NRW reduction programme. Measures will also be undertaken to increase the competency and capability of service providers to ensure efficient and optimal utilisation of infrastructure facilities.



SUSTAINABLE ENERGY DEVELOPMENT

19

I. INTRODUCTION

19.01 During the Eighth Plan period, the development of the energy sector was focused on ensuring a secure, reliable and cost-effective supply of energy, aimed at enhancing the competitiveness and resilience of the economy. Efficient utilisation of energy resources as well as the use of alternative fuels, particularly renewable energy, was encouraged. Energy-related strategies were streamlined to moderate the impact of escalating oil prices on the economy.

19.02 In the Ninth Plan period, the energy sector will further enhance its role as an enabler towards strengthening economic growth. In this regard, the sources of fuel will be diversified through greater utilisation of renewable energy. A market-based approach will be promoted to ensure efficient allocation of resources. Emphasis will be given to further reduce the dependency on petroleum products by increasing the use of alternative fuels. In ensuring efficient utilisation of energy resources and minimisation of wastage, the focus will be on energy efficiency initiatives, particularly in the industrial, transport and commercial sectors as well as in government buildings. Rural electricity coverage, especially in Sabah and Sarawak, will also be improved. A more integrated planning approach will be undertaken to enhance sustainable development of the energy sector.

II. PROGRESS, 2001-2005

19.03 The energy sector performed favourably in improving energy supply security to meet the increased demand. The long-term sustainability of the energy sector was enhanced with the implementation of measures on efficient utilisation of resources and the adoption of demand-side management initiatives.

Energy Demand

19.04 During the Plan period, final commercial energy demand increased from 1,244 petajoules (PJ) to 1,632 PJ, as shown in *Table 19-1*. The elasticity of energy demand to gross domestic product (GDP) was 1.3. There was a marginal increase in the energy intensity¹ from 5.9 gigajoules (GJ) in 2000 to 6.2 GJ in 2005. Although petroleum products was the main energy consumed, its share to total demand continued to decline while that of natural gas increased, in line with the Fuel Diversification Policy.

TABLE 19-1
FINAL COMMERCIAL ENERGY DEMAND¹ BY SOURCE,
2000-2010

| Source | Petajoules ² | | | % of Total | | | Average Annual Growth Rate (%) | |
|-------------------------------------|-------------------------|----------------|----------------|--------------|--------------|--------------|--------------------------------|------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | 9MP |
| Petroleum Products | 820.0 | 1,023.1 | 1,372.9 | 65.9 | 62.7 | 61.9 | 4.5 | 6.1 |
| Natural Gas ³ | 161.8 | 246.6 | 350.0 | 13.0 | 15.1 | 15.8 | 8.8 | 7.3 |
| Electricity | 220.4 | 310.0 | 420.0 | 17.7 | 19.0 | 18.9 | 7.1 | 6.3 |
| Coal and Coke | 41.5 | 52.0 | 75.0 | 3.4 | 3.2 | 3.4 | 4.6 | 7.6 |
| Total | 1,243.7 | 1,631.7 | 2,217.9 | 100.0 | 100.0 | 100.0 | 5.6 | 6.3 |
| Per Capita Consumption (gigajoules) | 52.9 | 62.2 | 76.5 | | | | 3.3 | 4.2 |

Source: Ministry of Energy, Water and Communications and Economic Planning Unit

Notes: ¹ Refers to the quantity of commercial energy delivered to final consumers but excludes gas, coal and fuel oil used in electricity generation.

² Joule is the unit of energy to establish the equivalent physical heat content of each energy form. One megajoule = 10⁶ joules, one gigajoule (GJ) = 10⁹ joules and one petajoule (PJ) = 10¹⁵ joules. One PJ = 0.0239 million tonnes of oil equivalent (mtoe). One toe = 7.6 barrels.

³ Includes natural gas used as fuel and feedstock consumed by the non-electricity sector.

19.05 The transport sector was the largest consumer of energy, accounting for 40.5 per cent of the total final commercial energy demand in 2005. This was followed by the industrial sector at 38.6 per cent and the residential and commercial sector at 13.1 per cent, as shown in *Table 19-2*.

¹ Energy intensity is the ratio of total domestic primary energy consumption or final energy consumption to gross domestic product or physical output.

TABLE 19-2

**FINAL COMMERCIAL ENERGY DEMAND BY SECTOR,
2000-2010**

| Source | Petajoules | | | % of Total | | | Average Annual Growth Rate (%) | |
|----------------------------|----------------|----------------|----------------|--------------|--------------|--------------|--------------------------------|------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | 9MP |
| Industrial ¹ | 477.6 | 630.7 | 859.9 | 38.4 | 38.6 | 38.8 | 5.7 | 6.4 |
| Transport | 505.5 | 661.3 | 911.7 | 40.6 | 40.5 | 41.1 | 5.5 | 6.6 |
| Residential and Commercial | 162.0 | 213.0 | 284.9 | 13.0 | 13.1 | 12.8 | 5.6 | 6.0 |
| Non-Energy ² | 94.2 | 118.7 | 144.7 | 7.6 | 7.3 | 6.5 | 4.7 | 4.0 |
| Agriculture and Forestry | 4.4 | 8.0 | 16.7 | 0.4 | 0.5 | 0.8 | 12.9 | 15.9 |
| Total | 1,243.7 | 1,631.7 | 2,217.9 | 100.0 | 100.0 | 100.0 | 5.6 | 6.3 |

Source: Ministry of Energy, Water and Communications and Economic Planning Unit

Notes: ¹ Includes manufacturing, construction and mining.

² Includes natural gas, bitumen, asphalt, lubricants, industrial feedstock and grease.

Energy Supply

19.06 Total supply of energy increased from 2,003 PJ in 2000 to 2,526 PJ in 2005, as shown in *Table 19-3*. The main sources of supply were crude oil and petroleum products as well as natural gas. The share of crude oil and petroleum products declined while that of coal and coke increased, indicating the reduced dependence on a single source of supply.

TABLE 19-3

**PRIMARY COMMERCIAL ENERGY SUPPLY¹ BY SOURCE,
2000-2010**

| Source | Petajoules | | | % of Total | | | Average Annual Growth Rate (%) | |
|----------------------------------|----------------|----------------|----------------|--------------|--------------|--------------|--------------------------------|------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | 9MP |
| Crude Oil and Petroleum Products | 988.1 | 1,181.2 | 1,400.0 | 49.3 | 46.8 | 44.7 | 3.6 | 3.5 |
| Natural Gas ² | 845.6 | 1,043.9 | 1,300.0 | 42.2 | 41.3 | 41.6 | 4.3 | 4.5 |
| Coal and Coke | 104.1 | 230.0 | 350.0 | 5.2 | 9.1 | 11.2 | 17.2 | 8.8 |
| Hydro | 65.3 | 71.0 | 77.7 | 3.3 | 2.8 | 2.5 | 1.7 | 1.8 |
| Total | 2,003.1 | 2,526.1 | 3,127.7 | 100.0 | 100.0 | 100.0 | 4.7 | 4.4 |

Source: Ministry of Energy, Water and Communications and Economic Planning Unit

Notes: ¹ Refers to the supply of commercial energy that has not undergone a transformation process to produce energy.

² Excludes flared gas, reinjected gas and exports of liquefied natural gas.

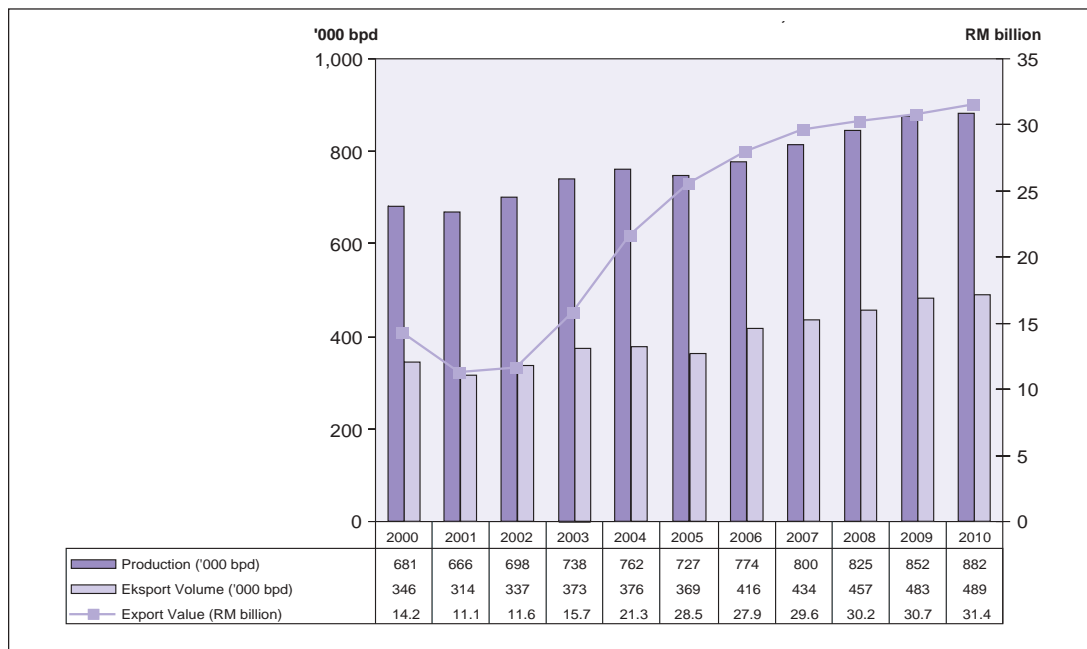
Crude Oil

19.07 Crude oil and condensate reserves increased from 4.5 billion barrels in 2000 to 5.3 billion barrels in 2005. The average production of domestic crude oil and condensate increased from 681,000 barrels per day (bpd) in 2000 to 727,000 bpd in 2005. Based on this production level, which is in line with the National Depletion Policy, the reserves are projected to last for 19 years. Although the total refining capacity declined from 591,000 bpd to 546,500 bpd, it was sufficient to meet the demand for petroleum products.

19.08 The export of crude oil and condensate increased to 369,000 bpd with a value of RM28.5 billion in 2005, as shown in *Chart 19-1*. Major export destinations were Australia, Thailand, India and the Republic of Korea.

CHART 19-1

CRUDE OIL AND CONDENSATE¹ PRODUCTION, EXPORT VOLUME AND VALUE, 2000-2010



Source: *Petroleum Nasional Berhad* and Economic Planning Unit

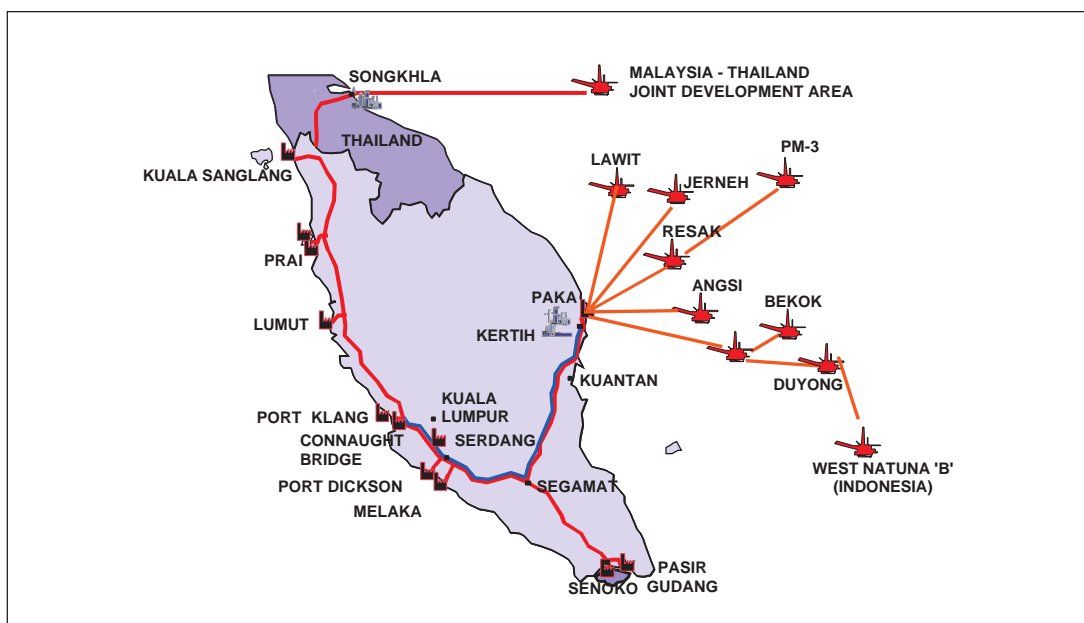
Notes: ¹ A crude oil component derived from natural gas streams, comprising pentane and heavier hydrocarbons.

Natural Gas

19.09 The discovery of new gas fields contributed to the increase in reserves from 84.3 trillion cubic feet (tcf) in 2000 to 85.2 tcf in 2005 and is expected to last for 33 years. The average natural gas production increased from 4,367 million standard cubic feet per day (mmscfd) to 5,800 mmscfd. Natural gas was also imported from West Natuna, Indonesia beginning 2002 and the Malaysia-Thailand Joint Development Area (MTJDA) in 2005, as shown in *Map 19-1*.

MAP 19-1

GAS SUPPLY NETWORK, 2005-2010



Source: *Petroleum Nasional Berhad*

19.10 The average demand for natural gas in Peninsular Malaysia increased from 1,643 mmscfd in 2000 to 2,141 mmscfd in 2005. The power sector continued to be the major consumer accounting for 66 per cent, followed by the non-power sector at 28 per cent. The remaining 6.0 per cent was exported to Singapore. To meet the increasing demand from the non-power sector, the Natural Gas Distribution System (NGDS) was expanded from 455 kilometres to 1,365 kilometres.

19.11 Exports of liquefied natural gas (LNG) increased from 15.4 million tonnes in 2000 to 21.9 million tonnes in 2005, mainly to Japan, the Republic of Korea and Chinese Taipei. In 2005, total export earnings from LNG amounted to RM20.8 billion compared with RM11.4 billion in 2000.

Electricity

19.12 In line with the strategy to ensure security and reliability of electricity supply as well as reduce the high dependence on gas, the sources of fuel for power generation was further diversified with the increased use of coal. In this regard, two coal-based plants were commissioned by *Tenaga Nasional Berhad* (TNB) while the Sejingkat plant was expanded by *Syarikat SESCO Berhad* (SESCO). During the Plan period, a total of 6,420 megawatts (MW) of new generation capacity was installed.

19.13 In consonance with the growth of the economy, peak demand increased from 10,657 MW in 2000 to 13,779 MW in 2005, as shown in *Table 19-4*. With the expansion in the installed capacity from 14,291 MW to 19,217 MW, the reserve margin increased from 34.1 per cent to 39.5 per cent, which was more than adequate to meet demand. To enable the sharing of costs for maintaining the reserve margin, the concept of demand risk sharing was introduced in power purchase agreements (PPAs).

TABLE 19-4
**INSTALLED CAPACITY, PEAK DEMAND AND
RESERVE MARGIN, 2000-2010**

| Year | Generation By System ¹ | Accumulated Installed Capacity (MW) | Peak Demand ² (MW) | Reserve Margin ³ (%) |
|------|-----------------------------------|-------------------------------------|-------------------------------|---------------------------------|
| 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 |
| 2005 | TNB | 17,622 | 12,493 | 41.1 |
| | SESB | 639 | 543 | 17.7 |
| | SESCO | 956 | 743 | 28.7 |
| | Total | 19,217 | 13,779 | 39.5 |
| 2010 | TNB | 22,802 | 18,187 | 25.4 |
| | SESB | 1,100 | 802 | 37.2 |
| | SESCO | 1,356 ⁴ | 1,098 | 23.5 |
| | Total | 25,258 | 20,087 | 25.7 |

Source: *Tenaga Nasional Berhad, Sabah Electricity Sdn. Bhd. and Syarikat SESCO Berhad*

Notes: ¹ System refers to utilities and the respective IPPs.

² Peak demand is the maximum power demand registered by the system in a stated period of time.

³ Reserve margin equals accumulated capacity minus peak demand, all of which divided by peak demand and multiplied by 100.

⁴ Including supply from the Bakun Hydroelectric Project.

19.14 Efforts were undertaken to reduce the high dependence on natural gas in the generation mix by increasing the use of coal. As a result, the share of coal to the total generation mix increased from 8.8 per cent in 2000 to 21.8 per cent in 2005 while that of natural gas decreased from 77.0 per cent to 70.2 per cent, as shown in *Table 19-5*. A burden-sharing concept was implemented in the sharing of cost between *Petroleum Nasional Berhad* (PETRONAS), TNB and independent power producers (IPPs) for the use of alternative fuels during the gas supply constraint in 2002 and 2003.

TABLE 19-5

FUEL MIX IN ELECTRICITY GENERATION, 2000-2010

| | Year | Oil | Coal | Gas | Hydro | Others | Total (GWh) |
|----------|------|------------|------|------|-------|--------|----------------|
| | | % of Total | | | | | |
| Malaysia | 2000 | 4.2 | 8.8 | 77.0 | 10.0 | 0.0 | 69,280 |
| | 2005 | 2.2 | 21.8 | 70.2 | 5.5 | 0.3 | 94,299 |
| | 2010 | 0.2 | 36.5 | 55.9 | 5.6 | 1.8 | 137,909 |
| TNB | 2000 | 2.3 | 8.7 | 79.6 | 9.4 | 0.0 | 63,634 |
| | 2005 | 0.5 | 22.5 | 71.9 | 4.9 | 0.2 | 86,242 |
| | 2010 | 0.1 | 38.1 | 56.8 | 3.4 | 1.6 | 126,718 |
| SESB | 2000 | 47.3 | - | 31.4 | 21.3 | - | 2,299 |
| | 2005 | 42.6 | - | 43.0 | 13.6 | 0.8 | 3,447 |
| | 2010 | 0.5 | 18.5 | 47.2 | 26.5 | 7.3 | 4,808 |
| SESCO | 2000 | 11.2 | 15.1 | 59.4 | 14.3 | - | 3,347 |
| | 2005 | 4.7 | 25.0 | 58.9 | 11.4 | - | 4,610 |
| | 2010 | 3.0 | 21.2 | 44.1 | 31.7 | - | 6,383 |

Source: *Tenaga Nasional Berhad, Sabah Electricity Sdn. Bhd. and Syarikat SESCO Berhad*

19.15 The electricity transmission system was further expanded with the completion of new transmission projects to link new generation plants to the main grids as well as provide connections to new industrial and commercial areas. These included the Manjung-Air Tawar line in Peninsular Malaysia as well as the East Coast Grid and the Northern Grid in Sabah. The distribution network was also expanded to provide greater access and enhance the quality of electricity supply to consumers.

19.16 During the Plan period, the supply of electricity to rural areas was further improved, as shown in *Table 19-6*. The implementation of rural electrification projects benefited 59,960 housing units, mainly in Sabah and Sarawak.

TABLE 19-6

**RURAL ELECTRIFICATION COVERAGE¹ BY REGION,
2000-2010
(%)**

| <i>Region</i> | <i>2000²</i> | <i>2005</i> | <i>2010</i> |
|---------------------|-------------------------|-------------|-------------|
| Peninsular Malaysia | 97.5 | 98.6 | 98.8 |
| Sabah | 67.1 | 72.8 | 80.6 |
| Sarawak | 66.9 | 80.8 | 89.6 |
| Malaysia | 89.5 | 92.9 | 95.1 |

Source: Economic Planning Unit and Ministry of Rural and Regional Development.

Notes: ¹ This refers to rural housing units served as a percentage of total rural housing units.

² This refers to Census 2000 data excluding housing units served with private individual generators.

19.17 There was an overall improvement in the productivity and efficiency of electricity supply services. TNB and SESCO recorded improved performance in terms of units sold per employee and reduction in the number of interruption incidences, as shown in *Table 19-7*.

TABLE 19-7

**PERFORMANCE INDICATORS OF THE ELECTRICITY
SUPPLY SYSTEMS¹, 2000 AND 2005**

| <i>Indicator</i> | <i>2000</i> | | | <i>2005</i> | | |
|---|-------------|-------------|--------------|-------------|-------------|--------------|
| | <i>TNB</i> | <i>SESB</i> | <i>SESCO</i> | <i>TNB</i> | <i>SESB</i> | <i>SESCO</i> |
| System Losses ² (%) | 10.3 | 16.8 | 12.6 | 10.5 | 19.5 | 14.5 |
| Units Sold per Employee ³ (GWh) | 2.43 | 0.94 | 1.40 | 3.05 | 1.29 | 1.93 |
| Interruption Incidences (number) | 46,896 | 14,543 | 8,145 | 23,213 | 20,385 | 4,489 |
| SAIDI ⁴ (minute/customer/year) | 351 | 2,791 | 860 | 147 | 4,109 | 310 |

Source: Tenaga Nasional Berhad, Sabah Electricity Sdn. Bhd. and Syarikat SESCO Berhad

Notes: ¹ This comprises utilities only.

² This refers to losses in generation, transmission and distribution stages as well as own-use.

³ This refers to the total unit of electricity sold divided by the total number of employees.

⁴ System Average Interruption Duration Index (SAIDI).

Renewable Energy

19.18 Efforts were continued to promote the utilisation of renewable energy (RE) resources. Under the Small Renewable Energy Power Programme (SREP), two projects with a combined grid connected capacity of 12 MW were implemented. A roadmap for the development of solar, hydrogen and fuel cells was formulated during the Plan period. To promote the wider application and utilisation of photovoltaic technology in buildings, the Malaysia Building Integrated Photovoltaic Technology Application Project (MBIPV) was also launched.

Energy Efficiency

19.19 To promote the efficient use of energy, focus was given to the design and installation of energy efficient features in government buildings such as in the Ministry of Energy, Water and Communications. In this regard, new guidelines for energy efficient designs for government buildings such as clinics and schools were formulated. Energy audits were also undertaken in eight energy-intensive industries under the Malaysian Industrial Energy Efficiency Improvement Project (MIEEIP) to identify potential energy savings.

Energy Prices

19.20 The international price of crude oil was volatile, increasing from an average of US\$30.18 per barrel in 2000 to US\$55.70 in 2005. In the domestic market, the prices of selected petroleum products such as gasoline, diesel and liquefied petroleum gas (LPG) were moderated through the Automatic Pricing Mechanism (APM). However, the prices of petroleum products were periodically reviewed to reflect the cost of supply while remaining affordable to consumers. For gas, the Government continued to set the downstream prices to mitigate the effects of increasing energy prices.

Participation in Energy-Related Industries and Services

19.21 In line with efforts to develop new sources of growth in the energy sector, Malaysian companies continued to venture in energy-related industries and services abroad. These included RM29 billion investments by PETRONAS in 35 countries both in upstream and downstream activities. TNB also invested in the development of a power plant in Pakistan and extraction of coal in Kalimantan, Indonesia.

III. PROSPECTS, 2006-2010

19.22 For the Ninth Plan period, the energy sector will continue to focus on sustainable development to enable it to support economic growth, enhance competitiveness as well as contribute towards achieving balanced development. In line with the thrust of the National Mission to improve the standard and sustainability of the quality of life, emphasis will be directed towards efficient production and utilisation while meeting environmental objectives. Towards this end, the strategies of the energy sector are as follows:

- ❑ *ensuring sufficiency, security, reliability, quality and cost-effectiveness of energy supply;*
- ❑ *improving the productivity and efficiency of energy suppliers and promoting market-based approach in determining energy prices;*
- ❑ *reducing the high dependence on petroleum products by increasing the use of alternative fuels;*
- ❑ *promoting greater use of renewable energy for power generation and by industries;*
- ❑ *intensifying energy efficiency initiatives in the industrial, transport and commercial sectors as well as in government buildings;*
- ❑ *expanding rural electricity coverage, particularly in Sabah and Sarawak; and*
- ❑ *developing new sources of growth in the energy sector including participation of local companies in energy-related industries and services abroad.*

Energy Demand

19.23 The overall demand is expected to increase at an average rate of 6.3 per cent per annum during the Ninth Plan period to 2,218 PJ in 2010, as shown in *Table 19-1*, due to the higher GDP growth expected for the period. The energy intensity of the economy is projected to increase to 6.3 GJ in 2010. With the expected improvement in the quality of life of the population, there will be an increase in energy consumption due to, among others, the increased use of electrical appliances and more frequent travels. In this regard, per capita consumption of energy is expected to increase from 62.2 GJ in 2005 to 76.5 GJ in 2010. However, the elasticity of energy demand to GDP is projected

to decrease to 1.0. Efforts to benchmark energy consumption with that of other countries such as Denmark, Germany and the Republic of Korea will be undertaken to improve energy efficiency. In addition, initiatives will be intensified to ensure efficient energy utilisation and minimisation of wastage, thus contributing towards the sustainable development of the energy sector. In line with the Fuel Diversification Policy, the share of petroleum products to total commercial energy demand is expected to decline to 61.9 per cent while that of natural gas is projected to increase to 15.8 per cent in 2010.

19.24 The transport and industrial sectors will continue to be the major energy consumers during the Plan period constituting 41.1 per cent and 38.8 per cent of the total energy demand in 2010, respectively, as shown in *Table 19-2*. The growth in demand by the transport sector, among others, is due to the increased requirement for transportation services by the manufacturing and agriculture sectors as well as the tourism industry. For the industrial sector, energy-intensive industries such as chemical, cement and ceramic, iron and steel as well as food processing are expected to remain the major consumers.

Energy Supply

19.25 The security, reliability, quality and cost-effective supply of energy will be enhanced through an optimal energy mix predominantly from domestic sources. To meet the energy requirements of the country, total supply is projected to reach 3,128 PJ in 2010, of which the share of crude oil and petroleum products is expected to decline to 44.7 per cent while coal will increase to 11.2 per cent. The price of crude oil in the international markets is expected to remain high in the Plan period. In this regard, efforts will continue to be undertaken to reduce dependence on petroleum products while utilising them efficiently. In addition, efforts will be intensified to increase the supply and use of alternative fuels including RE. By 2010, RE is expected to contribute 350 MW to total energy supply.

Crude Oil

19.26 To ensure a sustainable supply of oil and gas, appraisal wells will continue to be drilled in small oil fields offshore as well as deepwater areas, especially in Sabah and Sarawak. Continuous efforts will also be undertaken to attract international oil companies to invest in exploration activities, particularly in deepwater of more than 200 metres and ultra-deepwater of more than one kilometre to increase domestic petroleum reserves. In addition, collaboration with production sharing contractors will continue to be undertaken to identify opportunities to maximise reserves recovery. During the Plan period, the crude oil production level is expected to average 695,000 bpd.

19.27 PETRONAS will continue to review its international upstream and downstream operations to meet the challenges in the global oil market. Efforts will also be undertaken to secure more reserves and increase production from its offshore investments as well as to expand its downstream operations.

Natural Gas

19.28 Efforts will be intensified to develop domestic resources as well as secure supplies from abroad to sustain the long-term supply of natural gas. To meet the increasing domestic demand in Peninsular Malaysia, natural gas supply from West Natuna, Indonesia and the MTJDA is expected to increase to 250 mmscfd and 390 mmscfd, respectively, constituting about 20 per cent of the total gas supply in 2010.

19.29 The consumption of natural gas in Peninsular Malaysia is expected to increase at an average rate of 4.3 per cent per annum to reach 2,647 mmscfd in 2010. The power sector is expected to remain the major user of natural gas with consumption expected to reach 1,653 mmscfd in 2010. In the non-power sector, gas consumption by industries is expected to increase to 779 mmscfd due to the competitive gas prices as well as the development of new industrial sites and expansion of existing industries.

19.30 The NGDS network will be further expanded by about 640 kilometres to 2,005 kilometres by the end of the Plan period with an investment of RM640 million. The average annual growth of gas supplied by the NGDS network is projected to increase at 8.2 per cent per annum to reach 267 mmscfd by 2010.

19.31 To promote greater utilisation of natural gas for vehicles (NGV) in the transportation sector, an additional 54 NGV stations will be constructed to total 94 by the end of the Plan period. Measures will be undertaken to promote greater utilisation of NGV, including the development of dedicated NGV stations, financing packages for NGV conversion as well as intensification of R&D programmes. In addition, incentives will be reviewed to encourage transport operators to convert their vehicles to NGV.

19.32 A total of RM43.8 billion is expected to be invested by PETRONAS during the Plan period. Of this, RM13.1 billion or 30.0 per cent will be expended on oil and gas exploration as well as development and production activities to enhance the long-term supply of oil and gas. The balance of RM30.7 billion will be utilised to upgrade the oil and gas supply infrastructure, increase the number of service stations as well as expand the petrochemical industry.

Coal

19.33 The consumption of coal for power generation and industrial use is expected to reach 19.0 million tonnes and 2.2 million tonnes, respectively, in 2010, due mainly to the commissioning of two new coal-based generation plants in Peninsular Malaysia. Efforts will be continued to enhance the security of supply by exploring the potential of developing local sources, particularly in Sarawak as well as securing long-term supplies from abroad.

Electricity

19.34 In line with the positive outlook of the national economy, peak demand for electricity is expected to grow at an average rate of 7.8 per cent per annum to reach 20,087 MW in 2010, as shown in *Table 19-4*. By the end of the Plan period, the accumulated installed capacity is expected to increase to 25,258 MW. As a result, the overall reserve margin is expected to decline to a more efficient level of 25.7 per cent. The reserve margins for Peninsular Malaysia at 25.4 per cent, Sabah 37.2 per cent and Sarawak 23.5 per cent are adequate to meet the expected increase in demand.

19.35 In an effort to gradually reduce the reserve margin to 20 per cent in the long term, the implementation of approved projects in Peninsular Malaysia will be deferred and new plant-up will only be implemented in the next Plan period. In addition, the concept of demand risk sharing will be extended to new PPAs to enable sharing of costs for maintaining the reserve margin between the utility companies and IPPs. In addition, a review will be undertaken on the modes of privatization and fuel pass-through arrangement for future PPAs to ensure optimal utilisation of resources, allocation of risk between the utility companies and IPPs as well as minimisation of cost to the utility companies. These initiatives are expected to further enhance the efficiency and viability of both the utility companies and IPPs and consequently improve the security, reliability, quality and cost-effectiveness of supply to customers. In this regard, efforts will also be undertaken to benchmark the performance of utility companies with that of other countries.

19.36 Two new coal-based IPP plants at Tanjung Bin, Johor and Jimah, Negeri Sembilan with a combined installed capacity of 3,500 MW will be commissioned during the Plan period. These plants will utilise electrostatic precipitators and flue gas de-sulphurisation process to meet environmental standards. As part of efforts to promote the optimal utilisation of municipal waste for electricity generation, a pilot project on waste-to-energy will be implemented in Peninsular Malaysia.

19.37 In Sabah, a new gas-based plant with a capacity of 100 MW will be commissioned while a 120 MW open-cycle plant will be converted to a 190 MW combined-cycle plant in 2006. In addition, a gas-based plant with a capacity of 190 MW will also be commissioned in 2008. To meet demand as well as improve the reliability of supply in the east coast, a 300 MW coal-based plant will be constructed for operation in 2009/2010. In Sarawak, the generation capacity will also be expanded with the commissioning of new power plants, including the 100 MW Bintulu gas-based plant in 2006. The Bakun Hydroelectric project with an installed capacity of 2,400 MW will be commissioned in 2009/2010.

19.38 To achieve greater system security, a planning horizon of 10 to 15 years will be considered to facilitate the long lead time required to develop coal-based and hydroelectric plants. To enhance efficient utilisation of resources, future power generation projects will be considered through a bidding process. This will also enable the Government to pre-determine the capacity, fuel type and location of generation projects based on system requirement. Other sources of supply, particularly from hydropower, will be explored to further enhance the security of electricity supply, minimise generation cost as well as meet environmental objectives.

19.39 During the Plan period, the fuel mix for power generation will mainly comprise coal and natural gas. With the operation of the Tanjung Bin and Jimah coal-based plants, the share of coal in the generation mix will increase to 36.5 per cent in 2010, as shown in *Table 19-5*. The share of gas in the fuel mix is expected to decline to 55.9 per cent while oil and hydro below 10.0 per cent.

19.40 The performance of the transmission system will continue to be enhanced to ensure security and reliability of electricity supply. In this regard, operation and maintenance of the system will be improved. In addition, a transmission system that transcends national boundaries such as the Peninsular Malaysia-Sumatera Interconnection Grid will be explored to facilitate the implementation of the Trans-ASEAN Power Grid project (TAPG).

19.41 In Peninsular Malaysia, initiatives will be undertaken to increase reliability and security of supply in major load centres. These include new transmission lines for the Central Area Reinforcement in the Klang Valley, the Northern Area Reinforcement from Manjung in Perak to Pulau Pinang and the South-Central Reinforcement from Sepang to Puchong. As a result, the transmission network in Peninsular Malaysia is expected to increase to 20,860 circuit kilometres (cct-km) in 2010. For areas where uninterrupted supply of electricity is critical,

an islanding scheme will be implemented to enhance supply security. During the Plan period, the scheme will cover Putrajaya and Cyberjaya.

19.42 The East-West Interconnection Grid in Sabah will be completed in 2006. The integration of this grid with the East Coast Grid and Northern Grid will form a new transmission system backbone that will enable the transfer of electricity supply between the west and east coast as well as contribute towards system security and stability. As a result, the total length of the Sabah Grid will be 2,670 cct-km. In Sarawak, the SESCO Grid will be expanded to cater for additional generation capacity. New transmission lines will also be constructed to supply electricity from the Bakun project to Kemena and Balingian. By the end of the Plan period, the total length of transmission lines in Sarawak is expected to reach 1,620 cct-km.

19.43 During the Plan period, the distribution network in Peninsular Malaysia will continue to be expanded in line with the growth of new industrial estates, townships and residential areas. The distribution network in Sabah and Sarawak will also be upgraded to extend supply to outlying areas as well as enhance reliability. By the end of the Plan period, the distribution network in Peninsular Malaysia will reach 424,190 cct-km, Sabah 9,120 cct-km and Sarawak 25,950 cct-km.

19.44 The implementation of the rural electrification programme will be intensified to improve the quality of life of rural communities, especially in Sabah and Sarawak. Towards this end, about 54,680 housing units will be supplied with electricity using technologies such as solar hybrid and micro-hydro systems. A larger proportion of the Electricity Supply Industry Trust Account will be utilised in the implementation of these programmes. By the end of the Plan period, rural electricity coverage in Sabah and Sarawak is expected to increase to 80.6 per cent and 89.6 per cent, respectively.

19.45 During the Plan period, the productivity and efficiency of the electricity supply system will be further improved with the expansion of the Supervisory Control and Data Acquisition (SCADA) system as well as enhancement of the quality of power supply. Efforts will also be undertaken to improve efficiency in handling customer complaints such as reducing response time in attending to enquiries and improving the delivery of services. In addition, the customer relationship building programme will be expanded to improve quality of supply to major customers, particularly in the industrial sector. The performance of the electricity supply system will also be benchmarked against that of other countries.

Renewable Energy

19.46 The development and utilisation of RE will be further intensified in the Plan period. Towards this end, efforts will be continued to foster a more conducive environment to support the implementation of SREP projects. In this regard, the review of the terms and conditions of the Renewable Energy Power Purchase Agreement (REPPA) as well as issues related to project viability such as long-term fuel supply security and financing is expected to be completed. The Clean Development Mechanism (CDM) will also be utilised to provide support for the implementation of SREP projects. RE projects utilising municipal waste will also be promoted. By 2010, about 300 MW is expected to be generated and connected to the TNB Grid in Peninsular Malaysia and 50 MW to the *Sabah Electricity Sdn. Bhd.* (SESB) Grid in Sabah. Other RE sources such as stand-alone systems of solar hybrid will be developed while biomass based co-generation will be expanded in the Plan period.

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19.47 New sources of energy such as solar and wind will be developed with emphasis on utilising cost-effective technology as well as strengthening capacity building. In this regard, efforts will be undertaken to coordinate R&D activities of the various energy-related research centres. In addition, activities under the roadmap on solar, hydrogen and fuel cells such as technology development and knowledge sharing will be implemented while financing mechanisms will be explored. Initiatives to enhance local capabilities in the development of indigenous RE-based technologies as new sources of growth will also be supported.

19.48 Efforts to promote the development of biofuel using palm oil as a renewable source of energy will be undertaken during the Plan period in line with the initiative to make the country a world leader and hub for palm oil. Designated pump stations, mainly in the Klang Valley, to supply diesel blended with 5.0 per cent palm olein are expected to commence operation in 2006. For the initial phase, the blended diesel will be utilised by vehicles of selected Government agencies. Regulations for the blending of petroleum diesel and palm olein will be formulated. Efforts will also be undertaken to promote the export of palm-based diesel.

Energy Efficiency

19.49 The implementation of energy efficiency (EE) programmes will focus on energy saving features in the industrial and commercial sectors. In this regard, EE features such as efficient lighting and air conditioning systems as well as establishing a comprehensive energy management system will be encouraged. In addition, the industrial sector will be encouraged to implement

EE measures including improvements in plant, equipment and processes as well as end use. Towards this end, efforts will be undertaken to introduce the Efficient Management of Electrical Energy Regulations, amend the Uniform Building By-laws (UBBL), label electrical appliances and use high-efficiency motors. Initiatives to develop local expertise in the manufacture of EE equipment and machineries as new sources of growth will also be supported.

19.50 Efforts will be undertaken to enhance awareness on EE. In this regard, suitable courses on RE and EE for institutions of higher education will be developed. In addition, specialised courses on energy planning and management will be introduced to enhance the capacity of professionals in energy-related management. To promote greater EE in Government buildings, good energy practices such as optimal lighting and air-conditioning will be adopted. Energy audits will be conducted in Government buildings to identify additional measures that can be implemented to further improve EE. Under the MIEEIP project, energy audits will be extended to the oleo-chemical, plastic and textile industries to total eleven by the end of the Plan period. To further support the implementation of RE and EE initiatives, existing financial and fiscal incentives such as Accelerated Capital Allowance will be improved during the Plan period.

Energy Prices

19.51 During the Plan period, initiatives will be undertaken to review the energy pricing structure to reflect market prices of various alternative energy sources and encourage greater efficiency in the utilisation of energy while discouraging wasteful consumption. A review will be undertaken to gradually reduce subsidies on energy prices. In addition, the energy demand-side management will be emphasised to ensure optimal and efficient use of scarce and depletable energy resources.

Regional Cooperation on Energy

19.52 At the regional level, Malaysia will continue to support the ASEAN Plan of Action for Energy Cooperation (APAEC). The APAEC covers four areas of cooperation, namely the TAPG Project; Trans-ASEAN Gas Pipeline Project (TAGP); Sustainable Utilisation of Coal, Energy Efficiency and Conservation Programme; and Renewable Energy and Regional Energy Policy and Planning Programme. In this regard, the interconnected network of electricity grids and gas pipelines will offer significant benefits in terms of energy security and sustainability. In addition, issues of energy security will also be given emphasis under the cooperation of ASEAN Plus Three as well as the Asia Pacific Economic Cooperation (APEC).

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

19.53 The overall planning for the sustainable development of the energy sector towards ensuring sufficiency, security, reliability and cost-effectiveness of energy supply will continue to be coordinated by the Economic Planning Unit (EPU). In addition, the implementation of future power generation projects through a bidding process and a pilot plant on waste-to-energy will also be coordinated by EPU. Meanwhile, the development of RE and enhancement of EE initiatives will be spearheaded by the Ministry of Energy, Water and Communications. The development of biofuel will be led by the Ministry of Plantation Industries and Commodities while rural electrification programmes by the Ministry of Rural and Regional Development. Programmes related to the provision of secure, reliable and cost-effective supply of energy will be undertaken by PETRONAS, TNB, SESB and SESCO.

19.54 The expenditures by the Federal Government and investments by the Non-Financial Public Enterprises (NFPEs) for the Eighth Plan totaled RM76.2 billion, as shown in *Table 19-8*. The expenditure of the electricity supply as well as oil and gas industries amounted to RM27.9 billion and RM48.3 billion, respectively. For the Ninth Plan period, the Federal Government will provide an allocation of RM1.8 billion for the development of the energy sector while the investment expenditure by the NFPEs will total RM71.7 billion.

TABLE 19-8

DEVELOPMENT EXPENDITURE AND ALLOCATION/INVESTMENT FOR ENERGY SECTOR PROGRAMMES, 2000-2010 (RM million)

| Programme | 8MP Expenditure | | | 9MP Allocation | | |
|-----------------------|-----------------------|--------------------|------------------|-----------------------|------------------|------------------|
| | Federal Government | NFPEs ¹ | Total | Federal Government | NFPEs | Total |
| Electricity | 2,386.90 | 25,574.00 | 27,960.90 | 1,828.80 | 27,955.10 | 29,783.90 |
| Generation | 664.00 | 12,138.70 | 12,802.70 | - | 9,506.60 | 9,506.60 |
| Transmission | 632.50 | 5,121.40 | 5,753.90 | 302.60 | 6,781.90 | 7,084.50 |
| Distribution | 357.00 | 8,313.90 | 8,670.90 | 334.00 | 11,666.60 | 12,000.60 |
| Rural Electrification | 560.20 | - | 560.20 | 1,025.30 | - | 1,025.30 |
| Others | 173.20 | - | 173.20 | 166.90 | - | 166.90 |
| Oil & Gas | - | 48,300.00 | 48,300.00 | - | 43,800.00 | 43,800.00 |
| Upstream | - | 16,700.00 | 16,700.00 | - | 13,100.00 | 13,100.00 |
| Downstream | - | 31,600.00 | 31,600.00 | - | 30,700.00 | 30,700.00 |
| Total | 2,386.90 | 73,874.00 | 76,260.90 | 1,828.80 | 71,755.10 | 73,583.90 |

Source: Economic Planning Unit

Note: ¹ Refers to Tenaga Nasional Berhad, Sabah Electricity Sdn. Bhd., Syarikat SESCO Berhad and Petroliam Nasional Berhad.

V. CONCLUSION

19.55 During the Eighth Plan period, energy security was enhanced with the increase in electricity generation capacity as well as recoverable reserves of oil and gas. Measures were undertaken to further improve the supply of energy and minimise possible supply disruption. The focus during the Ninth Plan period will be to further enhance the sustainable development of the energy sector to enable it to contribute towards strengthening economic growth. Towards this end, greater emphasis will be given to ensure security, reliability and cost-effectiveness of supply as well as enhance the quality of service delivery to consumers. A market-based approach in determining energy prices will be gradually adopted to ensure efficient allocation of energy resources. Efforts will be intensified to promote greater utilisation of RE, especially for power generation, and the use of biofuel in the transportation sector. EE initiatives will be undertaken to ensure efficient utilisation of energy resources and minimisation of wastage. The reserve margin will be gradually reduced to 20 per cent in the long term and no new plant-up will be implemented during the Plan period.

I. INTRODUCTION

20.01 Safeguarding and improving the health status of individuals, families and communities were accorded higher priority during the Eighth Plan period. In this regard, efforts were undertaken to enhance the delivery system and to improve the scope and quality of health care. Emphasis was given to integrating the provision of health care services through greater cooperation between the public and private sectors as well as non-governmental organisations (NGOs).

20.02 Building on past investments in establishing an integrated and comprehensive health system, the Ninth Plan period will focus on achieving better health through consolidation of health services. Towards this end, there will be a shift from the traditional focus on providers, facilities and illnesses to consumer empowerment, health promotion, lifelong wellness as well as disease prevention and control. Delivery of health care will be further improved through greater integration, enhancement in the quality of services and resource optimisation.

II. PROGRESS, 2001-2005

20.03 During the Plan period, the overall objective of improving the health status of the population was continued through increased integration and smart partnerships among health care providers. Health facilities and scope of services were expanded to increase accessibility, affordability and equity. Various health programmes were implemented, in tandem with epidemiological and demographic changes as well as increasing public expectations.

Public Health Services

20.04 The public health services programme continued to focus on prevention and control of diseases. Better integration and coordination with the private sector and NGOs enabled various activities to be implemented effectively. *Health promotion* activities were intensified to further increase public awareness

and knowledge on health and health-related issues. To allow for better coordination and integration in the implementation of health promotion activities, the Health Promotion Foundation, comprising the public and private sectors, NGOs and consumers was formed in 2002. A healthy lifestyle campaign with the theme *Be Healthy for Life* was implemented in 2003. The campaign focused on four elements, namely healthy eating, exercise and physical fitness, abstinence from smoking and stress management.

20.05 The coverage and scope of the *immunisation* programme for children aged one year and below was further improved, as shown in *Table 20-1*. Full coverage of the Bacille Calmette-Guerin (BCG) immunisation was achieved while that of triple antigen vaccine for diphtheria, tetanus and pertussis improved from 94.4 per cent in 2000 to 99.8 per cent in 2005. To further reduce morbidity and mortality among children against vaccine-preventable diseases, new vaccines were incorporated as part of the childhood immunisation programme in July 2002 and provided free in all government facilities. These included the haemophilus influenza B (HiB) and the combined mumps, measles and rubella (MMR) vaccines. In addition, the National Measles Vaccination Programme implemented in 2004 for children aged 7-15 years, achieved coverage of 93.9 per cent. These efforts resulted in the incidence of vaccine-preventable diseases such as whooping cough and measles being reduced while that of poliomyelitis was eliminated.

TABLE 20-1
**IMMUNISATION COVERAGE IN MINISTRY OF
HEALTH CLINICS, 2000 AND 2005**
(% of Population)

| <i>Type of Immunisation (under one year)</i> | 2000 | 2005 |
|--|-------|-------|
| BCG | 100.0 | 100.0 |
| Diphtheria, tetanus and pertussis | 94.4 | 99.8 |
| Hepatitis B (3rd dose) | 94.4 | 95.0 |
| Measles | 86.2 | 95.0 |
| Polio (3rd dose) | 93.4 | 94.0 |

Source: Ministry of Health

20.06 The implementation and strengthening of programmes and activities to contain the spread of human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) continued to be undertaken. These included education and awareness programmes conducted in schools, health care facilities and work places as well as through the mass media. The mother-to-child transmission (MTCT) programme that involved screening of pregnant women attending government antenatal clinics continued to be implemented. Women found to be HIV-positive were given post-test counselling and free anti-retroviral treatment.

20.07 During the Plan period, effective and efficient response mechanisms were established to deal with the outbreaks of diseases due to emerging and unknown pathogens, such as avian flu and the severe acute respiratory syndrome (SARS). These included the Infectious Disease Surveillance Section in the Ministry of Health in 2001 as well as the Infectious Disease Research Centre and a bio-safety level three laboratory (P3 Lab) at the Institute of Medical Research (IMR) in 2001 and 2002, respectively. In addition, the development and implementation of electronic reporting of notifiable diseases through the communicable disease control information system in all government hospitals and health offices in 2005 further strengthened the surveillance of these diseases.

20.08 The prevention and control of *non-communicable diseases* was included as an element in the provision of basic health care, due to its increasing trend caused by the changing pattern of diseases and lifestyle activities, as shown in *Table 20-2*. Towards this end, all health clinics were provided with the necessary facilities for screening, early diagnosis and appropriate treatment to ensure optimal management of these diseases. Specific and standard guidelines on the management of diabetes, hypertension as well as cardiovascular diseases were also developed and implemented in all health facilities. Cancer prevention and control activities, including screening for breast and cervical cancers were undertaken at the primary level.

TABLE 20-2
**SELECTED NON-COMMUNICABLE DISEASES AT
MINISTRY OF HEALTH FACILITIES, 2000 AND 2005**

| Type of Disease | Number of Discharges | | Number of Deaths | |
|--------------------------|----------------------|---------|------------------|-------|
| | 2000 | 2005 | 2000 | 2005 |
| Hypertensive Disease | 32,886 | 38,445 | 155 | 180 |
| Ischaemic Heart Disease | 33,623 | 39,594 | 2,556 | 2,948 |
| Other Heart Diseases | 17,598 | 25,362 | 2,406 | 2,299 |
| Cerebro-Vascular Disease | 13,868 | 16,896 | 2,936 | 3,209 |
| Diabetes Mellitus | 27,179 | 39,762 | 323 | 402 |
| Injury | 157,823 | 145,127 | 2,689 | 2,661 |
| Suicide and Parasuicide | 1,837 | 2,482 | 151 | 156 |
| Cancer | 40,244 | 52,593 | 2,832 | 3,800 |

Source: Ministry of Health

20.09 Implementation of the *occupational safety and health programme* continued to be emphasised through the creation of a safer and healthier work place and culture. Procedures were introduced for the notification of occurrence of occupational diseases and incidents such as accidents, pesticide and chemical

poisoning, skin and lung diseases as well as noise-induced hearing loss. A total of 52 sentinel clinics was identified to enable early warning for deteriorating air quality thus facilitating the early introduction of appropriate health interventions.

20.10 The National Nutrition Policy was formulated in 2003 to ensure public access to safe and quality food regardless of location as well as ascertain that food is nutritious for optimal growth, development and the health of the family. *Nutrition* programmes for the prevention and control of nutritional excesses and deficiencies as well as promotion of healthy eating were further enhanced. In this regard, the Food Regulations 1985 was amended in 2004 to include the implementation of mandatory labelling of food content with relevant nutrition information to assist consumers in making informed choices when purchasing food products.

20.11 Various activities were implemented under the *food safety and quality programme* to enhance consumer health and ensure the adoption of an integrated approach throughout the total food production process, that is, from farm to table. In this regard, the National Food Safety Policy and Action Plan were formulated in 2004 to provide direction and guidance and standards on the production process to relevant agencies in the public and private sectors. The implementation of the Food Safety Information System of Malaysia (FoSIM), a comprehensive computerised web-based system, linking the 36 entry points and 11 food quality control laboratories in the country facilitated the inspection of food imports and ensured adherence to food safety regulations.

20.12 *Oral health* activities were implemented to promote awareness on the importance of good oral health practices for improved quality of life. To prevent tooth decay, the fluoridation of water supply continued to be undertaken. In this regard, nine water treatment plants were installed with fluoride feeders in the states of Kedah and Perak, bringing the total of plants fitted with feeders to 249 out of the 440 plants. A comprehensive dental health care programme for school children, aimed at the early identification and treatment of dental problems, continued to be implemented during the Plan period benefiting more than 90 per cent of primary school children.

20.13 During the Plan period, the *water supply and environmental health programme* continued to be implemented. In an effort to reduce water-borne diseases, especially among the rural community, basic amenities such as safe water supply, sanitary latrines and solid waste disposal systems continued to be provided, resulting in improved coverage. In addition, the quality of public water supply continued to be monitored under the National Drinking Water Quality Surveillance Programme. Water quality in islands, resorts as well as estates was also monitored.

Medical and Health Care Services

20.14 Medical and health care services were expanded, upgraded and new programmes introduced during the Plan period. These services, comprising primary, secondary, tertiary and rehabilitative care, continued to be provided through an extensive network of hospitals as well as health and community clinics, as shown in *Table 20-3*. Although the ratio of facility to population in the rural areas generally declined due to relocation of facilities, the quality and delivery of services improved with the upgrading of facilities including the provision of diagnostic and imaging equipment. These contributed to improvements in the speed and quality of diagnosis as well as enhanced patient comfort. In addition, the increasing number of private clinics and hospitals in urban areas complemented the provision of medical care by the public sector.

TABLE 20-3

FACILITIES PROVIDED BY MINISTRY OF HEALTH, 2000 AND 2005

| Type of Facility | Number | | Ratio of Facility to Population | |
|-----------------------------|--------|--------|---------------------------------|-------------|
| | 2000 | 2005 | 2000 | 2005 |
| Rural Health Facilities | | | | |
| Community Clinics | 1,924 | 1,900 | 1 : 4,640 | 1 : 5,085 |
| Health Clinics | 474 | 495 | 1 : 17,506 | 1 : 19,520 |
| Mobile Units ¹ | 204 | 200 | 1 : 43,764 | 1 : 48,312 |
| Mobile Dental Clinics | 8 | 30 | | |
| Urban Health Facilities | | | | |
| Health Clinics ² | 473 | 462 | 1 : 30,797 | 1 : 35,638 |
| Patient Care Services | | | | |
| Hospitals | 119 | 128 | 1 : 197,436 | 1 : 204,140 |
| Total Beds | 34,573 | 35,210 | 1 : 679 | 1 : 742 |
| Dental Units ³ | 2,597 | 3,340 | 1 : 9,047 | 1 : 7,823 |

Source: Ministry of Health

Notes: ¹ Refers to dispensary services, village health teams, flying doctor services and mobile dental services.

² Includes maternal and child health clinics.

³ Refer to dental chairs in Government clinics.

20.15 *Primary care services* were provided through an extensive network of health and community clinics as well as mobile units in underserved areas. Efforts to enhance the quality, speed and level of care, especially in the rural areas, included the upgrading and equipping of 123 clinics with laboratory and diagnostic imaging facilities as well as the placement of family medicine specialists. In addition, the integrated clinic concept was introduced to improve the delivery of care through efficient use of human resource and making clinics more patient-friendly. Under this concept, all services were provided on a daily basis rather than the conventional session clinics.

20.16 *Secondary and tertiary care services*, which focused on curative and rehabilitative care, were delivered through the 122 public hospitals including six special medical institutions. During the Plan period, a total of 22 hospitals was built, comprising 14 new and eight replacement hospitals. The completion of new hospitals and the replacement of several existing hospitals further improved access to specialist care in the country. Towards this end, all public hospitals provided at least three essential services namely paediatrics, medicine as well as obstetrics and gynaecology (O&G).

20.17 During the Plan period, two new subspecialty services were introduced, namely emergency and palliative medicine. The introduction of emergency medicine in five regional centres further enhanced the capacity for crisis and disaster response. In addition, disaster management plans were formulated and hospital emergency departments upgraded. In view of the increasing number of chronic and terminal illnesses and the need for proper management, palliative medicine was introduced as a subspecialty. Hospital Selayang in Selangor was designated as the referral centre for palliative care, with services also being provided in 10 state hospitals. In addition, the establishment of the palliative care network in the Klang Valley with the cooperation of NGOs provided enhanced access to palliative care.

20.18 Accessibility to cardiology, cardiothoracic and cardiac rehabilitation services were further improved during the Plan period. More specialists were placed at regional cardiac centres in Hospital Kuching, Hospital Pulau Pinang and Hospital Sultanah Aminah, Johor Bahru. The scope of orthopaedic services was also expanded with the introduction of seven subspecialties at all state hospitals. These included paediatric and geriatric orthopaedics, spinal care, sports medicine and bone bank services.

20.19 Specialised services in various disciplines continued to be provided and expanded. Nuclear medicine was consolidated to include research as well as diagnostic and therapeutic services and provided in four hospitals. In addition, the procurement of two positron emission tomography (PET) scan machines in Hospital Pulau Pinang and Hospital Putrajaya further enhanced the quality of care provided. Hospital Selayang was developed as the national centre for

hepatobiliary surgery and liver transplant services were also provided during the Plan period. Hospital Putrajaya was developed as the centre for breast and endocrine services. In addition, urology services were improved with the introduction of minimal invasive surgery at Hospital Kuala Lumpur (HKL) and Hospital Sultanah Aminah, Johor Bahru in 2004.

20.20 Efforts were undertaken to maintain the quality of blood and blood products. Towards this end, the existing 59 blood screening centres were consolidated to 16 centres fully equipped with the necessary equipment. Blood bank services were further improved with the completion of the National Blood Transfusion Centre at Wilayah Persekutuan Kuala Lumpur in 2003. To ensure the provision of safe blood and blood products to patients in private hospitals, agreements were signed for the supply of these products from public facilities.

20.21 Taking cognisance of the increasing elderly population, geriatric medicine was integrated into the medical care programme. Specialist geriatric services, which were only provided at Hospital Seremban, Negeri Sembilan, were extended to HKL and Hospital Selayang. In addition, neurophysiology services were provided in five regional centres through teleneuro-consultation linkages with HKL. A stroke registry was established at HKL in 2002 to enable more effective planning of programmes for stroke patients. Efforts were also undertaken to provide improved rehabilitative care such as physiotherapy, audiology, speech and occupational therapy services for people with special needs.

20.22 During the Plan period, ambulatory care centres (ACC) were established in five state hospitals, namely Hospital Ipoh; Hospital Tengku Ampuan Rahimah, Klang; Hospital Tengku Ampuan Afzan, Kuantan; Hospital Kuala Terengganu and Hospital Pulau Pinang. Through the ACCs, day care that included medical, surgical, paediatric and endoscopic services were provided, thus reducing hospitalisation as well as congestion in hospital wards. Extended health services were provided for the elderly and people with special needs. In this regard, home care nursing was introduced on a pilot basis in three districts, namely Klang, Selangor; Kota Bharu, Kelantan and Kuala Kangsar, Perak.

20.23 Various measures were implemented to improve accessibility to specialist services. These included regular visits by specialists to hospitals without resident specialists and hospital networking where resources were pooled for optimal utilisation. A network concept, known as the Klang Valley Intensive Care Unit (ICU) Network was introduced. Under this concept, ICU beds in Hospital Kajang, HKL, Hospital Selayang, Hospital Seremban, Hospital Tengku Ampuan Rahimah, Klang and Hospital Putrajaya, were managed as one network. A similar networking arrangement for surgery and orthopaedic services was implemented in Hospital Kota Bharu, Kelantan and the surrounding district hospitals. In addition, networking for vascular surgery was also established between HKL, Hospital Kuching and Hospital Alor Setar.

20.24 Specialist *oral health* care services, including oral surgery, paediatric dentistry, periodontics and orthodontics continued to be provided. These services were expanded during the Plan period to include restorative and forensic dentistry. To cater for this expansion and to provide improved specialist care, existing dental facilities were upgraded and new hospitals with more than 108 beds were provided with oral surgery and paediatric dentistry units.

20.25 The *pharmaceutical care service*, aimed at providing optimum drug therapy through the proper preparation, manufacture, supply and control of medicines remained an integral component of the medical care programme. Information and advice on the appropriate use of pharmaceutical products were provided. The Integrated Drug Dispensing System was implemented in selected health clinics, whereby patients discharged from hospitals were able to obtain follow-up medication from these clinics that were located closer to their homes.

20.26 In line with the Plan objective of greater integration through smart partnerships in providing health care, various activities were implemented with the cooperation of the private sector and NGOs. These included the provision and procurement of services in haemodialysis, radiotherapy and diagnostic imaging from private health care providers. NGOs continued to complement Government efforts in implementing various rehabilitative and palliative care programmes to ease the suffering of terminally and chronically ill patients as well as provide support for their families.

20.27 The rapid development of the health sector that provided quality yet affordable care, created a conducive environment for the promotion of health tourism. During the Plan period, about 450,000 foreign patients obtained treatment from private hospitals for various illnesses as well as utilised diagnostic and therapeutic services such as endoscopy, haemodialysis and magnetic resonance imaging. In addition, medical screening incorporating the wellness concept, ophthalmology and endocrinology were identified as niche disciplines for the promotion of health tourism.

Human Resource Development

20.28 Measures were undertaken during the Plan period to ensure an adequate supply of human resource to support the expansion and delivery of health services. Training capacity in seven public universities and five private medical colleges was expanded to train more doctors, dentists and pharmacists. These efforts resulted in an improvement in the ratio of health personnel to population, as shown in *Table 20-4*. Although the doctor-population ratio improved from 1:1,413 in 2000 to 1:1,387 in 2005, disparities between states still remained high, as shown in *Table 20-5*. To enable the medical profession to provide higher levels of care, emphasis was given to post-graduate training in various specialty and subspecialty disciplines such as emergency, palliative and rehabilitative medicine, psychiatry, head and neck surgery as well as family medicine. A total of 1,855 doctors and 278 specialists underwent specialty and subspecialty training, respectively.

TABLE 20-4

HEALTH PERSONNEL: POPULATION RATIO, 2000 AND 2005

| Type of Personnel | Number | | Ratio to Population | |
|---|--------|--------|---------------------|------------|
| | 2000 | 2005 | 2000 | 2005 |
| Doctors ¹ | 15,619 | 18,842 | 1 : 1,413 | 1 : 1,387 |
| Dentists ¹ | 2,144 | 2,689 | 1 : 10,356 | 1 : 9,716 |
| Pharmacists ¹ | 2,225 | 4,021 | 1 : 8,306 | 1 : 6,512 |
| Nurses ¹ | 31,129 | 43,977 | 1 : 1,000 | 1 : 594 |
| Medical Assistants ² | 6,530 | 6,200 | 1 : 4,742 | 1 : 4,214 |
| Dental Technicians ² | 538 | 691 | 1 : 43,344 | 1 : 37,811 |
| Dental Surgery Assistants ² | 1,296 | 2,357 | 1 : 18,091 | 1 : 11,085 |
| Community Nurses ² | 7,717 | 15,218 | 1 : 3,767 | 1 : 1,717 |
| Dental Nurses ² | 1,552 | 2,104 | 1 : 14,635 | 1 : 12,418 |
| Occupational Therapists ² | 153 | 265 | 1 : 152,050 | 1 : 98,594 |
| Physiotherapists ² | 271 | 398 | 1 : 85,215 | 1 : 65,647 |
| Radiographers ² | 638 | 1,158 | 1 : 36,578 | 1 : 22,563 |
| Medical Laboratory Technologists ² | 2,974 | 3,373 | 1 : 7,823 | 1 : 7,746 |

Source: Ministry of Health

Notes: ¹ Includes public and private sectors.

² Refers to the ratio and requirement of the Ministry of Health only.

TABLE 20-5

SUPPLY OF DOCTORS BY STATE, 2005

| State | Number | | | | | Ratio to Population |
|-------------------|----------------------------|--------------|--------------|----------------|---------------|---------------------|
| | Public Sector ¹ | | | Private Sector | Total | |
| | MOH | Non-MOH | Total | | | |
| Johor | 832 | 12 | 844 | 885 | 1,729 | 1 : 1,794 |
| Kedah | 529 | 6 | 535 | 452 | 987 | 1 : 1,872 |
| Kelantan | 378 | 377 | 755 | 188 | 943 | 1 : 1,596 |
| Melaka | 315 | 26 | 341 | 337 | 678 | 1 : 1,051 |
| Negeri Sembilan | 464 | 6 | 470 | 324 | 794 | 1 : 1,191 |
| Pahang | 483 | 1 | 484 | 315 | 799 | 1 : 1,786 |
| Perak | 661 | 24 | 685 | 811 | 1,496 | 1 : 1,509 |
| Perlis | 98 | 1 | 99 | 37 | 136 | 1 : 1,655 |
| Pulau Pinang | 665 | 9 | 674 | 851 | 1,525 | 1 : 963 |
| Sabah | 754 | 3 | 757 | 352 | 1,109 | 1 : 2,719 |
| Sarawak | 722 | 25 | 747 | 366 | 1,113 | 1 : 2,078 |
| Selangor | 962 | 93 | 1,055 | 2,078 | 3,133 | 1 : 1,512 |
| Terengganu | 328 | 0 | 328 | 146 | 474 | 1 : 2,145 |
| W.P. Kuala Lumpur | 1,177 | 948 | 2,125 | 1,801 | 3,926 | 1 : 396 |
| Malaysia | 8,368 | 1,531 | 9,899 | 8,943 | 18,842 | 1 : 1,387 |

Source: Ministry of Health

Notes: ¹ Includes Ministry of Health, other government agencies, local authorities and universities.

20.29 In spite of these efforts, the country continued to face shortages of medical personnel. Measures undertaken to alleviate these shortages included the recruitment of 871 foreign doctors and dentists. A total of 873 retired specialists, doctors and dentists were re-employed on contract basis. Private sector specialists were also recruited on sessional basis in public hospitals and general practitioners encouraged to serve in public health clinics. In addition, dental officers and pharmacists were required to serve three years compulsory service.

20.30 Measures were undertaken to increase the number of allied health science personnel (AHSP). In this regard, two new training colleges were established in Sg. Buloh, Selangor and Kuching, Sarawak. A total of 22,000 AHSP were trained during the Plan period. However, there were still shortages of various categories of AHSP. To ease these shortages, training of AHSP was outsourced to private institutions of higher learning. In addition, 440 AHSP were employed on contract basis. In an effort to continuously upgrade and improve the level of expertise among AHSP, post-basic training was provided in various disciplines. To ensure optimal utilisation of available resources, a total of 19,488 health attendants underwent basic clinical and administrative training to enable them to undertake multiple tasks.

Research and Development

20.31 During the Plan period, research and development (R&D) activities continued to be undertaken to strengthen, develop and support services provided by the health sector. Emphasis was given to strengthen institutional capacity and promote research in priority areas to support evidence-based practices. Towards this end, the scope of the existing five institutes under the National Institutes of Health (NIH) was streamlined and expanded to seven, thus allowing for increased focus in the following priority areas:

| <i>Scope</i> | <i>Institute</i> |
|--|---|
| Biomedical | Institute of Medical Research (IMR) |
| Clinical | Clinical Research Centre (CRC) |
| Public health | Institute of Public Health (IPH) |
| Health systems | Institute of Health Systems Research (IHSR) |
| Health management | Institute of Health Management (IHM) |
| Health promotion | Institute of Health Promotion (IHP) |
| Natural products, vaccines and biologicals | National Institute of Natural Products, Vaccines and Biologicals (NINPVB) |

20.32 Biomedical research undertaken at the IMR included cancer, cardiovascular, diabetes, nutrition and infectious diseases as well as the development and production of viral infectious clones. As a result, five patents were registered and four products were commercialised. IMR was designated as the focal point for the WHO Collaborative Surveillance Programme on Antibiotic Resistance in the Western Pacific Region and the WHO National Influenza Centre. IMR also secured WHO certification as the Centre for Global Eradication Programme for Poliomyelitis. During the Plan period, IPH conducted the National Disease Burden Study that provided a comprehensive assessment of premature mortality and morbidity attributable to diseases, injuries and various other risk factors. This Study provided information on major health challenges that formed the basis of future health programmes to promote a healthier Malaysia.

20.33 Realising the potential in Malaysia's rich biodiversity and the increasing use of traditional and complementary medicine (T/CM) as well as the need to ensure vaccine self-sufficiency, the Government approved the establishment of NINPVB. The objective of NINPVB was to transform natural products into commercialised products as well as utilise biotechnology in vaccine development for infectious diseases. In addition, NINPVB was selected as the focal point for vaccine development among the Organisation of Islamic Countries (OIC). R&D activities in vaccines and herbal medicine were undertaken in smart partnership with the private sector.

Information and Communications Technology

20.34 The delivery of health care continued to be transformed and enhanced with the utilisation of information and communications technology (ICT). During the Plan period, the teleconsultation component under the Telehealth project was implemented to enable health care providers obtain medical knowledge and information to support decision-making. In this regard, teleconsultation enabled primary care providers, especially in rural areas, to consult with specialists in urban areas, thus providing patients with higher levels of care. The scope of the Telehealth project was subsequently revised according to priority needs and implementation capabilities. Emphasis was given to the implementation of seven components, namely lifetime health records, lifetime health plan services, mass customised personalised health information and education, continuing professional development (CPD), teleconsultation, call centre/customer relation management and group data services.

20.35 The scope and implementation of the total hospital information system, an electronic system that supported the function of patient care and the services that facilitated this function, was reviewed during the Plan period. In this regard, emphasis was given to institutional computerisation for end-to-end patient management. To ensure optimal utilisation of resources in providing efficient and quality patient care, Hospital Kepala Batas in Pulau Pinang and Hospital Lahad Datu in Sabah were equipped with basic and intermediate information systems, respectively.

20.36 Efforts were undertaken to equip primary care facilities with ICT to provide health information and facilitate early disease identification and intervention. Towards this end, Teleprimary Care was launched as a pilot project in 41 sites in the states of Johor and Sarawak. Through this initiative, health care providers in rural areas were assisted in decision-making by specialists in hospitals through a system-wide clinical information and support system. In addition, to further improve the collection of data, the health management information system was upgraded to establish links with health offices at the district levels.

Governance

20.37 Efforts continued to be undertaken to ensure that the population had access to safe, comprehensive, affordable and quality care. In this regard, the Malaysian Patient Safety Council was established in 2003 to develop policies, strategies and programmes to enhance the safety of patients and medical personnel in the public sector. In addition, a surveillance system for the monitoring and control of hospital-acquired infections was introduced in all public hospitals. Quality improvement initiatives implemented included the Hospital Accreditation Certification, for which a total of 50 public and private hospitals received accreditation. The National Health Fund was established in 2002 to coordinate and provide financial assistance for patients to secure medical services from private hospitals.

20.38 Systematic regulatory control measures of pharmaceutical as well as health and personal care products were undertaken to ensure their quality, safety and efficacy. Online registration to enable speedier approval of cosmetics commenced in 2002, generic and non-generic prescription drugs in 2003 and traditional medicine in 2004. Increased surveillance, enforcement and more stringent inspection of manufacturing premises were undertaken to ensure compliance to good manufacturing practices (GMP). In order to ensure the quality and efficacy of generic prescription medicines, compulsory bioequivalence studies were conducted on products containing specified active ingredients.

20.39 Post-marketing surveillance continued to be undertaken to counter the availability of counterfeit, adulterated and substandard pharmaceutical products. In addition, to streamline the manufacture, import, registration and sale of genuine pharmaceutical products, including over-the-counter external personal care and traditional products as well as health supplements, the Government embarked on the phased implementation of the hologram security device.

20.40 Health technology assessment (HTA) continued to be undertaken to ensure the use of safe and appropriate technology that was evidence-based. In this regard, it was mandatory for HTA to be carried out prior to acquisition of all medical equipment involving new technologies costing more than RM200,000 per unit. The extensive work in promoting evidence-based policy and decision-making through HTA resulted in Malaysia being designated as the WHO Collaborating Centre for Evidence-based Practice in Healthcare for the Asia Pacific region in 2004.

20.41 The provision of accessible and affordable health care through a comprehensive network of facilities and the implementation of various programmes resulted in improved health status of the Malaysian population. The indicators, as shown in *Table 20-6*, were comparable with that of developed countries.

TABLE 20-6
SELECTED INDICATORS OF HEALTH STATUS, 2000 AND 2005

| <i>Indicator</i> | <i>2000</i> | <i>2005</i> |
|---|-------------|-------------|
| Life Expectancy at Birth (in years) | | |
| Male | 70.0 | 70.6 |
| Female | 75.1 | 76.4 |
| Crude Birth Rate (per 1,000 population) | 24.5 | 21.0 |
| Crude Death Rate (per 1,000 population) | 4.4 | 4.5 |
| Infant Mortality Rate (per 1,000 live births) | 6.6 | 5.8 |
| Toddler Mortality Rate (per 1,000 toddler population) | 0.6 | 0.5 |
| Maternal Mortality Rate (per 1,000 live births) | 0.3 | 0.3 |
| Perinatal Mortality Rate (per 1,000 total births) | 7.5 | 6.8 |
| Neonatal Mortality Rate (per 1,000 live births) | 3.8 | 3.8 |

Source: Ministry of Health

III. PROSPECTS, 2006-2010

20.42 Health is an important asset in the development of human capital. During the Ninth Plan period, while the Government will continue to provide facilities and implement programmes to improve the health status of the population, greater individual responsibility is crucial for achieving better health. Towards this end, efforts will be undertaken to promote lifelong wellness as a proactive approach to maintain health, reduce the disease burden and harness resources available for the optimum benefit of the population. Emphasis will also be given to the consolidation and integration of services to further improve efficiency, quality, accessibility and equity in health care delivery. Thus, health sector development will be guided by the following strategies:

- preventing and reducing the disease burden to further improve the health status;*
- enhancing the health care delivery system to increase accessibility to quality care;*
- optimising resources through consolidation and integration;*

- ❑ *enhancing research and development to support evidence-based decision-making;*
- ❑ *managing health-related crisis and disasters effectively;*
- ❑ *enhancing human resource development; and*
- ❑ *strengthening health information and management systems.*

Public Health Services

20.43 Good population health is a critical input for economic growth and human development. Towards this end, greater efforts will be undertaken to ensure the promotion and maintenance of a healthy population. Based on the findings of the Disease Burden Study that indicated non-communicable diseases to be the leading burden of disease, efforts will be undertaken to prevent or postpone the occurrence of these diseases by modifying individual risk behaviour or intervening in societal risk factors.

20.44 *Health promotion* will be given greater emphasis to enable people to increase control over and improve their health in order to achieve their health potential. Health promotion and education activities will be increased to provide the necessary knowledge and information as well as inculcate healthy behavioural practices. In this regard, individuals, families and communities will be empowered to take greater responsibility to enhance their overall health and well-being. The promotion of healthy lifestyle in selected settings will be further strengthened. School canteens and hostels will be encouraged to provide healthy and nutritious food. In addition, various other health promotion and disease prevention activities, including counselling, will be implemented with increased collaboration and networking among government agencies, the private sector as well as NGOs.

20.45 The prevention and control of *communicable diseases* will be further emphasised during the Plan period. Towards this end, the Communicable Disease Centre (CDC) will be established in Sg. Buloh, Selangor to enhance the ability to cope and deal with the changing and widening scope of these diseases as well as outbreaks of newly emerging and re-emerging diseases. The CDC will be equipped with surveillance systems to enable prompt and timely notification as well as provide adequate laboratory support for early diagnosis and confirmation. The epidemic intelligence programme will be further strengthened to equip medical personnel at the state and district levels to respond immediately and efficiently to disease outbreaks. In addition, community participation and involvement will be enhanced to assist in the control of vector-borne diseases such as dengue and malaria.

20.46 To further reduce HIV transmission in the country and to achieve the Millennium Development Goal (MDG) with regard to HIV/AIDS, the National Strategic Plan (NSP) for HIV/AIDS will be implemented. The NSP will provide the general framework for a nationally driven and expanded HIV/AIDS initiative

over the next five years and will adopt the 'three ones' as the guiding principles for improving the country's response to HIV/AIDS. This will involve the establishment of one comprehensive national AIDS framework, one national AIDS coordinating authority and one national monitoring and evaluation system. In addition, the harm reduction programme will be implemented throughout the country.

20.47 In an effort to reduce the transmission of communicable diseases by foreigners, notably tuberculosis, sexually transmitted diseases and zoonotic diseases, efforts will be undertaken to check, monitor and control the spread of these diseases. These include the establishment of travel health clinics in each state to provide services such as screening, vaccination and prophylaxis as well as health information to foreigners. Enhanced laboratory support will be provided with the construction of four public health laboratories in the states of Kedah, Kelantan, Melaka and Sarawak.

20.48 The rise in *non-communicable diseases* in the country is largely related to lifestyle and behaviour as well as demographic changes. In this regard, efforts will be undertaken to encourage individuals to acquire knowledge and take necessary actions to stay healthy always. Greater emphasis will be given to preventive medicine such as practising healthy lifestyles and regular screening as well as early risk factor identification and modification. Towards this end, a registry for non-communicable diseases will be established to enable more effective broad-based interventions to be undertaken to control and prevent these diseases.

20.49 Health-related *crisis and disaster management* will be further strengthened to increase the level of preparedness and to develop strategies to address public health issues and rehabilitation in the event of disasters. Towards this end, a National Crisis (Health) Preparedness and Response Centre will be established. This Centre will coordinate all health-related activities to ensure effective and immediate response aimed at reducing morbidity and mortality before, during and after the event through the adoption of an inter-sectoral approach. Collaboration and coordination with international organisations, NGOs and the private sector, including pharmaceutical companies and laboratories, will be enhanced.

20.50 *Mental health* services will be further strengthened at the primary care and community levels. In this regard, comprehensive and integrated mental health services will be developed for specific target groups such as adolescents and older persons. Prevention and control of mental illness will be undertaken through enhanced and early screening of problems such as stress, anxiety, depression and abuse. To improve the functioning of persons with mental illness and ensure their integration into society, psychosocial rehabilitation services will be provided at the primary care level. In addition, family and community intervention as well as support programmes including training will be developed.

20.51 The implementation of the *water supply and environmental health programme* will be continued. In this regard, the provision of sanitary latrines, safe water, proper sullage and solid waste disposal systems will be expanded for the benefit of the rural population. The quality of drinking water will continue to be monitored to ensure that it meets national and international standards. Epidemiological and health risk assessment strategies will also be introduced to monitor the impact of environmental pollution on health.

Medical and Health Care Services

20.52 The medical and health service programme that provides primary, secondary, tertiary and rehabilitative care will be consolidated to improve the delivery of health care. Strategies for the prevention of diseases and health promotion will be implemented to enable individuals to make the right lifestyle choices to promote wellness. Towards this end, wellness and health promotion facilities will be established at existing clinics and hospitals, while programmes involving patients and their families as well as the community will be implemented. In recognising the role of T/CM in health care delivery, integrated services to include selected T/CM practices will be piloted in three hospitals.

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20.53 During the Plan period, greater efforts will be undertaken to strengthen services provided at the *primary care* level. Existing facilities will be upgraded while new facilities will be built to provide a comprehensive package of services. In a further effort to increase accessibility, mobile clinics will be provided in densely populated urban areas where suitable land is unavailable for the construction of health facilities. Access to health care in the remote and underserved areas will be improved through the provision of more mobile clinics equipped with necessary diagnostic equipment.

20.54 New programmes that include screening for specific diseases and risk factors, early intervention and treatment as well as reducing disability will be implemented. In this regard, an integrated and comprehensive health risk management programme aimed at early detection of diseases will be implemented. The screening programme for congenital hypothyroidism among newborns will be further expanded. Services for children with special needs will be expanded and introduced in every district. Thalassaemia screening will be implemented to ensure early detection of blood disorders.

20.55 In view of the increasing incidences of communicable and non-communicable diseases, primary care facilities will be further equipped to detect, treat as well as manage these diseases. Family medicine specialists and AHSP will be trained in multi-disciplines to identify emerging infections and ensure that standard operating protocols are adhered to in their treatment. Screening programmes to detect diseases such as respiratory illnesses, cancer and cardiovascular diseases will be instituted in all clinics. For patients suffering from these diseases, individualised intervention packages will be provided. As

part of the smoking cessation programme, more quit smoking clinics will be established and standardised clinical practice guidelines introduced.

20.56 In an effort to enhance and continuously improve the delivery of care, medical care services provided at the primary care level will be reviewed and expanded. Emergency and diagnostic services will be further developed and upgraded to facilitate early and effective diagnosis. Emphasis will be given to providing medical care to specific target groups such as the Orang Asli, urban poor, elderly and children with special needs. The integrated clinic concept will be continued with the daily provision of all services to improve the delivery of care and increase the comfort of patients. To further improve the speed and quality of diagnosis, all clinics will be provided with relevant support services and diagnostic equipment. These include pathology, radiology and pharmaceutical services.

20.57 Various measures will be undertaken to improve and consolidate the provision of *secondary and tertiary care*. Through an efficient and effective referral system, seamless care will be provided with no distinct boundary between primary, secondary and tertiary care. Appropriate services will be identified and relocated to bring care closer to home and optimise resources. In this regard, family medicine specialists serving at the primary care level will follow-up on patients discharged from hospitals or receiving treatment from specialist clinics. These patients will also be able to obtain their follow-up medical supplies from health facilities located nearest to them. These initiatives will enable patients to receive care in a more comfortable environment including shorter waiting time. For patients with chronic debilitating and terminal illnesses, home care services will be provided with the support and cooperation of the community and NGOs.

20.58 To reduce the number of admissions and hospitalisation, efforts will be undertaken to increase the efficiency and improve the delivery of pre-hospital, emergency and ambulatory care services. Pre-hospital care will be enhanced through the establishment of more ambulance call centres while emergency response teams will be provided with better-equipped ambulances. In addition, paramedic emergency response teams (motorcycle squads) will be established to enable reaching the emergency site and providing treatment as quickly as possible. ACCs will also be established at all state and selected district hospitals.

20.59 During the Plan period, new and replacement hospitals will be built to provide greater accessibility and higher quality care. These include a hospital for women and children and a rehabilitation hospital. The National Institute of Cancer will be established at Hospital Putrajaya to provide comprehensive cancer care. To ensure better planning, coordination and management of forensic services in the country, a National Forensic Institute and regional centres will be established. In addition, specialist oral care services will be further strengthened with the establishment of the National Institute for Oral Health. Towards this end, an allocation of RM1.3 billion will be provided.

20.60 The provision of cardiology services will be improved with the expansion of these services to more state hospitals, namely Hospital Alor Setar, Hospital Tengku Ampuan Afzan, Kuantan and Hospital Queen Elizabeth, Kota Kinabalu. Neurosurgical services will also be provided in more hospitals including Hospital Kuala Terengganu, Hospital Melaka and Hospital Tengku Ampuan Rahimah, Klang. Radiotherapy and oncology services will be improved and expanded to Hospital Pandan in Johor, Hospital Pulau Pinang and Hospital Likas in Sabah.

20.61 Efforts will also be undertaken to increase the capacity and quality of critical care units in all hospitals, with priority being given to upgrading existing intensive care facilities at all state and some district hospitals. These units will be equipped with comprehensive intensive care services for all disciplines and age groups. In addition, sophisticated and specific tertiary services will be provided on a regional basis through the establishment of centres of excellence in areas such as forensic medicine, tissue and stem cell development as well as genetics. To ensure efficient management of infectious diseases, regional centres will be established at Hospital Kota Bharu, Kelantan; Hospital Sg. Buloh, Selangor; Hospital Pulau Pinang and Hospital Sultanah Aminah, Johor Bahru. The establishment of such centres will enable higher quality care as well as provide a conducive environment for training and research activities.

20.62 Various efforts will be undertaken to optimise resources available in under-utilised facilities. In this regard, hospitals with low bed occupancy will be used for patients suffering from chronic and terminal illnesses as well as those requiring rehabilitation. Palliative and day care centres as well as halfway houses for mental patients will be set up in these facilities. Training programmes will be implemented to train sufficient personnel in rehabilitative care, including from NGOs and the community, who will also be encouraged to participate in hospital volunteer programmes.

20.63 During the Plan period, *pharmacy services* will continue to be strengthened. The National Medicine Policy will be formulated to promote the rational use of safe, effective and affordable drugs for improved health outcomes. In addition, consumers will be provided with accurate and evidence-based information online as well as through the media to assist in the selection and usage of medical products. More educational and awareness campaigns will be organised to enable the public to make informed decisions and reduce the consumption of unregistered products. With the introduction of medication counselling and adherence clinics in major hospitals, patients suffering from chronic illnesses such as diabetes mellitus, asthma, cardiovascular diseases and HIV/AIDS will be provided with enhanced pharmaceutical care. The role of pharmacists will be expanded to include their involvement in inpatient care to optimise drug therapy and improve health outcomes.

20.64 Efforts will continue to be undertaken to strengthen cooperation and collaboration between public and private health care providers to ensure the efficient and optimal utilisation of health care services. In this regard, outsourcing

of medical services, provision of services in public facilities by private practitioners, leasing of public facilities to private practitioners as well as collaborating with private medical institutions in the training of medical and allied health personnel will be undertaken. In addition, private providers will be encouraged to give greater emphasis to disease prevention and the promotion of a healthy lifestyle.

20.65 Health tourism will continue to be promoted during the Plan period with greater involvement of the private health sector. In this regard, a comprehensive package of services for which Malaysia has the comparative advantage will be developed. These include T/CM, spas as well as cosmetic services. Efforts will also be undertaken to further develop health care services at popular tourist destinations including emergency and evacuation facilities for high risk or extreme sports activities. Health promotion and wellness activities including affordable screening at selected hospitals and clinics will be marketed to attract more tourists to utilise these services. In addition, centres of excellence in ophthalmology at Hospital Selayang in Selangor and endocrinology at Hospital Putrajaya will be promoted. Towards this end, promotional efforts will be further enhanced with the creation of a Malaysian brand of services known as Health Malaysia.

Human Resource Development

20.66 Human resource development will be given higher priority during the Plan period to address acute shortages in various categories of medical and health personnel. An allocation of RM1 billion will be provided. A blueprint will be formulated to improve human resource development as well as address issues relating to the acquisition, training, supply, utilisation and deployment of health personnel. To this effect, the training of medical, dental and pharmacy undergraduates and postgraduates will be further strengthened to meet the demands of the health sector in the country. Collaboration mechanisms will be instituted with relevant government agencies and the private sector to increase training capacities. In this regard, selected public hospitals will also be utilised as teaching hospitals. In addition, students will be sent overseas to complement training undertaken by local institutions.

20.67 The continuous professional development (CPD) programme will be further strengthened through the provision of online facilities to develop the skills and competencies of medical personnel. CPD activities will be monitored to ensure enhanced quality, professionalism and will be matched with the required competency tests. In addition, efforts will be undertaken to enhance the knowledge and competencies of medical personnel in new areas of specialisation and subspecialties such as vaccine development and health-related disaster management, through in-service training. Priority will also be given to ensuring sufficient supply of trained personnel to address the behavioural component of lifestyle issues.

20.68 Efforts will be undertaken to attract and retain personnel through improvements in terms and conditions of service. These include extending the retirement age of doctors, improving career advancement opportunities, increasing allowances as well as providing a more conducive working environment through the upgrading of facilities. Additional and improved accommodation facilities will also be provided in rural and remote areas as well as in major towns where rentals are high.

20.69 The completion of seven training colleges for AHSP during the Plan period will enable an additional 25,000 personnel to be trained. To further improve and upgrade the skills and knowledge of trained personnel, post basic training in new and priority disciplines will be conducted. In addition, the development of soft skills, including the inculcation of good ethics, values as well as a caring attitude will be given greater emphasis. Measures will also be undertaken to increase the number of tutors as well as upgrade their skills.

Research and Development

20.70 R&D in health will continue to be undertaken to provide the impetus for improving the quality of health care and health outcomes. The research capacity and capability of institutes under NIH will be strengthened to enable the formulation and development of more effective programmes for the prevention, diagnosis, treatment and control of public health problems.

20.71 Various epidemiological studies will be conducted, including a second Disease Burden Study and the third National Health and Morbidity Survey. Research addressing the risk factors of prevalent diseases and ways to reduce the disease burden will be given priority. Research activities on emerging and re-emerging diseases will be intensified in the light of their increasing occurrences. In this regard, efforts will continue to be undertaken to accelerate the production of diagnostic kits for dengue and *nipah* infections.

20.72 Recognising the potential of revolutionising therapy in the form of cell replacement, stem cell research will be given greater priority. The establishment of NINPVB during the Plan period will enable research to be conducted on drug and vaccine development, including *halal* vaccines, from local resources. In addition, NINPVB will undertake the manufacture of basic childhood vaccines for local consumption as well as for export. To facilitate the incorporation of T/CM into the health care system, studies on the safety and efficacy of medicinal plant products will be undertaken to provide evidence for the specific treatment of diseases.

Information and Communications Technology

20.73 During the Plan period, a nation-wide information system will be introduced to link public and private health facilities to enable the provision of timely, quality and reliable information. In this regard, a National Health Informatics Centre will be established to ensure that all health and health-related information will be processed centrally. Priority will also be given to the implementation of Telehealth services that will enable the interoperability and sharing of information through Lifetime Health Record (LHR) and Lifetime Health Plan (LHP) services. The LHR facilitates integration between providers and enables the provision of seamless and continuous care, while the LHP provides information in relation to various anticipated events in an individual's life including disease prevention and illness management. The LHR and LHP will be implemented on a pilot basis in Seberang Perai in Pulau Pinang.

20.74 Teleconsultation services will be further expanded to enable the provision of specialist services for the rural population, especially in the states of Sabah and Sarawak, thus contributing to optimisation of resources and providing higher quality care. The use of ICT in the delivery of primary care services will be expanded with the increased coverage of the teleprimary care project to more districts. A system-wide information system will be introduced to link public and private facilities, thus allowing the transfer of patient information between providers whenever and wherever required to enable the provision of borderless and continuous care. The implementation of the hospital information system (HIS) in selected hospitals will further improve health care delivery by providing accurate and complete patient information online. HIS implementation will be undertaken in phases and will include all new and existing hospitals and clinics.

20.75 Population health surveillance will be further strengthened through improvements and upgrading of existing information systems for various programmes such as disease surveillance as well as food and water quality control. In addition, national registries for specific diseases such as HIV/AIDS, diabetes and mental illnesses will be strengthened towards providing more comprehensive coverage. Information from these registries will contribute towards the formulation of effective and improved programmes as well as enhance research in these areas.

Governance

20.76 During the Plan period, good governance through the proper control of healthcare personnel, facilities, products and devices will ensure that quality and affordable health care is provided. Greater synergy will be achieved through harmonization of quality improvement initiatives that will contribute towards institutionalising the culture of quality and professionalism among health personnel at all levels. More hospitals will be encouraged to institute measures to qualify

for Hospital Accreditation Certification. Emphasis will also be given to enhancing the quality of the soft component of care, including improving responsiveness to patient needs and expectations as well as ensuring staff competency and capability. International evidence-based indicators and quality improvement measures will be used as benchmarks in determining the quality of service. For more effective planning and efficient resource allocation, efforts will be undertaken to ensure the annual compilation of the National Health Accounts to provide information on the levels and trends of financial resources available in the health sector.

20.77 The implementation of the health financing mechanism will further enhance accessibility and equity through the provision of high quality, efficient, integrated and comprehensive health coverage for the population. In doing so, the mechanism will encourage greater flexibility and freedom of choice in obtaining care from both the private and public sectors. In addition, the Government will continue to ensure that no one is denied access to health care.

20.78 New and existing health legislation will be introduced and reviewed to regulate and monitor the health sector. The Medical Devices Act will be formulated to regulate and ensure equipment used is of high quality, appropriate and safe. In addition, the compulsory registration of beauty and cosmetic saloons will be undertaken to protect consumer interests. Health technology assessments will continue to be undertaken prior to the introduction of new services and technologies such as screening for and early diagnosis of specific diseases, treatment and interventions. The Traditional and Complementary Medicine Act will be formulated to ensure safe practice of T/CM practitioners. At the same time, public awareness and education programme will be undertaken to inform consumers on safe T/CM. To ensure compliance with the principles and ethical standards of biomedical and clinical research, especially in safeguarding the dignity, safety and well-being of patients, the National Ethics Board will be established during the Plan period.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

20.79 The Ministry of Health will continue to be the lead agency and the main provider of health care services for the nation. The provision of health services will be undertaken in collaboration with other relevant ministries and agencies as well as the private sector and NGOs. During the Ninth Plan period, a sum of RM10.28 billion will be allocated for health sector development, as shown in *Table 20-7*. A major portion of this allocation will be set aside for the implementation of public health programmes that include health promotion and disease prevention as well as enhancing human resource development. R&D as well as the upgrading and renovation of existing health care facilities will also be given emphasis.

TABLE 20-7

**DEVELOPMENT EXPENDITURE AND ALLOCATION FOR
HEALTH SERVICES, 2001-2010**
(RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|---------------------------------------|----------------------------|---------------------------|
| Patient Care Services | 7,719.0 | 5,483.2 |
| New Hospitals | 5,324.8 | 1,275.6 |
| Upgrading and Renovation | 2,394.2 | 4,207.6 |
| Public Health Services | 1,329.3 | 3,311.6 |
| Urban Health | 471.8 | 1,269.9 |
| Rural Health | 797.6 | 2,027.2 |
| Environmental Health | 59.9 | 14.5 |
| Other Health Services | 451.7 | 1,481.2 |
| Training | 364.5 | 1,052.2 |
| Research and Development ¹ | 28.9 | 250.0 |
| Land Procurement | 58.3 | 179.0 |
| Total | 9,500.0 | 10,276.0 |

Source: Economic Planning Unit

Notes: ¹ Excludes allocation under IRPA.

V. CONCLUSION

20.80 During the Eighth Plan period, emphasis was given to further improve the quality of life. Priority was given to facility expansion and upgrading as well as expanding the scope of health care. During the Ninth Plan period, efforts will be undertaken to consolidate health care services, enhance human resource development and optimise resource utilisation. Improvements in the delivery system will be undertaken with the greater involvement of the private sector and NGOs. While efforts will be undertaken to protect the population from communicable and non-communicable diseases, the responsibility and cooperation of individuals, families and the community in disease prevention and control as well as practising a healthy lifestyle is crucial towards achieving better health and wellness.



PROVIDING QUALITY HOUSING AND URBAN SERVICES

21

I. INTRODUCTION

21.01 The implementation of housing development programmes and provision of urban services during the Eighth Plan period were aimed at improving the quality of life and well-being of the population. The overall performance of housing programmes undertaken by the public and private sectors was encouraging, surpassing the Plan target. Emphasis was given towards providing affordable and quality houses, particularly for the low-income group with better urban services and a healthy living environment.

21.02 During the Ninth Plan period, continuous efforts will be undertaken to ensure that Malaysians of all income levels will have access to adequate, quality and affordable homes, particularly the low-income group. In this regard, the private sector will be encouraged to build more low- and low-medium-cost houses in their mixed-development projects while the public sector will concentrate on building low-cost houses as well as houses for public sector employees, the disadvantaged and the poor in urban and rural areas. To enhance the quality of life of the urban population, the provision of more systematic and well organised urban services programmes will emphasise on sustainable development, promoting greater community participation and social integration of the population.

II. PROGRESS, 2001-2005

21.03 The main objective of the housing programmes during the Eighth Plan period was in line with the housing policy of providing adequate, quality and affordable houses to all Malaysians. The planning and implementation of housing development programmes were based on the human settlement concept, which included the provision of public amenities such as community halls, playgrounds for children, clinics, shophouses and open spaces. While public sector housing programmes continued to focus on providing low-cost houses for the low-income group and towards the elimination of squatters in urban areas, the

private sector continued to build houses to meet the overall market demand. To enhance the quality of life and socioeconomic status of the urban population, efforts were undertaken to improve the quality of urban services as well as provide better infrastructure and public amenities.

Housing

21.04 The performance of housing development programmes was encouraging with the number of houses constructed surpassing the Plan target. A total of 844,043 units was completed, as shown in *Table 21-1*. Of the total, 77.6 per cent was constructed by the private sector while the remaining by the public sector.

21.05 As part of the Government's efforts to increase the construction of low- and low-medium-cost houses, the *Syarikat Perumahan Negara Malaysia Berhad* (SPNB) undertook housing development projects to cater for the housing needs of the population. During the Plan period, SPNB implemented the *Program Perumahan Mampu Milik*, *Program Perumahan Mesra Rakyat* and housing projects for military personnel. In addition, SPNB undertook the rehabilitation of selected abandoned housing projects including those of the private sector as identified by the Ministry of Housing and Local Government (MHLG).

21.06 The Housing Development Act, (Control and Licensing) 1966 was amended in 2002 to expand the scope of enforcement by MHLG to include projects implemented by government agencies and cooperatives, provision for quality control and timely completion of housing projects as well as the establishment of the Tribunal for Homebuyer Claims. The Tribunal, which handled claims below RM25,000, registered a total of 10,074 claims whereby 8,569 cases were resolved during the Plan period.

Low-cost Housing

21.07 The overall performance of houses built under the low-cost housing category was encouraging with 200,513 units completed or 86.4 per cent of the Plan target. Of this total, 103,219 units or 51.5 per cent was constructed by the public sector including state economic development corporations (SEDCs). To ensure an adequate supply of low-cost houses for the low-income group, any mixed-development projects undertaken by private developers, continued to be guided by the 30 per cent low-cost housing policy requirement. However, taking into account the situational demand for low-cost houses as well as addressing the issue of unsold units, some state governments made adjustments to the policy.

TABLE 21-1

PUBLIC AND PRIVATE SECTOR HOUSING TARGETS AND ACHIEVEMENTS, 2001-2005

| Programme | Housing for the Poor | | Low-Cost | | Low Medium-Cost | | Medium-Cost | | High-Cost | | Total | | | | | | | |
|--|----------------------|--------------------|-------------|----------------|------------------|--------------|----------------|------------------|-------------|----------------|------------------|--------------|----------------|----------------|--------------|----------------|----------------|--------------|
| | Target (units) | Achieved (units) | % of Target | Target (units) | Achieved (units) | % of Target | Target (units) | Achieved (units) | % of Target | Target (units) | Achieved (units) | % of Target | | | | | | |
| Public Sector | 16,000 | 10,016 | 62.6 | 192,000 | 103,219 | 53.8 | 37,300 | 22,826 | 61.2 | 46,700 | 30,098 | 64.4 | 20,000 | 22,510 | 112.6 | 312,000 | 188,669 | 60.5 |
| Low-cost Housing | - | - | - | 175,000 | 81,108 | 46.3 | - | - | - | - | - | - | - | - | - | 175,000 | 81,108 | 46.3 |
| Housing for the hardcore poor (PPRT) | 15,000 | 9,536 ¹ | 63.6 | - | - | - | - | - | - | - | - | - | - | - | - | 15,000 | 9,536 | 63.6 |
| Sites and Services | 1,000 | 480 | 48.0 | - | - | - | - | - | - | - | - | - | - | - | - | 1,000 | 480 | 48.0 |
| Housing by Commercial Agencies | - | - | - | 15,000 | 16,386 | 109.2 | 10,000 | 15,442 | 154.4 | 16,000 | 9,924 | 62.0 | 15,000 | 5,753 | 38.4 | 56,000 | 47,505 | 84.8 |
| Housing by Land Schemes | - | - | - | 2,000 | 5,725 | 286.3 | 1,000 | 695 | 69.5 | - | - | - | - | - | - | 3,000 | 6,420 | 214.0 |
| Institutional Quarters and Staff Accommodation | - | - | - | - | - | - | 26,300 | 6,689 | 25.4 | 30,700 | 20,174 | 65.7 | 5,000 | 16,757 | 335.1 | 62,000 | 43,620 | 70.4 |
| Private Sector | - | - | - | 40,000 | 97,294 | 243.2 | 94,000 | 61,084 | 65.0 | 64,000 | 222,023 | 346.9 | 105,000 | 274,973 | 261.9 | 303,000 | 655,374 | 216.3 |
| Private Developers | - | - | - | 39,000 | 94,029 | 241.1 | 90,000 | 53,607 | 59.6 | 60,000 | 215,267 | 358.8 | 100,000 | 269,320 | 269.3 | 289,000 | 632,223 | 218.8 |
| Cooperative Societies | - | - | - | 1,000 | 3,265 | 326.5 | 4,000 | 7,477 | 186.9 | 4,000 | 6,756 | 168.9 | 5,000 | 5,653 | 113.1 | 14,000 | 23,151 | 165.4 |
| Total | 16,000 | 10,016 | 62.6 | 232,000 | 200,513 | 86.4 | 131,300 | 83,910 | 63.9 | 110,700 | 252,121 | 227.8 | 125,000 | 297,483 | 238.0 | 615,000 | 844,043 | 137.2 |

Source: Ministry of Housing and Local Government

Notes: ¹ Excluding 13,037 units rehabilitated houses.

21.08 Under the Public Low-cost Housing Programme (PLHP) for the low-income group, a total of 27,006 low-cost houses was constructed involving 70 projects during the Plan period. These projects were implemented by state governments through loans provided by the Federal Government and mainly concentrated in small towns and sub-urban areas. These houses were sold to eligible buyers registered under the computerised open registration system administered by the respective state governments. For cities and larger towns, the *Program Perumahan Rakyat Bersepadu* (PPRB) was implemented for the resettlement of squatters. Under this programme, 37,241 low-cost houses were completed and rented out to those eligible. Out of this total, 24,654 units were built in Wilayah Persekutuan Kuala Lumpur while 12,587 units in other major towns throughout the country.

Low-medium-cost Housing

21.09 In the low-medium-cost housing category, a total of 83,910 units was completed, achieving 63.9 per cent of the Plan target. Of this total, the private sector constructed 61,084 units or 72.8 per cent. The overall performance in this category was better than the 20.7 per cent of the target achieved during the previous Plan period. This achievement showed that private developers responded positively to the increasing demand for houses in this category, thus reducing the demand pressure for low-cost houses. The SPNB constructed a total of 3,898 houses under the *Program Perumahan Mampu Milik*.

Medium- and High-cost Housing

21.10 The total number of medium- and high-cost houses constructed by the private sector during the Plan period far exceeded its target reflecting a continuous demand for houses in this category. In this respect, a total of 222,023 units of medium-cost and 274,973 units of high-cost houses were constructed. The public sector constructed 30,098 medium-cost houses and 22,510 high-cost houses, which met 64.4 per cent and 112.6 per cent of the Plan target, respectively. These houses were mainly built by corporations such as SEDCs and SPNB for sale to the general public as well as by government agencies for quarters.

Housing Development in the Rural Areas

21.11 Various programmes continued to be implemented in the rural areas such as the *Program Perumahan Rakyat Miskin Tegar* (PPRT) for the hardcore poor and *Program Pembangunan Masyarakat Setempat* (PPMS). These programmes were part of efforts to eradicate poverty among the rural poor as well as to provide them with decent houses with basic amenities. During the Plan period, 9,536 houses for the hardcore poor were newly constructed while 13,037 houses were rehabilitated. In efforts to develop new settlement areas

equipped with basic infrastructure and social amenities, the *Penyatuan Semula Kampung*, *Pusat Pertumbuhan Desa* and *Pembangunan Bersepadu Desa Terpencil* programmes were implemented in 40 villages throughout the country benefiting about 6,000 families.

Housing for Public Sector Employees

21.12 During the Plan period, 43,620 housing units or 70.4 per cent of the Plan target were constructed as quarters for public sector employees, particularly for those serving in the police, armed forces, fire and rescue services, customs and immigration departments as well as those serving in Wilayah Persekutuan Putrajaya. Out of this total, 9,286 units were constructed in Putrajaya. Quarters were also provided for other employees such as teachers and health personnel serving in rural and remote areas or places without adequate suitable accommodation facilities.

Urban Services

Services in the Local Authorities

21.13 Local authorities undertook various obligatory and discretionary activities in providing services to the urban population. These included the provision of solid waste management services as well as the construction and upgrading of public amenities such as community halls, markets, business premises and recreational facilities.

21.14 *Solid Waste Management.* During the Plan period, the collection and disposal of municipal solid waste was carried out by concession companies, operators or the respective local authorities. To reduce wastes generated by the general public, greater awareness among the public on the importance of recycling through extensive recycling campaigns and activities were carried out by 97 local authorities in collaboration with the private sector and non-governmental organisations (NGOs). In this regard, various recycling programmes were undertaken, which included public awareness campaigns and the setting up of recycling centres, particularly in residential areas as well as shopping centres.

21.15 Measures were undertaken to enable local governments to adopt systematic practices in the management of solid waste as well as improving the level of cleanliness. In this regard, modern facilities which included a transfer station, a thermal treatment plant and sanitary landfills were provided to local authorities as shown in *Table 21-2*. Financial assistance was also provided to local authorities, particularly the district councils to upgrade waste disposal facilities, undertake waste recycling programmes and the purchase of equipment for waste management. In this regard, a total of RM302 million was disbursed to various local authorities.

TABLE 21-2

SOLID WASTE MANAGEMENT FACILITIES, 2001-2005

| <i>Facilities/Projects</i> | <i>Handling Capacity (tonnes per day)</i> |
|---|---|
| Transfer station at Taman Beringin, Kuala Lumpur | 1,700 |
| Thermal oxidation plant at Labuan | 40 |
| First cell of the Seelong Sanitary Landfill, Johor Bahru, Johor | 1,200 |
| Advanced cell of the Bukit Tagar Sanitary Landfill, Hulu Selangor | 1,500 |

Source: Economic Planning Unit

21.16 To ensure integrated and sustainable solid waste management, the National Strategic Plan for Solid Waste Management (NSPSWM) was adopted in 2005. The NSPSWM outlined various strategies including the adoption of sustainable waste management through reduction, reuse and recycling as well as the use of appropriate technologies, facilities, equipment and service standards. To enhance the delivery system, the NSPSWM recommended the drawing up of action plans with the participation of the local community, private sector and NGOs.

21.17 *Landscaping and Recreational Programme.* In line with the national aspiration to implement a garden city concept in urban centres, various landscaping and recreational projects were implemented by local authorities with the support and assistance from the National Landscape Department. In this regard, the Department provided assistance to local authorities and state governments in planning for green lungs, designing recreational and public parks as well as greening and landscaping of rivers, roads and amenities. A total of 30 landscape master plans was developed, which provided guidelines for the proper development of landscape focusing on a clean, beautiful and safe environment while ensuring balance between physical development and the conservation of natural resources. To meet the increasing demand for better recreational areas and open spaces, 17 new public parks were built and 256 existing parks upgraded. In addition, the national tree planting campaign continued to be implemented during the Plan period aimed at promoting awareness among the public on the importance of trees in our living environment.

21.18 *Upgrading Status of Local Authorities.* Several local authorities undertook structural and administrative changes in their organisations due to the rapid pace of urbanisation as well as to meet the increasing demands of a more educated and knowledgeable urban population. During the Plan period, three municipal councils were conferred city status, namely the Kota Setar Municipal

Council in Kedah, *Majlis Perbandaran Melaka Bandar Bersejarah* in Melaka and Miri Municipal Council in Sarawak. In addition, 16 district councils were upgraded to municipal councils, which provided for wider area of coverage, better development planning and greater financial resources to ensure proper development as well as quality delivery of services.

21.19 *Development of Information and Communications Technology.* During the Plan period, the use of information and communications technology (ICT) in the administration and management of local authorities was further enhanced to increase their capacity and efficiency. In the implementation of the Smart Local Government Governance Agenda (SLGGA), efforts were undertaken to equip local authorities with computer equipment and relevant software. Web sites for 52 local authorities were developed to enable the implementation of the e-Local Authority application involving various systems such as the revenue, licensing, reporting, accounting, complaint and the e-Submission system.

21.20 *Local Agenda 21.* Community participation in activities conducted by local authorities increased through the Local Agenda 21 programme, which was launched in 2000. The programme, which focused on enhancing understanding and cooperation between the community, local authorities and the private sector, was implemented in 47 local authorities during the Plan period. Out of this total, 16 launched their comprehensive plan of action pertaining to sustainable development covering social, economic and environmental aspects.

21.21 *Facilities and Infrastructure.* Local authorities continued to encourage the low-income group to participate in small businesses by providing facilities such as wet markets, hawker centres and commercial premises which were rented to those eligible. Works undertaken to improve infrastructural facilities included the repairing and upgrading of roads, upgrading of the public transport system to avoid traffic congestion and provision of better drainage system to avoid flash floods. To ensure safety of the urban communities, the Safe City concept was introduced in 2004. Under this concept, local authorities were encouraged to improve street lightings, pedestrian walks and pathways as well as cooperate with the police to promote, develop and implement initiatives to prevent crimes in urban areas.

Fire and Rescue Services

21.22 Measures continued to be undertaken to provide quality and professional fire and rescue services equivalent to international practices and standards. In this regard, the Fire and Rescue Department undertook various efforts to equip and upgrade its personnel with proper equipment and skills, enhance its communications system as well as promote public awareness on fire safety. During the Plan period, the Department undertook 195,070 fire and rescue

efforts which resulted in the saving of an estimated RM47.7 billion worth of assets and materials.

21.23 To ensure efficient delivery of fire and rescue services, 73 new fire stations were constructed at strategic locations, particularly in housing, commercial and industrial areas. In addition, five new state headquarters complexes and two regional workshops were built to strengthen and upgrade these services. The efficiency of fire and rescue services were further enhanced with the procurement of an additional 146 fire fighting vehicles, 20 support vehicles and 595 utility vehicles. These included sophisticated and specialised vehicles for specialised and high risk operations including fire incidents at high rise buildings, maritime and the handling of hazardous materials. An additional two helicopters and five boats were purchased during the Plan period for surveillance and other rescue operations.

III. PROSPECTS, 2006 -2010

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21.24 During the Ninth Plan period, the development of the housing sector will continue to focus on the provision of adequate, affordable and quality houses for all Malaysians. Towards this end, the private sector will undertake the lead role while the public sector will provide the necessary support and regulatory measures to ensure efficiency. To meet the needs of the low-income group, emphasis will continue to be given to the development of low- and low-medium cost houses at suitable locations provided with adequate public amenities. To improve the quality of life of the urban population, the provision of urban services will focus on expanding the scope of coverage of the local authorities, creating a safe living environment, increasing people participation as well as ensuring sustainable urban planning and development.

21.25 The strategic thrusts of housing development and urban services during the Plan period will be as follows:

- ❑ *providing adequate, affordable and quality houses, particularly to meet the needs of the low-income group, with greater emphasis on appropriate locations and conducive living environment;*
- ❑ *reviewing laws and regulations to ensure proper development of the housing sector;*
- ❑ *encouraging private sector participation in the construction of low- and low-medium-cost houses;*
- ❑ *improving the efficiency and capability of local authorities;*
- ❑ *ensuring provision of quality urban services; and*
- ❑ *encouraging greater community participation in urban development.*

Housing

21.26 During the Plan period, requirement for new houses is expected to be about 709,400 units, of which 19.2 per cent will be in Selangor followed by Johor at 12.9 per cent, Sarawak 9.4 per cent and Perak 8.2 per cent, as shown in *Table 21-3*. Of the total requirement, 92.8 per cent will be for new houses while 7.2 per cent for replacement. The private sector is expected to supply 72.1 per

TABLE 21-3
HOUSING REQUIREMENTS BY STATE, 2006-2010
(Units)

| State | New Requirements | Replacements | Total Needs |
|----------------------------------|------------------|---------------|----------------|
| Johor | 86,100 | 5,400 | 91,500 |
| Kedah | 51,800 | 5,000 | 56,800 |
| Kelantan | 40,600 | 5,600 | 46,200 |
| Melaka | 19,100 | 1,700 | 20,800 |
| Negeri Sembilan | 23,000 | 3,700 | 26,700 |
| Pahang | 41,100 | 3,300 | 44,400 |
| Perak | 48,600 | 9,600 | 58,200 |
| Perlis | 6,100 | 500 | 6,600 |
| Pulau Pinang | 30,900 | 1,900 | 32,800 |
| Sabah | 50,800 | 5,300 | 56,100 |
| Sarawak | 62,400 | 4,600 | 67,000 |
| Selangor ¹ | 135,200 | 800 | 136,000 |
| Terengganu | 30,000 | 2,800 | 32,800 |
| Wilayah Persekutuan Kuala Lumpur | 31,800 | 600 | 32,400 |
| Wilayah Persekutuan Labuan | 1,000 | 100 | 1,100 |
| Total | 658,500 | 50,900 | 709,400 |
| % | 92.8 | 7.2 | 100.0 |

Source: Ministry of Housing and Local Government

Notes: ¹ Includes Wilayah Persekutuan Putrajaya.

cent of the total requirement, as shown in *Table 21-4*. In terms of the housing category, 38.2 per cent will be a combination of low- and low-medium-cost houses as well as houses for the poor while 61.8 per cent in the category of medium- and high-cost houses.

21.27 During the Plan period, the Government will continue to construct low-cost houses under the *Program Perumahan Rakyat (PPR)* to ensure adequate houses for the low-income group. In this regard, efforts will be undertaken to expedite the completion of on-going projects involving 24,757 units of houses. In addition, 43,800 units of houses for rental as well as for sale will be constructed to meet the expected increase in demand from the low-income group. Towards

TABLE 21-4

PUBLIC AND PRIVATE SECTOR HOUSING TARGETS, 2006-2010

| Programme | Number of Units | | | | | Total | |
|--|----------------------|----------------|-----------------|----------------|----------------|-----------------|--------------|
| | Housing for the Poor | Low-Cost | Low Medium-Cost | Medium-Cost | High-Cost | Number of Units | % of Total |
| Public Sector | 20,000 | 85,000 | 37,005 | 27,100 | 28,700 | 197,805 | 27.9 |
| Low-cost Housing | - | 67,000 | - | - | - | 67,000 | 9.5 |
| Housing for the hardcore poor (PPRT) | 20,000 | - | - | - | - | 20,000 | 2.8 |
| Housing by Commercial Agencies | - | 13,500 | 31,005 | 8,200 | 4,700 | 57,405 | 8.1 |
| Housing by Land Schemes | - | 4,500 | 500 | - | - | 5,000 | 0.7 |
| Institutional Quarters Staff Accommodation | - | - | 5,500 | 18,900 | 24,000 | 48,400 | 6.8 |
| Private Sector | - | 80,400 | 48,500 | 183,600 | 199,095 | 511,595 | 72.1 |
| Private Developers | - | 77,700 | 42,400 | 178,000 | 194,495 | 492,595 | 69.4 |
| Cooperative Societies | - | 2,700 | 6,100 | 5,600 | 4,600 | 19,000 | 2.7 |
| Total | 20,000 | 165,400 | 85,505 | 210,700 | 227,795 | 709,400 | 100.0 |
| % | 2.8 | 23.3 | 12.1 | 29.7 | 32.1 | 100.0 | |

Source: Ministry of Housing and Local Government

this end, the National Housing Department will work closely with state governments to ensure that these houses are built in suitable locations and provided with adequate public amenities.

21.28 To complement efforts by the Government, the SPNB will build about 26,120 units of low- and low-medium-cost houses in the urban and sub-urban areas. A total of 3,050 units of low-cost houses will be constructed in the rural areas under the *Program Perumahan Mesra Rakyat*. SPNB will also rehabilitate about 11,000 units of houses from various abandoned projects throughout the country as well as 166 houses in Kedah and 900 houses in Pulau Pinang for the resettlement of the *tsunami* victims.

21.29 Greater private sector involvement in the construction of low-cost houses will be encouraged to ensure adequate supply of affordable houses to meet the needs of the low-income group. To facilitate this, current housing policies and strategies as well as legislation will be reviewed. These will include the requirement for private housing developers to surrender to the Government the land allocated for low-cost houses in their mixed-development project in the event that the

project fails. During the Plan period, the private sector is targeted to construct a total of 80,400 low-cost houses.

21.30 To encourage housing developers to increase the supply of low-medium-cost housing component in their mixed-development projects, the 30 per cent quota requirement for the low-cost houses will be reviewed, particularly in areas where there is poor demand for low-cost houses. Guidelines detailing the specification, designs as well as prices for the low-medium-cost houses will be provided. This will assist housing developers in preparing their development plans, expediting the approval process imposed by the authorities as well as to ensure that these houses fulfil the required standards and remain affordable to the target group. A total of 48,500 low-medium-cost houses is targeted to be built by the private sector.

21.31 Measures will be undertaken to further improve the registration and distribution system for low-cost houses to ensure proper distribution and prevent genuine target groups from being denied the opportunity to buy these houses. Information in the database will be regularly updated and the criteria for selection of eligible buyers will be revised and standardised for all states. Apart from income level, priority will be given to the less advantaged groups such as single mothers, families with many dependents and those with handicapped members. The existing centralised database system at the MHLG will be upgraded and integrated with the database administered by state governments to facilitate the selection and distribution of low-cost houses in a more systematic and transparent manner.

21.32 Measures will be undertaken to ensure that all high rise apartments, particularly the low- and low-medium-cost categories are properly maintained. In this regard, the National Housing Department, in collaboration with the respective local authorities, will conduct activities aimed at increasing awareness among residents on their responsibility for the cleanliness and maintenance of their premises. Efforts will be made to encourage residents to appoint management companies in the provision of maintenance and security services.

21.33 *Housing Development in the Rural Areas.* Efforts will continue to be undertaken to provide houses with basic amenities for the rural population. In this regard, the implementation of housing programmes for the low-income group and the hardcore poor in the rural areas will be reviewed, particularly to ensure its effectiveness. An allocation of RM233.1 million will be provided for the construction of houses for the hardcore poor, which include the rehabilitation of about 14,000 dilapidated houses. In addition, development projects under the *Penyatuan Semula Kampung* and *Pembangunan Bersepadu Desa Terpencil* programmes will be intensified.

21.34 *Housing for Public Sector Employees.* The Government will continue to provide housing for public sector employees, particularly those in the essential services and in the areas that lack suitable accommodation facilities. During the Plan period, a total of 48,400 institutional quarters and staff accommodation units will be constructed particularly for uniformed personnel, medical services and teachers throughout the country including Putrajaya. These houses will be provided in major towns, border areas as well as remote areas in Peninsular Malaysia, Sabah and Sarawak.

21.35 *Housing for Estate and Industrial Workers.* The Government will ensure that estate owners and employers provide adequate housing or accommodation and facilities for their workers as provided by the Workers Minimum Standards of Housing and Amenities Act, 1990. Employers in the industrial sector will also be encouraged to provide proper accommodation and facilities for their workers. Regular inspection and monitoring will be conducted by the relevant agencies to ensure that estate owners and industrial employers adhere to the requirement.

21.36 *Housing Technology, Research and Development.* Continuous efforts will be undertaken to promote research and development (R&D) in activities related to the construction industry which include housing. During the Plan period, efforts will be enhanced to encourage the use of alternative construction material and technology under the Industrialised Building System (IBS) and designs based on the modular coordination concept in housing construction. The use of this technology will result in less labour, increased productivity and enhanced quality of houses while creating a safer and cleaner working environment.

21.37 During the Plan period, the implementation of IBS will be guided by a roadmap of implementation strategies. Among others, the strategies will include the use of IBS components in the construction of affordable homes and in Government building projects and enforcement on the use of modular coordination concept through Uniformed Building Bylaws by the local authorities. The Government will provide incentives such as *green-lane* building plan approval and exemption of the Construction Industry Development Board (CIDB) levy for users of standard plans which are designed based on modular coordination and standard building components. In addition, focus will also be given to R&D related to sustainable building services and cleaner technology in the construction industry based on the 3Rs concept (reduce, reuse and recycle) such as wastewater recycling and energy efficiency.

Urban Services

Services in the Local Authorities

21.38 To further improve the provision of efficient and quality urban services, a National Urbanisation Policy will be formulated. This policy will provide strategies

towards establishing safe, systematic, modern and attractive cities as well as townships.

21.39 Measures will be undertaken to ensure that the implementation of development projects at state, local authority and district levels is based on approved structure and local plans. These include the strict adherence by developers on the use of these plans which act as a tool for land utilisation planning and distribution of resources. The development of traditional villages and *kampung tersusun* in the urban areas will be based on village models developed by the Town and Country Planning Department.

21.40. To enhance the capacity and management capabilities of local authorities, measures will be undertaken through capacity building efforts and reviewing of systems and procedures. In this regard, efforts will be continued to enhance human capital development and increase awareness among employees on their role and responsibilities in serving the general public. To ensure that decisions made at the *Majlis Negara Kerajaan Tempatan* are implemented by state governments and local authorities, a monitoring mechanism will be developed by the MHLG.

21.41 To improve revenue collection by local authorities and to enhance their financial capabilities, the valuation of holding assets and assessment rates will be reviewed as provided for under Act 171. Greater focus will be given to local authorities which have not reviewed their assessment rates for more than 10 years. In addition, the formula for annual grants provided by the Federal Government to local authorities under the *Geran Tahunan Berasaskan Kadar Keseimbangan* will be revised to ensure that local authorities, particularly district councils, are given adequate financial assistance. To strengthen their revenue collection, local authorities will be encouraged to diversify methods of collection including adopting online payment system as well as provide discounts for early payment. In addition, local authorities will be encouraged to introduce innovative ways of increasing their revenue to reduce financial dependence on the Government and to be self-financing in the long run. Efforts will also be undertaken to expand the implementation of SLGGA to more local authorities, particularly for those with city and municipal status.

21.42 The Local Agenda 21 programme will be extended to all local authorities based on the achievements of 47 local authorities during the previous Plan period. To facilitate the involvement of local communities in this programme, more community centres will be established, which will be managed by resident associations. The community centres will be the focal point for social activities and the dissemination of information such as employment, education and training opportunities. To increase accessibility of the community to ICT-based activities, computer learning facilities will be provided at community centres.

21.43 To empower the local community to be more responsible towards the proper maintenance of their surroundings, local residents, the private sector and NGOs will be encouraged to participate in *gotong-royong* activities, undertake aggressive recycling of solid wastes and conduct campaigns and educational programmes towards creating a clean and sustainable as well as safe living environment. Incentives in the form of awards and special allocations will be provided to local authorities, which are capable of achieving and sustaining the desired level of participation.

21.44 The development programmes and projects for the new villages will be guided by its newly established master plan. These will include improvement of their basic infrastructure and social amenities as well as greater involvement of the private sector in the development of small and medium enterprises and tourism related activities. To facilitate the development of traditional villages within the local authority areas, a specific master plan will be drawn up. An allocation of RM400 million will be provided for the implementation of projects in both the traditional and new villages.

21.45 *Solid Waste Management and Cleanliness.* Management of solid waste during the Plan period will be based on the National Strategic Plan for Solid Waste Management (NSPSWM). The NSPSWM sets out the policies, strategies and plan of action in the management of solid waste and will be a guide for all stakeholders in the planning and allocation of resources. To facilitate the implementation of the NSPSWM, measures will be undertaken to review the existing institutions, legislation and regulations pertaining to the management of solid waste as well as to improve infrastructural facilities. The waste hierarchy under the NSPSWM will give priority towards the reduction, reuse and recovery as well as the technology and type of facilities to be provided. The construction of small and manageable-sized disposal facilities will be given priority. A new entity, the Solid Waste Management Department will be established under the MHLG to undertake policy formulation, planning and management of solid waste including financial management.

21.46 During the Plan period, public awareness campaigns will be intensified to ensure better public response and participation towards development programmes, projects and activities on the management of solid waste. These campaigns will focus towards educating the public on the need to have proper waste management facilities, the costs associated with the provision of services and the role of the public in waste minimisation programmes. A master plan on solid waste minimisation at the national level will be formulated aimed at strengthening the institutional capacity of respective agencies as well as creating a society that is committed towards waste minimisation and achieving a recycling target of 22 per cent by 2020.

21.47 *Landscaping and Recreational Programmes.* In line with the national aspiration of making Malaysia a developed, clean and attractive garden nation, efforts will continue to be undertaken towards the development of quality landscape.

A comprehensive national landscape policy supported by relevant regulation will be formulated to spearhead the programme. In this regard, the National Landscape Department will ensure that planning of new public parks will be based on standards for open space and recreational facilities in line with the respective landscape master plans at the state levels. Public parks and landscaped areas will be designed to ensure easy maintenance, sustainable, attractive and accessible to the public, including the aged and the disabled. In addition, research and development (R&D) on landscaping and planning of parks will be intensified to enhance landscape development. Local authorities will continue to undertake measures to forge smart partnerships with the private sector and NGOs to upgrade and maintain public parks. These will include the provision of equipment for playgrounds, construction of fitness circuits and gazebos as well as maintaining side walks.

Fire and Rescue Services

21.48 Efforts will continue to be undertaken to improve and upgrade the quality of fire and rescue services to meet fire safety requirement of international standards. During the Plan period, emphasis will be given to building additional fire stations and control bases as well as purchasing more comprehensive fire fighting and rescue equipment. To further enhance the professionalism and skills of fire and rescue personnel, the Fire and Rescue Academy in Wakaf Tapai, Terengganu will be expanded to increase the capacity for training and equipped with the latest fire and rescue technology. In addition, a R&D centre to conduct R&D in fire safety and engineering will be established during the Plan period.

21.49 Fire prevention campaigns will continue to be conducted to enhance public awareness on the need to take precautionary measures against fire incidents. Measures will be undertaken to disseminate information on fire prevention and protection through the mass media and printed materials. The Fire and Rescue Department will continue to conduct exhibitions and training sessions using mobile exhibition vehicles. To encourage public participation in activities conducted by the Department, more fire and rescue volunteer brigades will be established, especially in sub-urban and residential areas.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

21.50 During the Plan period, MHLG will take the lead role in undertaking public low-cost housing programmes and the provision of urban services including fire and rescue services while the Ministry of Rural and Regional Development will be the leading agency in rural housing development. The provision of institutional quarters and staff accommodation will be handled by the respective government agencies. A total of RM 18.4 billion will be allocated for housing development and urban services as shown in *Table 21-5*. Public sector housing

programmes will be provided with an allocation of RM9.5 billion out of which RM6.8 billion will be for institutional quarters and the balance for low-cost houses and PPRT. A total of RM9.0 billion will be provided for urban services which include RM1.5 billion for fire and rescue services.

TABLE 21-5

DEVELOPMENT EXPENDITURE AND ALLOCATION FOR HOUSING AND URBAN SERVICES, 2001-2010
(RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|---|----------------------------|---------------------------|
| Housing | 6,972.1 | 9,452.0 |
| Public Housing | 6,611.2 | 9,101.3 |
| Low-cost Housing | 3,242.3 | 2,256.5 |
| Institutional Quarters and Staff Accommodation | 3,368.9 | 6,844.8 |
| Rural Housing | 360.8 | 350.7 |
| Housing for the Hardcore Poor | 101.8 | 233.1 |
| Regrouping of Villages and Rural Growth Centres | 259.0 | 117.6 |
| Urban Services | 7,093.0 | 8,993.0 |
| Local Authorities | 5,485.1 | 7,464.0 |
| Fire and Rescue Services | 1,607.9 | 1,529.0 |
| Total | 14,065.1 | 18,445.0 |

Source: Economic Planning Unit

V. CONCLUSION

21.51 During the Eighth Plan period, the overall performance of the housing programme surpassed the Plan target. The implementation of the housing and urban services programmes contributed to the enhancement in the quality of life and living standards of the population in the urban and rural areas. During the Ninth Plan period, priority will continue to be given to the provision of adequate, affordable and quality houses for all Malaysians in various income levels with emphasis on the low-income group and the poor. Efforts will be undertaken to improve the coverage and quality of urban services and encourage greater participation of the local community and the private sector in the management of their living environment. To ensure provision of better fire and rescue services, the capability of personnel will be enhanced through knowledge and skills development in fire safety and fire engineering.



PROMOTING ENVIRONMENTAL STEWARDSHIP

22

I. INTRODUCTION

22.01 During the Eighth Plan period, the incorporation of environmental considerations into planning and development was intensified. This enabled a more integrated and holistic management of the environment and natural resources. The institutional capacity and regulatory framework was strengthened and new approaches and planning tools introduced. These efforts to promote sustainable development resulted in Malaysia being ranked 38 among 146 countries worldwide and second in Asia with regard to environmental sustainability¹. In addition, an Environmental Performance Index Study² ranked Malaysia ninth among 133 countries in terms of efforts taken to reduce environmental stress on human health and in protecting ecosystem vitality.

22.02 For the Ninth Plan, in line with the ninth principle³ of *Islam Hadhari*, environmental stewardship will continue to be promoted to ensure that the balance between development needs and the environment is maintained. Greater focus will be placed on preventive measures to mitigate negative environmental effects at source, intensifying conservation efforts and sustainably managing natural resources. Emphasis will be given to the fostering of closer cooperation between stakeholders in addressing environmental concerns. Environmental planning tools such as environmental impact assessments (EIA), strategic environmental assessments (SEA), cost-benefit analysis, market-based instruments and environmental auditing will be increasingly applied in evaluating and mitigating environmental impacts of development activities. In addition, research and development (R&D) will be intensified to further support environmental management and sustainable use of natural resources. These efforts in improving protection of the environment and conserving natural resources will contribute towards enhancing the quality of life.

¹ Environmental Sustainability Index Study, 2005, Yale University.

² Environmental Performance Index Study, 2006, Yale University.

³ "Safeguarding the environment."

II. PROGRESS, 2001-2005

22.03 During the Eighth Plan period, emphasis was placed on improving environmental quality through better management in major areas of concern particularly air and water quality, solid waste management as well as the utilisation of cleaner technologies. With regard to natural resource management, conservation and sustainable utilisation measures were intensified particularly for biodiversity, forest and water resources. The National Environment Policy, which outlines strategies to propel the country's growth trends towards sustainable development, was adopted in 2002. In 2004, a new Ministry of Natural Resources and Environment was formed, consolidating 10 environment and natural resources agencies under one administration to facilitate a coordinated and comprehensive approach in managing environment and natural resources.

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22.04 *Air Quality.* During the Eighth Plan period, air quality remained at good to moderate levels as indicated by the Air Pollution Index. However, there were instances of air quality deterioration in the Klang Valley, Selangor and Seberang Perai, Pulau Pinang, due to increased concentration of ambient ozone levels and particulate matter from motor vehicles, industries and open burning activities and sulphur dioxide from industrial activities. The occurrences of haze from transboundary sources became annual phenomena in parts of the west coast of Peninsular Malaysia and Sarawak. In this regard, bilateral efforts were directed at identifying and addressing the source of transboundary haze. Measures were also undertaken to reduce the occurrence of haze from domestic sources, with the enactment of the Environmental Quality Regulation (Declared Activities) (Open Burning) in 2003.

22.05 Mobile sources remained the major source of pollutants in terms of carbon monoxide and nitrogen oxide (NO_x) emissions. Several measures were undertaken to reduce emissions of pollutants from mobile sources. In 2004, the Environmental Quality Regulation (Control of Emissions from Motorcycles) 2003 was gazetted. Steps were also taken to enact legislation to reduce the sulphur content in diesel from 0.3 per cent to 0.05 per cent. Power plants were the main source of sulphur dioxide followed by industries and others such as hotels and commercial premises. In terms of particulate matter (PM₁₀), stationary sources, which include industries and power plants, contributed almost 90 per cent of the emissions.

22.06 *Water Quality.* The main sources of river water pollution were discharge of domestic sewage, pollutants from agro-based industries/farming, run-offs from earthworks and land clearing and effluent discharge from manufacturing activities. Efforts to reduce and control the discharge of waste water from the

domestic sector focused on upgrading existing and building new sewerage treatment plants. Under the first phase of the National Sewerage Project, four sewerage treatment plants and centralised sewage treatment facilities were constructed. In addition, 825 sewerage treatments plants were upgraded and the length of sewerage networks maintained increased from 9,240 kilometres in 2000 to 14,560 kilometres in 2005. These measures reduced the biochemical oxygen demand (BOD) load in rivers resulting in a decline in the number of polluted rivers.

22.07 Marine Water Quality. During the Plan period, marine water quality improved in terms of levels of arsenic, copper, *Escherichia coli* (*E.coli*), mercury and suspended solids. *E.coli* remained the major contaminant of marine water.

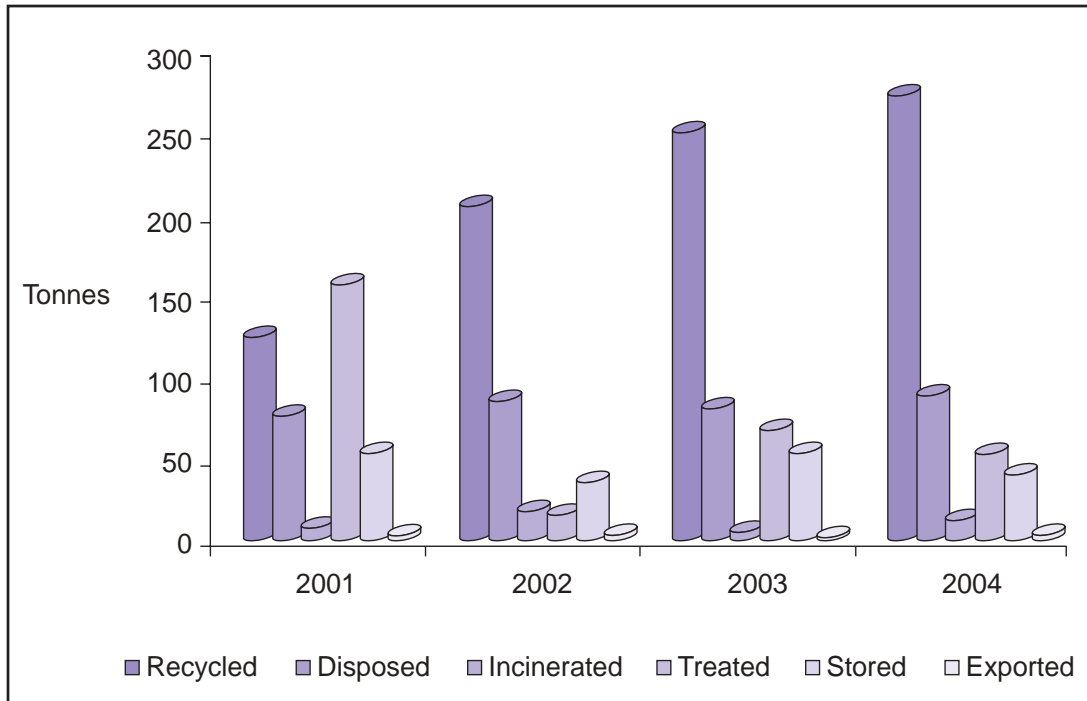
22.08 Solid Waste. The amount of solid waste generated in Peninsular Malaysia increased from 16,200 tonnes per day in 2001 to 19,100 tonnes in 2005 or an average of 0.8 kilogram per capita per day. Solid waste in Malaysia on average consists of 45.0 per cent food waste, 24.0 per cent plastic, 7.0 per cent paper, 6.0 per cent iron, and 3.0 per cent glass and others. Despite concerted efforts to promote reuse, reduction and recycling (3Rs) of materials through the National Campaign on Recycling, the amount of solid waste recycled remained at less than 5.0 per cent of total waste disposed. During the Plan period, the Government opened two sanitary landfills at Seelong in Johor and Bukit Tagar in Selangor, and a transfer station in Taman Beringin, Selangor.

22.09 Toxic Waste. During the Plan period, an average of 430,000 tonnes of scheduled waste was generated per annum. Of the total waste generated in 2004, approximately 18.8 per cent was treated and disposed in the toxic waste treatment and disposal facility in Bukit Nanas, Negeri Sembilan, 58.0 per cent was recycled and recovered at licensed premises, 19.7 per cent was treated and stored within the premises of generators, 0.7 per cent was exported for recycling and 2.7 per cent was disposed at clinical waste incinerators. The recycling and material recovery from toxic waste registered a significant increase from 29.0 per cent in 2001 to 58.0 per cent in 2004. This led to a decline in toxic waste treated and stored within premises from 59.9 per cent in 2001 to 19.7 per cent in 2004, as shown in *Chart 22-1*.

22.10 Chemical and Hazardous Substances. The use of chemical and hazardous substances showed an increase, particularly in the agriculture sector. The volume of fertilisers used increased from 2.2 million tonnes in 2001 to 4.0 million tonnes in 2004. Better farming practices were introduced to reduce the use of chemicals and hazardous substances through the *Skim Akreditasi Ladang Malaysia* (SALM), and *Skim Organik Malaysia* (SOM). The Pesticides Act 1974 was revised in September 2004 to strengthen the control of pesticides through the introduction of safer handling measures, penalties for non-compliance with safety labels and promotion of safety features in production and sale.

CHART 22-1

SCHEDULED WASTE MANAGEMENT, 2001-2004



Source: Department of Environment

Natural Resource Management

22.11 *Land Use Planning.* A National Physical Planning Council was established in 2003 and a National Physical Plan (NPP) 2005-2010 was adopted to further enhance integrated land use planning. In addition, guidelines to protect and conserve environmentally sensitive areas (ESA) were developed. A total of 86 local plans and 14 structure plans, which incorporated environment and natural resource conservation considerations, were prepared. In addition, 35 development standards and guidelines on the environment, housing, transport, land use, industry and urban surroundings, were also issued and implemented to improve urban planning and development.

22.12 *Water Resources.* The Government adopted an integrated water resource management (IWRM) approach to optimise water management and developed a Management Plan for the Langat River Basin, Selangor. A study on groundwater resources in the states of Johor, Kedah, Negeri Sembilan, Sabah, Sarawak and Selangor was completed in 2002. A guideline for installing a rainwater collection and utilisation system was also introduced.

22.13 *Biodiversity.* The National Biodiversity-Biotechnology Council (NBBC) was established in 2001 to coordinate efforts for the conservation and sustainable utilisation of biological resources. The National Wetlands Policy was adopted in 2004 to protect and conserve wetlands as well as improve their management. A Highlands Conservation and Management Strategy for Peninsular Malaysia was developed and a study of Hill Stations in Peninsular Malaysia conducted to promote sustainable development of highlands. In this regard, 109 projects on highlands implemented by 12 different Ministries were monitored to ensure that the strategies and guidelines were taken into account.

22.14 The number of protected areas increased from 37 to 40, with the establishment of the *Taman Negeri DiRaja Belum* in Perak, *Taman Negara Pulau Pinang* and *Taman Warisan Selangor*, increasing the size of protected areas to 5.36 million hectares, or 16.3 per cent of Malaysia's land area. In addition, the wetlands in Tanjung Piai, Sungai Pulai and Pulau Kukup, Johor were designated RAMSAR sites. Other critical habitats such as the wildlife corridors in Gunung Bintang Hijau in Kedah-Perak and Endau Rompin in Johor-Pahang, as well as fresh water swamps and open lakes, were also identified for conservation. Gene banks for endangered species and *ex-situ* breeding programmes were also established to protect endangered species and facilitate relocation of threatened species.

22.15 *Forest Resources.* During the Plan period a total of 19.52 million hectares or 59.5 per cent of Malaysia's land area remained under forest cover, of which 14.39 million hectares were permanent reserved forest and 3.21 million hectares were totally protected areas. In addition, 310,550 hectares of forest plantation were established, of which 75,800 hectares were in Peninsular Malaysia and 174,750 hectares in Sabah and 60,000 hectares in Sarawak. The Malaysian Criteria, Indicators, Activities and Standards of Performance for Forest Management Certification (MC&I) system was launched in 2001 to certify sustainably managed forests and chain-of-custody timber produced from these forests, and 67 companies were certified by 2005. Measures were also taken to intensify the conservation and rehabilitation of mangrove forests, to serve as an effective shoreline defence system against erosion, wave action and *tsunamis*.

22.16 *Mineral Resources.* The National Minerals Council was established in 2001 to monitor and coordinate measures to manage mineral resources including the mineral reserves policy and the institutional framework for mineral governance. The model State Mineral Enactment, which encompassed enhanced environmental considerations and procedures, was adopted by three more states, namely Johor, Kedah and Negeri Sembilan, bringing the total to five. Quarry Rules pursuant to the National Land Code 1965 were also adopted by Selangor in 2003 and Pahang in 2004 to improve control of quarry operations.

22.17 *Marine and Coastal Resources.* During the Plan period, 37 projects were implemented to protect coastal areas from degradation and erosion. These included the construction of wave breakers, beach nourishment and widening of coastlines, particularly the shoreline bordering agricultural areas in Johor, Melaka, Perak, Perlis, Pulau Pinang, Sarawak and Wilayah Persekutuan Labuan. In addition, a pilot study to develop an integrated shoreline management plan (ISMP) for the northern coastline of Pahang was completed, while the study for the southern coastline of Pahang is ongoing. Other initiatives to protect marine diversity included the establishment of the Tun Sakaran Marine Park in Sabah and the preparation of a Marine Strategic Roadmap to intensify marine R&D.

Other Initiatives

22.18 *Environmental Awareness and Promotion.* During the Plan period, efforts to enhance environmental awareness were further intensified at school, community and national levels. In 2002, the Malaysian Environmental NGOs (MENGOs) was established to bring together 18 environment-related organisations to improve cooperation and integration of their efforts in raising awareness on environment and natural resource issues and in providing inputs, comments and feedback to the Government. In addition, the *Bandar Lestari-Anugerah Alam Sekitar* programme was launched in 2005 to encourage local authorities to adopt environmentally friendly practices, and Kuantan, Pahang emerged as the first recipient.

22.19 *International Environmental Initiatives.* Malaysia continued to play an active role in various multilateral environmental initiatives. Notably, Malaysia hosted the Seventh Convention of Parties (COP7) of the Convention on Biological Diversity and the First Meeting of Parties (MOP) to the Cartagena Protocol in February 2004. A number of multilateral environmental agreements (MEAs) and related amendments were signed and ratified during the Plan period. These included the signing of the Stockholm Convention on Persistent Organic Pollutants, while the Montreal Protocol on Substances that Deplete the Ozone Layer, the Basel Convention on the Transboundary Movements of Hazardous Waste and their Disposal, the Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the Cartagena Protocol on Biosafety, were ratified.

III. PROSPECTS, 2006-2010

22.20 During the Ninth Plan period, the Government will place emphasis on preventive measures to mitigate and minimise pollution as well as address other adverse environmental impacts arising from development activities. In addition, steps will be undertaken to identify and adopt action to promote sustainable natural resource management practices in relation to land, water, forest, energy

and marine resources. These efforts will enhance protection of the environment and conservation of natural resources and contribute towards improving the quality of life. The strategic thrusts for addressing environmental and natural resources issues will focus on:

- ❑ *promoting a healthy living environment;*
- ❑ *utilising resources sustainably and conserving critical habitats;*
- ❑ *strengthening the institutional and regulatory framework as well as intensifying enforcement;*
- ❑ *expanding the use of market-based instruments;*
- ❑ *developing suitable sustainable development indicators; and*
- ❑ *inculcating an environment-friendly culture and practice at all levels of society.*

Environmental Management

22.21 *Air Quality.* A new Clean Air Action Plan will be developed and implemented to improve air quality. Detailed studies will be undertaken to formulate action plans to improve the air quality in urban areas. Emission of air pollutants from stationary sources will be addressed by promoting the use of cleaner technologies. The sulphur content in diesel and petrol will be reduced from 3,000 ppm to 500 ppm and from 1,500 ppm to 500 ppm respectively, with the adoption of EURO 2M specifications. New emission standards based on EURO 2 for diesel vehicles and EURO 3 for petrol vehicles will also be introduced to reduce emission of air pollutants from mobile sources. In addition, the capacity and ability to fight peat swamp fires, a domestic source of haze, will be strengthened.

22.22 *Water Quality.* The utilisation of the integrated river basin management (IRBM) approach will be intensified to improve river and groundwater quality. Efforts will be targeted towards reducing the number of polluted rivers. Public sewerage systems will be upgraded and additional centralised sewerage treatment plants will be constructed to reduce the discharge of inadequately treated wastewater into river systems. Gross pollution traps and sedimentation ponds will be installed at critical locations in river basins to reduce the outflow of non-point source pollutants. Siltation and erosion control will be addressed through the amendment of existing laws. Enforcement will be intensified to ensure that effluent discharge comply with environmental standards in order to maintain environmental health.

22.23 *Marine Water Quality.* The interim standards for marine water quality will be reviewed with a view towards establishing comprehensive standards. A detailed study will be undertaken to establish the appropriate methodologies and parameters taking into account domestic pollutant loads and conditions. In addition, surveillance of marine waters will be intensified to increase compliance and control the illegal discharge of pollutants.

22.24 *Solid Waste.* The National Strategic Plan for Solid Waste Management (Strategic Plan) will be implemented with emphasis on the upgrading of unsanitary landfills as well as the construction of new sanitary landfills and transfer stations with integrated material recovery facilities. Priority will continue to be accorded to the reduction, reuse, recovery and recycling of waste as well as greater use of environment-friendly materials such as bioplastics. Legislation to streamline solid waste management will be enacted to facilitate the implementation of the strategies and measures in the Strategic Plan. Awareness raising campaigns and activities will be increased to educate the public on the benefits of practicing sustainable consumption. A solid waste department will be established to implement these measures and to administer solid waste policy, planning and management in a holistic manner.

22.25 *Toxic, Chemical and Hazardous Substances.* The institutional capacity of the relevant agencies managing toxic and hazardous substances will be further strengthened through the adoption of a global harmonised system for the registration of imports, transportation and safe handling of chemical and hazardous substances. Measures will also be undertaken to develop a framework to facilitate the utilisation of approaches and technologies to treat and convert toxic waste into a resource for reuse. In addition, steps to address the indiscriminate use of chemicals, particularly in agricultural practices, will be intensified.

22.26 *Cleaner Technology.* To promote the greater use of environmentally sound technologies, industries will be encouraged to adopt self-regulatory measures and apply the Life Cycle Approach (LCA) in their production processes and product development. SIRIM Berhad will develop a National Lifecycle Inventory Database for primary industries and activities such as electricity generation, water supply, petroleum and natural gas exploration and production as well as petrochemicals. The database will facilitate efforts by industries to develop LCAs in their production and manufacturing processes. In addition, findings from the pilot eco-labelling project will be used to develop a national environmental labelling scheme. Steps will also be taken to facilitate the adoption of cleaner technologies by small and medium enterprises (SMEs), including through the identification of new sources of financing from the SME Bank.

Natural Resource Management

22.27 *Land Use Planning.* The application of the spatial development approach, which integrates environmentally sustainable development concepts and methodologies, will be promoted. The strategies in the NPP will be implemented via incorporation into structure plans. Appropriate methods and parameters will be developed to identify and manage ESAs to enable them to serve as buffer zones in the control of development sprawl. Management of land resources will be improved through the expansion of the *e-Tanah* programme and by instituting competent land administration through training.

22.28 *Landscape.* The National Landscape Policy will guide the development of urban parks at city, district and state levels. Green lung reserves will be expanded and rivers, roads, public buildings and amenities will be landscaped to improve the environment. Suitable ex-mining areas and quarries will be rehabilitated and improved to serve as geological heritage sites and eco-tourism attractions.

22.29 *Water Resources.* Emphasis will be placed on maintaining and enhancing the ecosystem functions of river systems through the restoration and maintenance of highland catchments, wetlands, river buffers and riparian zones. The suitability of market-based instruments will be explored to internalise environmental costs, including scarcity, into water pricing systems. Measures to reduce water demand will be emphasised including through the provision of tax rebates for industries that recycle water.

22.30 *Biodiversity.* Efforts will be intensified to protect critical habitats. Towards this end, existing management plans will be reviewed to further strengthen the protection of threatened flora and fauna. EIA processes will be reviewed to include assessment of impacts to ecosystems. The Highland Conservation and Management Strategy study for Sabah and Sarawak will be implemented and a National Highlands Policy will be developed. The Guidelines for Access and Benefit Sharing (ABS) of Biological Resources will be developed to ensure the equitable sharing of benefits from the use of biodiversity resources as well as address issues of biopiracy. Research institutions and universities will develop a comprehensive biodiversity inventory to facilitate bioprospecting.

22.31 *Forest Resources.* The conservation and sustainable use of forest products, watersheds and water catchments will be emphasised to promote sustainable forest management. The development of sustainable sources of wealth from forest products such as herbal and medicinal products, eco-tourism and bioprospecting activities will be promoted. Centres on Forest and Non-Forest Products will be established to further develop capacity in environmental and natural resources management. The MC&I system will be strengthened to consolidate efforts for sustainable forest management.

22.32 *Mineral Resources.* A synergistic approach will be taken to steer the industry towards sustainable mineral resources development. The adoption of environmentally-friendly practices will be emphasised through the adoption of the Minerals Enactment and Quarry Rules by all states.

22.33 *Marine and Coastal Resources.* An Integrated Coastal Zone Management Policy will be adopted to promote conservation and preservation of marine and coastal resources. The rehabilitation and improvement of the coastline will be intensified through regeneration and re-vegetation programmes. A comprehensive management plan for mangroves and coastal forests will be developed to arrest the mangrove depletion rate to ensure a continuous supply of resources as well

as to mitigate the impact of coastal erosion and *tsunamis*. A Coastal Vulnerability Index will be developed to guide the design of programmes to enhance coastal zone management.

Other Initiatives

22.34 *Economic Approaches*. Measures will be undertaken to expand the use of economic instruments and market-based measures, such as the incorporation of the polluter pays principle, user fees and economic valuation techniques, to address environmental issues effectively and efficiently. The use of innovative funding mechanisms to facilitate the conservation of critical and protected areas will be explored. Pilot studies and projects will be undertaken to operationalise the implementation of these innovative market-based instruments.

22.35 *Environmental Awareness and Promotion*. During the Plan period, efforts to promote and inculcate an environment-friendly culture and practice among Malaysians will be intensified and will involve the active participation of the private sector and NGOs. Appropriate interventions and changes will be made through the school curriculum to create a deeper and longer lasting awareness of the need to care for the environment. The private sector will be encouraged to institute responsible care programmes within industries and companies to develop a higher degree of care towards public safety, security and the environment. In addition, the energy, ideas and enthusiasm of environmental NGOs will be harnessed to complement and supplement efforts by the Government in protecting the environment.

22.36 *Sustainable Development Indicators*. A Malaysian SDI system will be developed and benchmarked with on-going international initiatives to ensure comparability. In this regard, a comprehensive study will be conducted to evaluate the timeliness, appropriateness and usefulness of applying assessment methods such as natural resource accounting, environmental auditing and pressure-state-response based models to monitor sustainable development in Malaysia.

22.37 *International Environmental Initiatives*. Malaysia will continue to emphasise regional and international cooperation in addressing regional and global environmental issues. The deliberations and developments at various environmental fora will be closely monitored to ensure that they do not jeopardise Malaysia's interests. Emphasis will be accorded to the studies and measures needed to facilitate action by Malaysia to meet its commitments to multilateral environmental agreements.

IV. INSTITUTIONAL SUPPORT

22.38 The Ministry of Natural Resources and Environment and its 10 agencies will have a key role in promoting environmental stewardship and maintaining

the balance between development needs and the environment. Together with the Ministry of Housing and Local Government, it will ensure that the environment is taken into account in land use planning and development. The Department of Forestry and the Department of Wildlife and National Parks (PERHILITAN) will be the frontline agencies in the conservation of our biodiversity. The corporate sector and environmental NGOs will be encouraged to supplement and complement the efforts of these key agencies.

V. CONCLUSION

22.39 During the Eighth Plan period, emphasis was placed on improving environmental quality through better management in major areas of concern particularly air and water quality, solid waste management, as well as the utilisation of cleaner technologies. Efforts were also intensified to protect and conserve land, water, biodiversity and forest resources. During the Ninth Plan period, the Government will place emphasis on preventive measures to mitigate and minimise pollution. The promotion of sustainable natural resource management practices in relation to land, water, forest, energy and marine resources, will be intensified. There will also be closer cooperation with stakeholders and NGOs in addressing environment and natural resource concerns. These efforts will enhance protection of the environment and conservation of natural resources and contribute towards improving the quality of life.

ENRICHING CULTURE, ARTS AND HERITAGE

23

I. INTRODUCTION

23.01 During the Eighth Plan period, the development of culture and the arts was promoted to enhance national identity while strengthening national unity, harmony and integration. Various aspects of culture and the arts were developed to offer a myriad of products and services that supported the growth of the tourism industry. In this regard, concerted efforts to preserve the nation's cultural heritage, dissemination of cultural information and the development of culture and the arts were also undertaken.

23.02 In the Ninth Plan, the development of culture, arts and heritage will be given greater emphasis. This is in line with the National Mission of developing human capital who are not only knowledge-driven and economically competitive, but also imbued with a progressive outlook and good values, including positive cultural values. Culture, arts and heritage-related industries, especially crafts, will also be promoted as a source of economic growth. The appreciation of culture, arts and heritage will be enhanced as part of a larger nation-building agenda, in helping to build awareness of a common history and heritage, as well as of a shared future and destiny for all Malaysians. The Government will also seek to develop a healthy domestic culture and arts scene as this will help raise the people's quality of life. The active participation of the private sector, non-governmental organisations (NGOs) and the people in culture, arts and heritage related activities and programmes will be encouraged, while the upgrading of cultural resources and infrastructure will be intensified.

II. PROGRESS, 2001-2005

23.03 During the Eighth Plan period, various culture, arts and heritage related programmes were implemented to raise the interest of society in arts and culture as well as the preservation of the nation's heritage. The Ministry of Culture, Arts and Heritage was set up in 2004 to consolidate policy and programmes that further promote Malaysia's culture, arts and heritage as well as to formulate new strategies to make the arts more accessible to the masses.

Arts and Culture

Awareness and Appreciation of Arts and Culture

23.04 In line with efforts to create a culturally-rich society, various programmes were undertaken to increase appreciation of culture and the arts among Malaysians at all levels. In this regard, arts and culture related activities were carried out at the national, state, district and village levels. During the Plan period, four new cultural centres were established in Melaka, Negeri Sembilan, Perlis and Wilayah Persekutuan Kuala Lumpur, bringing the total number of such centres to seven. These centres provided avenues to promote artistic and cultural activities as well as to conduct training and capacity-building programmes to nurture talents in the performing arts.

23.05 In an effort to create appreciation and love for culture among the younger generation, various cultural programmes and activities, such as cultural clubs continued to be organised in primary and secondary schools. During the Plan period, an additional 220 *Kumpulan Tunas Budaya* involving 10,203 students, and 77 *Kelab Kesenian Sekolah* involving 2,800 students, were set up in primary and secondary schools, respectively. Assistance in the form of training, advisory services as well as costumes and equipment was also provided. Students involved in these activities were given the opportunity to perform at official functions at the state and district levels as part of the effort to spread the awareness and appreciation of culture and the arts among more Malaysians.

Capacity Building and Training

23.06 To further promote the development of the creative and performing arts as well as to provide an avenue to nurture creative talents, the *Akademi Seni Kebangsaan* (ASK) continued to offer courses at certificate and diploma levels in theatre, creative writing, dance and music as well as cinematography. During the Plan period, a total of 485 students enrolled at the ASK while 157 graduated in various disciplines. In addition, existing courses and programmes in the performing and fine arts conducted in other institutions of higher education were expanded to include new areas such as computer graphic modeling, digital video arts as well as marketing and management. These provided more opportunities for students to develop their talents.

Performing Arts

23.07 To support the tourism industry and to provide opportunities for Malaysians to deepen their appreciation of arts and culture, efforts continued to be undertaken by the Government and the private sector to develop world-class entertainment infrastructure to showcase stage shows of international standard. The *Istana*

Budaya, equipped with modern facilities, continued to be an important venue for the staging of performing arts and various cultural shows. During the Plan period, 96 performances were staged at *Istana Budaya* which included musicals, concerts and dances attracting an audience of over 403,400. The private sector also contributed to the diversity and variety in the performing arts with the setting up of the Kuala Lumpur Performing Arts Centre in 2005.

Visual Arts

23.08 To inculcate interest in the visual arts, various exhibitions, seminars, workshops, competitions and art activities were held during the Plan period. A total of 142 exhibitions were organised during the Plan period, attracting over 866,500 visitors. Each exhibition highlighted a different approach and theme, showcasing the creativity and talent of local and international artists. The *Balai Seni Lukis Negara* (BSLN) continued to collect, conserve and exhibit works of art as well as promote awareness and appreciation among all levels of society. In addition, the BSLN also initiated *Laman Seni Kuala Lumpur*, a popular monthly art market that was visited by an average of 2,000 people a month.

National Unity

23.09 Recognising that an appreciation of and respect for the culture of the various ethnic groups in Malaysia is an important part of forging a unique Malaysian identity, the cultural and religious festivals of the major ethnic groups in Malaysia continued to be celebrated at the national level. In this regard, the Government organised Malaysian Open Houses to celebrate festivals such as *Hari Raya Aidilfitri*, the Chinese New Year, Deepavali, Christmas, *Gawai* and *Tadau Kaamatan*. These celebrations reflected the spirit of national unity and harmony in multi-cultural Malaysia.

Heritage

23.10 To strengthen and inculcate an appreciation of culture and heritage among Malaysians, efforts were made to conserve and preserve cultural products such as heritage sites, monuments and artifacts, particularly those which have historical importance. In this regard, 63 monuments and 25 historical sites were preserved, conserved and upgraded for the benefit of the nation as well as to serve as tourist attractions. This included the *Rumah Merdeka* in Alor Star, Kedah, the original home of the first Prime Minister, which was restored as part of the *Memorial Tunku Abdul Rahman*.

23.11 Besides maintaining existing museums, new museums and archives were also set up to highlight Malaysia's achievements as well as to serve as centres to preserve and document the country's history. To showcase Malaysia's

achievement in the automotive industry, the National Automobile Museum was set up at the Kompleks Sepang International Circuit. The Museum was opened to the public in 2004 and attracted over 34,500 visitors. The establishment of the Kedah/Perlis National Archives and the Sabah National Archives in 2003 and 2005, respectively, facilitated the collection, acquisition and preservation of national records for research purposes. In addition, the Islamic Arts Museum contributed towards the promotion of local and foreign Islamic art and artifacts. Other measures to create awareness and appreciation of Malaysia's rich heritage included the dissemination of information and the implementation of various programmes and activities such as talks, seminars and workshops.

III. PROSPECTS, 2006-2010

23.12 The Ninth Plan period will give greater emphasis towards enhancing the role of culture and arts in the lives of all Malaysians as well as to promote cultural and arts related industries. This is due to the active involvement of all groups in cultural and arts activities which will contribute towards the total development of the individual, strengthen national unity and enhance the quality of life of Malaysians. In this regard, more concerted efforts will be undertaken with the participation of the private sector to create greater awareness and appreciation of Malaysia's rich cultural heritage. Hence, the strategic thrusts for the Ninth Plan period will be as follows:

- ❑ *inculcating positive cultural values among Malaysians;*
- ❑ *enhancing the appreciation of culture, arts and heritage among Malaysians at all levels;*
- ❑ *conserving and preserving tangible and intangible heritage;*
- ❑ *developing the craft industry and promoting craft products for the world market;*
- ❑ *developing the creative cultural industry; and*
- ❑ *strengthening capacity building programmes to ensure continuous and sustainable development of culture, arts and heritage.*

Inculcating Positive Cultural Values

23.13 The continued emphasis on developing positive cultural values among Malaysians and creating a Bangsa Malaysia is of great importance especially in light of Malaysia's multi-ethnic society and the need to maintain national unity and harmony in the course of pursuing development goals. In this regard, a series of courtesy and integrity campaigns that seek to enhance positive social

and cultural values and attitudes will be undertaken. The campaigns and other related programmes will emphasise the need for Malaysians to practise tolerance, mutual respect and other positive values necessary to maintain national unity, social harmony and cohesion.

Enhancing the Appreciation of Culture, Arts and Heritage

23.14 To develop a greater appreciation of culture, arts and heritage among Malaysians at all levels, access to culture and arts activities will be increased, while the active participation of all communities in these activities will be encouraged. In this regard, the *Program Merakyatkan Seni dan Budaya* or Arts for All programme, which is aimed at bringing the arts back into the community and to make the arts a part of daily life, will be implemented. The activities under the Arts for All programme include performances such as traditional and modern dances, drama and music as well as arts and crafts related activities, and will involve communities in both urban and rural areas.

23.15 Programmes that educate and advocate the importance and value of culture, arts and heritage appreciation among youths will be given more emphasis during the Ninth Plan period. Towards this end, concerted measures will be undertaken by the respective agencies to increase the number of those trained in various cultural and arts related fields. These individuals will then be deployed to various schools under the *Tunas Budaya* programme to provide training in the arts to students. *Tunas Budaya* activities are envisaged to help instill an appreciation of culture and the arts and to provide basic knowledge and skills of various art forms to students. The programme provides the link between the arts community and the education sector which supports the professional development of arts educators and arts education providers. In addition, a similar programme will be extended to cover public sector employees and youths to improve their access to the arts. Strategic partnerships between the various state governments, local authorities, arts and community based organisations together with the private sector will be established to ensure effective implementation of this programme.

23.16 To enhance cultural and arts appreciation, particularly at the grass root level, various out-reach programmes such as the *Laman Seni Kuala Lumpur* will be intensified and extended to all states. To deepen awareness and appreciation of the arts as well as to enhance the visibility of visual and performing arts, various interactive programmes involving the participation of youths, the community and the private sector will be implemented. In line with approved policy, measures will be undertaken to realise Kuala Lumpur's position as the hub of cultural and artistic activities in the Ninth Plan period.

23.17 Besides being a source of entertainment and cultural enrichment for individuals, the performing arts is also a vehicle for the preservation and transmission of culture. In this regard, the role of *Istana Budaya* will be strengthened as a centre of excellence for the staging of high quality performing arts. Continuous efforts will be undertaken to attract more foreign productions to make *Istana Budaya* as the venue of choice for the staging of shows, which will contribute towards the realisation of Kuala Lumpur as a regional cultural hub. In making the arts more accessible to the public and raising awareness of the availability of the state-of-the-art facilities at *Istana Budaya*, aggressive promotional activities will be carried out targeting local and foreign productions. This effort will be in tandem with measures to create a cultural belt within and around *Istana Budaya*.

Conserving and Preserving Heritage Products

23.18 The National Heritage Act 2005, enforced in March 2006 will allow for a more coordinated and integrated approach towards the conservation and preservation of national heritage products, both tangible and intangible. The Act will include enforcement measures to ensure that conservation and archeological practices comply with world standards. The implementation of this Act will also facilitate the identification and designation of buildings, monuments and sites with historical importance to be gazetted as historical zones.

23.19 The National Archives will continue to preserve and manage the nation's archival collection as part of the national heritage. During the Plan period, it will focus on becoming the nation's resource and research centre in providing curatorial consultancy services. Towards this end, the National Archives will diversify and enhance the quality of its collection and services as well as expand its expertise in various related fields. Leveraging on new technologies and advancements in information and communications technology, the second phase of the electronic record keeping and digital preservation of government documents of historical value will be undertaken. In addition, the Audio and Visual Documentation Centre will be established as a record keeping centre.

23.20 As part of efforts to inculcate greater awareness of and appreciation for Malaysia's rich cultural heritage, the Textile Museum will be established in 2006. The Museum will help to disseminate knowledge and information as well as promote research on *tenunan*, *songket* and *batik*, and will feature textiles from all states which will provide a good source of information for students, researchers, academicians and craft entrepreneurs.

Developing the Craft Industry and Promoting Crafts for the World Market

23.21 During the Ninth Plan, continuous efforts to develop and improve the quality of Malaysian crafts will be undertaken. This will include research and

development on new ways to enhance craftsmanship, as well as developing new designs and technology. Extensive efforts to promote Malaysian crafts in traditional and new markets will also be undertaken in collaboration with the private sector. Innovative and creative ways to market and brand Malaysian crafts will be explored.

Developing the Creative Cultural Industry

23.22 Malaysia has vast cultural and creative resources in the fields of performing arts, visual and fine arts, Islamic calligraphy and *Jawi* writing, film, arts education, literary works and craft which can be further developed and exploited. During the Ninth Plan period, the economic potential of the creative cultural industry will be further developed through close collaboration between the public and private sectors. To facilitate the development of the creative industry and to ensure its contribution to the economy, the Government will continue to provide a conducive environment as well as supportive infrastructure. Industries will be encouraged to utilise various facilities at the state level such as state cultural centres and galleries to promote their activities. In addition, the Government will also provide business premises to entrepreneurs to promote their crafts and products.

23.23 The promotion and marketing of Malaysian arts, culture and heritage products will be intensified at both domestic and international levels through various marketing campaigns and the organisation of prestigious international events. These events such as the KL Festival, Malaysian Film Festival and National Craft Day will continue to be organised to make Kuala Lumpur a cultural hub.

Strengthening Capacity Building Programmes

23.24 In line with the aspiration to create excellence among professionals in the fields of performing arts and heritage, the ASK will be upgraded into *Akademi Seni Budaya dan Warisan*. The scope of the Academy will be expanded to include degree courses in heritage studies covering museumology, archeological and archival science. In addition, the academy will also intensify skills training to produce professionals with the capacity to assist in the production of high quality performances in areas such as stage and theatre management, lighting and sound design, props and set design as well as effective marketing. To further promote and develop the local film industry, *Perbadanan Kemajuan Filem Nasional Malaysia* (FINAS) will focus on capacity building activities to develop highly skilled human capital in film-related fields.

23.25 Capacity building programmes will continue to be conducted at the National Craft Institute as well as through various entrepreneur development

programmes to contribute to the development of technologically skilled artisans to meet future challenges. A special programme, the Heritage Craft Apprenticeship Scheme, will be implemented during the Plan period to provide skill training as well as to preserve traditional arts and crafts including indigenous crafts.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

23.26 The Ministry of Culture, Arts and Heritage will continue to be the lead agency in implementing programmes and projects related to culture, arts and the preservation of national heritage. These efforts will be complemented by the Ministry of Education, the Ministry of Higher Education, the Ministry of Tourism, the Ministry of Entrepreneur and Cooperative Development and the Ministry of Information as well as the state governments.

23.27 During the Ninth Plan, an allocation of RM442.4 million will be provided for culture, arts and heritage programmes, as shown in *Table 23-1*. Of this total, 63 per cent will be used for the preservation and conservation of cultural heritage and 37 per cent will be for the implementation of various arts and culture programmes at the state and district levels.

TABLE 23-1

**DEVELOPMENT EXPENDITURE AND ALLOCATION FOR CULTURE,
ARTS AND HERITAGE, 2001-2010**
(RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|----------------------------------|----------------------------|---------------------------|
| Culture and Arts | | |
| Cultural Centres | 69.9 | 55.9 |
| <i>Balai Seni Lukis Negara</i> | 1.0 | 22.0 |
| <i>Akademi Seni Kebangsaan</i> | 39.7 | 20.0 |
| FINAS | 7.1 | 3.0 |
| Craft | 67.0 | 63.5 |
| Heritage | | |
| Museum | 79.0 | 65.0 |
| Archives | 105.1 | 113.0 |
| Historical Heritage Preservation | 85.2 | 100.0 |
| Total | 454.0 | 442.4 |

Source: Economic Planning Unit

V. CONCLUSION

23.28 During the Eighth Plan period, the implementation of culture, arts and heritage programmes contributed towards the strengthening of national unity as well as promoting the tourism industry in the country. During the Ninth Plan period, recognising that culture and heritage are the intertwining anchors of civilisation and an important aspect of developing well-balanced Malaysians imbued with good values and progressive outlook, focus will be given towards enhancing the role of culture, arts and heritage in the daily life of Malaysians. To facilitate this, strategic collaboration between the public and private sectors as well as civil society will be strengthened. Recognising the potential of culture, arts and heritage related industries as sources of economic growth, efforts to promote the craft and creative cultural industries will also be intensified.



DEVELOPING A SPORTS CULTURE

24

I. INTRODUCTION

24.01 During the Eighth Plan period, sports development programmes were implemented by the Federal and State Governments as well as the private sector and national sports associations to promote a healthy lifestyle while developing character, team work and goodwill among Malaysians. Various efforts were undertaken to attract greater participation in sports and recreational activities.

24.02 Recognising the importance and contribution of sports towards enhancing national unity and inculcating the spirit of patriotism and solidarity as well as building a disciplined and competitive society, efforts to promote mass and high performance sports will continue to be undertaken during the Ninth Plan period. Emphasis will be placed on creating a sports culture among Malaysians to promote a healthy lifestyle as well as achieve excellence and recognition in sports at the national and international levels.

II. PROGRESS, 2001-2005

24.03 During the Plan period, various measures were implemented to provide an enabling environment for sports development in the country which included the training of athletes, coaches and officials, development of facilities as well as organising competitions at the national and international levels. These efforts provided an impetus to the development of sports and contributed towards the growth of the tourism industry. To achieve excellence in national and international competitions, emphasis was given to the development of high performance sports programmes while the Sports For All programme continued to be promoted to encourage mass participation of society in sports and recreation.

Enabling Environment

24.04 During the Plan period, a total of 564 sports associations was registered in line with the Sports Development Act, 1997. This enabled the Sports

Commissioner to ensure these associations were managed and administered in a more systematic, efficient and professional manner. A total of 29 associations was deregistered for various reasons provided under the Act. To further enhance professionalism among the office bearers of the sports associations, various courses were conducted by the Sports Commissioner's Office and 2,491 officials were trained during the Plan period.

24.05 A Special Cabinet Committee on Sports was established in 2004 to ensure effective coordination and implementation of sports development programmes. The Committee approved a monthly pension scheme which gave due recognition to former athletes who excelled in the Olympic Games. In this regard, two badminton players who won medals at the 1992 Olympic Games in Barcelona and three players in the 1996 Olympic Games in Atlanta benefited from the scheme.

Mass Sports Programme

24.06 Various activities under the mass sports programme continued to be implemented to create an active and healthy Malaysian society as well as to promote youth solidarity and national unity through participation in sports. During the Plan period, sports events and activities, including traditional sports as well as new sports such as extreme sports, mountain climbing, skate boarding and motor sports were organised. These events received encouraging response from sports enthusiasts which attracted 615,000 participants in 5,120 activities. In addition, awareness campaigns as well as fitness education programmes were organised aimed at creating and maintaining a healthy lifestyle. Callisthenics at the workplace and public parks were introduced by public and private sector organisations to improve the health and increase the productivity of their workers.

24.07 The National Fitness Council was set up in 2004 to further advance an active, physically fit, healthy and united Malaysia. This Council, a collaboration of four government agencies, namely the Ministry of Youth and Sports, Ministry of Health, Ministry of Housing and Local Government and Department of National Unity and Integration, supported the creation of a sports culture among Malaysians and enabled the implementation of more integrated and coordinated sports development programmes.

High Performance Sports Programme

24.08 During the Plan period, the Government undertook the upgrading and renovation as well as the construction of sports facilities at the national and state levels. These included the upgrading of stadiums and sports complexes such as the *Stadium Tuanku Abdul Rahman*, Seremban and the *Kompleks Sukan Paroi* in Negeri Sembilan as well as the construction of new facilities including the *Kompleks Sukan Negeri Melaka* and the *Kompleks Sukan Tawau, Sabah*.

24.09 To enable participation in international competitions, various programmes aimed at building a pool of young talents with the potential of becoming champions were implemented by the National Sports Council (NSC). In this regard, the Commonwealth Games Athletes Preparation Programme, the Southeast Asian (SEA) Games Athletes Preparation Programme and the Talent and Youth Development Programme were continued during the Plan period to provide young athletes with systematic training. These long-term training programmes improved the performance of the national athletes with Malaysia emerging as the champion contingent for the first time at the XXI SEA Games in 2001 and Malaysian athletes were qualified to participate in 11 sports events at the 2004 Olympic Games in Athens compared with nine in the 2000 Olympic Games in Sydney.

24.10 Malaysian athletes also excelled in individual championships to reach world standard in sports such as badminton, tenpin bowling, squash, diving, body building, *wushu* as well as traditional sports such as *pencak silat*. They participated in, among others, the World *Pencak Silat* Championship in 2003, the World Championship for badminton, World FIQ for tenpin bowling and the British Open and World Championship for squash in 2005.

24.11 The training of athletes, coaches and sports officials for competitions at national and international levels continued to be undertaken by the respective sports associations and the NSC. These bodies provided the necessary training to athletes to participate in international competitions such as the Asian Games, Commonwealth Games, SEA Games and the Olympics. During the Plan period, Malaysia successfully hosted competitive sporting events which included the XXI SEA Games and World Cup Hockey in 2001, the XV World Tenpin Bowling Championship in 2003, ASEAN Cup Shooting Championship in 2004 and the VI International Raja Muda Regatta as well as the Monsoon Cup in 2005. In addition, the hosting of other international sporting events such as the Power Boat, *Le Tour de Langkawi* and the Formula One Grand Prix facilitated the growth of the sports industry as well as contributed to the development of the tourism industry.

24.12 To establish the foundation for participation in high performance sports, a more systematic approach for the identification and preparation of athletes at an early stage at the primary and secondary school levels was adopted. Towards this end, athletics and gymnastics were included in the school physical education curriculum, while the number of physical education teachers was increased, especially at primary schools. A talent identification programme was implemented to identify young athletes with high potential to be trained in training centres throughout the country. During the Plan period, a total of 2,370 athletes was trained at 115 sports training centres by 208 qualified coaches. Specialised training programmes were also implemented in institutions of higher education to enable promising athletes to continue training while pursuing their education.

24.13 With the establishment of world class sports facilities, efforts were undertaken to make Malaysia an international sports destination as well as venue for training of coaches and athletes through collaboration with international sports organisations and associations. Athletes from temperate countries were encouraged to utilise facilities available in the country for the purpose of training in tropical conditions. During the Plan period, a total of 34 international teams in various games such as hockey, squash, archery, football, swimming and athletics benefited from this arrangement.

24.14 In recognition of the contributions of sportsmen and sportswomen and to further encourage the participation of youths in sports, the Government introduced various incentive and welfare schemes. In appreciation of their contributions in international competitions, the *Skim Hadiah Kemenangan Sukan*, *Skim Hadiah Kemenangan Atlit Remaja*, *Skim Galakan Jurulatih Kebangsaan* and *Skim Kecemerlangan Pengurusan Pasukan* were continued during the Plan period. A total of 250 athletes received such incentives amounting to RM6.1 million.

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III. PROSPECTS, 2006-2010

24.15 During the Ninth Plan period, sports development will emphasise on institutional and organisational improvements to enhance professionalism and promote greater achievement in sports. The strategic thrusts for the development of sports will be as follows:

- ❑ *strengthening the national machinery and institutional capacity of sports associations to promote greater achievement in sports;*
- ❑ *developing a sports culture among Malaysians through the implementation of various sports programmes; and*
- ❑ *promoting active and healthy lifestyle through sports and recreation.*

Strengthening the National Machinery and Institutional Capacity

24.16 During the Plan period, sports development will give emphasis to eight core sports, namely athletics, aquatic, badminton, tenpin bowling, football, gymnastics, hockey and squash. To ensure that the development of sports in Malaysia is well coordinated and managed in a professional manner and in accordance with the Sports Development Act, 1997, the Sports Commissioner's Office will continue to organise training programmes for office bearers focusing on administration and management. It is expected that about 2,010 officials will be trained annually. To standardise the management of sports associations throughout the country, the Sports Development Act, 1997 will be extended to Sabah and Sarawak.

24.17 The private sector will also be encouraged to complement Government efforts in providing sports and recreational facilities in areas to be developed for residential, commercial and industrial purposes. A long-term plan on the provision and management of sports and recreational facilities by the public and private sectors. In addition, partnership arrangements with the private sector will be intensified to assist in the identification of young talents as well as provide more opportunities for the younger generation to be involved in sports activities.

Mass Sports Programme

24.18 Various sports programmes and sports-related recreational activities will be organised to further promote mass participation in sports. These will include fitness development programmes and outdoor activities while new programmes based on strength and endurance that can attract greater participation among youths will be introduced. To promote the benefits of maintaining a healthy lifestyle among the masses, more awareness programmes such as campaigns, fitness education programmes and callisthenics at the workplace and public parks will be continued during the Plan period. It is expected that 50 per cent of Malaysians will be directly involved in fitness and healthy lifestyle activities by 2010 through these measures. To ensure the effective implementation of such programmes, a total of 24,000 instructors and facilitators in mass sports will be recruited and trained through courses to be conducted locally and abroad.

24.19 The active lifestyle programme will be continued to enable youths, particularly at the grass root level, to participate in sports. Under this programme, all sporting activities including motor sports, water sports and aero sports will be promoted with the support of the corporate sector through their sponsorships. These programmes and activities will enhance and promote sports tourism and contribute to the growth of the sports industry.

24.20 As part of the efforts to promote mass participation in sports, some of the existing sports facilities at state and district levels will be upgraded. Measures will be undertaken to ensure the proper maintenance and upkeep of these facilities, including the strict enforcement of a set of rules and procedures on their utilisation. In addition, personnel involved in the maintenance of these facilities will be provided with relevant training to ensure their capability and efficiency in managing the facilities. To encourage as well as facilitate greater participation in sports at the grass root level, 13 multipurpose sports complexes will be built at the district level. Various facilities for sports such as badminton, *sepak takraw* and futsal as well as premises for meetings and other community-related activities will be provided at these complexes. The proper running and maintenance of each complex will be undertaken by a committee to be set up in each particular area.

High Performance Sports

24.21 During the Plan period, efforts will continue to be undertaken to prepare a larger pool of young athletes to participate in international competitions through more systematic training and coaching programmes. In this regard, the Talent Development Programme will provide training to 14,570 young athletes in 37 sports events. Towards this end, the training centres and coaches for the Talent Development Programme will be increased to produce more athletes with championship talents and potential medal winners particularly for the 2006 Asian Games, 2008 Olympic Games, 2010 Asian and Commonwealth Games as well as other international championships. Greater accessibility to training programmes overseas will be provided to ensure athletes excel in high performance sports at the international level.

24.22 To establish a better 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 be adopted. Towards this end, more physical education teachers will be deployed to primary schools while athletics and gymnastics will be included as part of the education curriculum. In addition, the school sports development programme will be further strengthened including the upgrading of existing facilities, the construction of two new sports schools, greater involvement and participation at the international level as well as the provision of more qualified and competent coaches and trainers. Schools will be encouraged to organise after school activities to provide opportunities for students to improve their skills in familiar sports and involve in new activities under the guidance of good coaches. Greater accessibility to sports facilities and complexes will be provided to students, including those under the management of local authorities in an effort to encourage students to be active in sports.

24.23 As coaches play a vital role in the development of sports, efforts will be undertaken to increase the number of qualified coaches. More training programmes at the certificate, diploma and degree levels will be conducted. A special programme will be introduced for the accreditation of coaches involved in conducting athletes development programmes while experienced former and current athletes will be encouraged to undergo the necessary training to qualify as coaches. Public institutions of higher education will be encouraged to offer more places for students to enrol in degree courses in sport science as well as programmes to train new coaches.

24.24 The Athletes Preparation Programme will be continued to prepare Malaysian athletes for the Commonwealth Games and Asian Games in 2006 and 2010, the SEA Games in 2007 as well as the Olympics in 2008. Malaysia's hosting of the Far East and South Pacific Paralympic Games for the Disabled in 2006 will further contribute towards the development of sports among the

disabled. This event will involve the participation of 48 countries with 5,000 athletes and sports officials as well as 10,000 volunteers. For this purpose, intensive and specialised training programmes will be organised to ensure the successful participation of Malaysian athletes. In addition, the hosting of other sporting events such as the Power Boat, *Le Tour de Langkawi*, the Formula One Grand Prix and the Monsoon Cup will further contribute to the development of the tourism industry.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

24.25 The Ministry of Youth and Sports will continue to be the lead agency in providing sports and recreational facilities at the district and state levels. The state governments, the private sector as well as sports associations will provide support in creating a sports culture and promoting a healthy lifestyle among Malaysians.

24.26 The development allocation for the Ninth Plan is shown in *Table 24-1*. Of the total allocation of RM620.8 million, 48.3 per cent will be utilised for the construction of multipurpose sports complexes and 51.7 per cent for the upgrading, expansion and maintenance of existing sports facilities at the district levels as well as the implementation of athletes development programmes.

TABLE 24-1

DEVELOPMENT EXPENDITURE AND ALLOCATION FOR SPORTS PROGRAMMES, 2001-2010 (RM million)

| <i>Programme</i> | <i>8MP Expenditure</i> | <i>9MP Allocation</i> |
|--|----------------------------|---------------------------|
| Sports Complexes | 188.0 | 299.9 |
| Upgrading and Maintenance of Sports Facilities | 113.2 | 280.9 |
| Athletes Development Programmes | 6.0 | 40.0 |
| Total | 307.2 | 620.8 |

Source: Economic Planning Unit

V. CONCLUSION

24.27 The implementation of sports development programmes during the Eighth Plan period made significant contributions towards the creation of a disciplined society through participation in sports and recreational activities. During the Ninth Plan period, sports development programmes will continue to focus on

increasing accessibility to sports facilities to ensure greater participation at the grass root level as well as nurturing sports talents to excel at national and international level competitions. In addition, sports development programmes will continue to promote a healthy lifestyle, character building and teamwork among Malaysians. The private sector and NGOs are expected to play an increasingly important role in the implementation of sports development programmes to complement public sector efforts.

GOOD GOVERNANCE FOR DEVELOPMENT

25

I. INTRODUCTION

25.01 During the Eighth Plan period, various programmes and measures were implemented to enhance integrity in the public and private sectors. In particular, the launching of the National Integrity Plan (PIN) galvanised efforts towards the creation of a Malaysian society with a high level of integrity. These efforts to enhance integrity involved participation at the grassroots right up to the highest level of society.

25.02 During the Ninth Plan period, in line with the second¹, sixth² and eighth³ principles of *Islam Hadhari*, the implementation of PIN will be intensified with emphasis on priority areas. Ethical business practices and corporate social responsibility programmes will be promoted to improve corporate governance. Efforts will also be directed at eliminating opportunities for corruption, malpractice and abuse of power. These measures will help address corruption, reduce wastage as well as increase transparency and efficiency of public service delivery and the corporate sector by reducing the cost of doing business. The gains in good governance will not only facilitate the achievement of the nation's development goals, but also make Malaysia more competitive and attractive to investors.

II. PROGRESS, 2001-2005

25.03 During the Eighth Plan period, PIN was launched to mould a moral and ethical society with strong religious and spiritual values and high ethical standards, thereby addressing the fourth challenge of Vision 2020. Review of laws, rules and regulations as well as stringent enforcement measures were also undertaken by various regulatory bodies to enhance corporate governance. Measures were also introduced to promote good business ethics in the corporate sector.

¹ "A just and trustworthy government."

² "A good quality of life for the people."

³ "Cultural and moral integrity."

National Integrity Plan

25.04 The implementation of PIN commenced in April 2004 with the launch of TEKAD 2008, the first phase towards enhancement of ethics and integrity to ensure that they become part of society's culture. It is aimed at:

- effectively reducing corruption, malpractices and abuse of power;
- increasing efficiency of the public service delivery system and overcoming bureaucratic inefficiency;
- enhancing corporate governance and business ethics;
- strengthening the family institution; and
- improving the quality of life and societal well-being.

25.05 The Malaysian Institute of Integrity (IIM) was established in 2004 to coordinate and monitor the implementation of PIN. In the initial phase, six lead agencies were identified to spearhead the implementation of PIN, namely the Public Service Department (JPA); the Ministry of Domestic Trade and Consumer Affairs; the Ministry of Women, Family and Community Development; the Ministry of Housing and Local Government; the Ministry of Higher Education and the Ministry of Education. In addition, about 100,000 civil servants underwent training to inculcate noble values and ethics in their daily work routines.

25.06 A National Integrity Index (IIN) comprising six sub-indices, namely the Malaysian Corruption Index; the Malaysian Public Service Delivery Index; the Malaysian Corporate Governance and Business Ethics Index; the Malaysian Family and Community Cohesiveness Index; the Malaysian Courtesy Index; and the Malaysian Quality of Life and Societal Well-Being Index, is being developed to measure the level of integrity in the country. The IIN was pilot tested in Perak to check and correct for its reliability and validity.

Good Corporate Governance

25.07 During the Plan period, various laws and regulations were reviewed to increase efficiency and good governance in the corporate sector. Regulations such as the Listing Requirements, Practice Notes and Guidance Notes, were reviewed to enhance standards of corporate governance and promote greater transparency to enable investors to make informed investment decisions. The revisions included the requirement for company directors to attend the Mandatory Accreditation Programme (MAP) and the Continuing Education Programme (CEP). In order to create a conducive environment for an efficient and robust capital market, the Securities Commission (SC) and Bursa Malaysia Securities Berhad (BMSB) formulated a corporate governance framework for companies

listed on the stock exchange. The framework included the formation of independent audit committees by companies to ensure prudent and transparent financial management.

25.08 Corporate governance in the financial sector was also enhanced with the review of the corporate governance framework for financial institutions by *Bank Negara Malaysia* (BNM), which covered the role of independent directors, their minimum qualifications and compensation issues. The Minimum Internal Audit Standards was also formulated to guide and measure the performance of internal audits and improve operational effectiveness of financial institutions.

25.09 Measures were also undertaken to enhance good governance among companies not listed on the stock exchange. The Companies Commission of Malaysia (SSM) stepped up surveillance activities and public awareness campaigns to ensure compliance with the provisions of the Companies Act 1965 and the Registration of Business Act 1956. Submission of Annual Returns, information on shareholders, capital and audited accounts for the year, increased from 44.0 per cent in December 2003 to 64.0 per cent in December 2004. The SSM also trained corporate directors to ensure that they understand their fiduciary duties in the management of a company. As of May 2005, about 2,350 courses were conducted involving 106,590 company directors.

25.10 During the Plan period, the Minority Shareholders Watchdog Group (MSWG) established a Product Development Advisory Committee (PDAC) and set up a Task Force on Guidance on Pro Forma Financial Information to protect the interest of minority shareholders. The MSWG also conducted the Corporate Governance Rating Survey and developed the Corporate Governance Screencard as well as the Corporate Governance Monitoring Control Sheet to facilitate the attainment of highest standards of good corporate governance.

25.11 Non-governmental organisations (NGOs) such as the Malaysian Institute of Corporate Governance (MICG) and the Business Ethics Institute of Malaysia (BEIM) also undertook initiatives to improve corporate governance. The MICG conducted 30 corporate governance training programmes for 7,000 participants. Similarly, BEIM conducted training programmes to promote *Rukuniaga Malaysia* and create awareness on the importance of ethical business practices. The Federation of Malaysian Manufacturers established the Ethical Business Practice Committee in 2002 as a platform to promote good corporate governance and ethical business values and practices. The Institute of Internal Auditors Malaysia collaborated with relevant agencies to promote a culture of ethics, good corporate governance and integrity amongst its members and key stakeholders. These included the issuance of the “Guidelines on Internal Audit Functions” and the “New Handbook on Corporate Governance” in 2002 as well as a survey on the “Internal Audit Functions of Public Listed Companies” in 2004. The Malaysian International Chamber of Commerce and Industry (MICCI) established a Standing Committee for Improving Business Ethics in 2003 to provide continuing education

and support for members seeking to enhance their governance practices. In 2004, a Charter of Core Business Values was developed based on best practices as identified by multinational corporations in the country.

Addressing Corruption

25.12 The Anti-Corruption Agency (ACA) intensified its three-pronged approach in addressing corruption, namely prevention, community education and punitive action through rigorous enforcement. During the Plan period, the ACA investigated 5,901 corruption cases and made 2,359 arrests, of which, 1,033 cases were charged in court, as shown in *Table 25-1*. The ACA also conducted integrity screening on key personnel in both the public and private sectors for the purpose of promotions, conferment of Federal and state awards and appointments to vital positions.

TABLE 25-1
CASES ON CORRUPTION, 2000-2005

| <i>Year</i> | <i>Investigations</i> | <i>Arrests</i> | <i>Charged</i> |
|--------------|-----------------------|----------------|----------------|
| 2000 | 699 | 430 | 160 |
| 2001 | 663 | 318 | 115 |
| 2002 | 1,063 | 290 | 200 |
| 2003 | 1,058 | 339 | 175 |
| 2004 | 977 | 497 | 178 |
| 2005 | 1,441 | 485 | 205 |
| Total | 5,901 | 2,359 | 1,033 |

Source: Anti Corruption Agency

III. PROSPECTS, 2006-2010

25.13 During the Ninth Plan period, the Government will intensify its efforts to enhance the integrity and transparency of the public and private sectors and further improve the level of good governance in order to facilitate development. The strategic thrusts to enhance good governance will focus on:

- ❑ *intensifying the implementation of PIN;*
- ❑ *reviewing and refining laws and regulations to improve corporate governance; and*
- ❑ *intensifying enforcement and strengthening measures to address corruption.*

National Integrity Plan

25.14 The implementation of the eight PIN strategies will be intensified, namely the integrity agenda for the family; community; civil society; as well as for sociocultural; religious; economic; political; and administrative institutions. Emphasis will be placed on the five priority areas for the implementation of the first phase of PIN, which are to reduce corruption, malpractice and abuse of power; improve efficiency of the public delivery system; improve corporate and business ethics; strengthen the family and community institutions and improve societal well-being.

25.15 IIM will undertake strategic alliances and network with private sector organisations and NGOs as well as international organisations to strengthen integrity-related programmes as well as build capacity among existing organisations. IIM will also assist government agencies incorporate PIN into their respective programmes. The implementation of PIN at all levels will be intensified by establishing agencies similar to IIM at the state level under the auspices of the respective state governments. In addition, the Government will continue to strengthen the role of the various committees tasked to enhance accountability and integrity within the public sector.

Responsible Citizenship

25.16 In line with the fourth challenge of Vision 2020 to establish a fully moral and ethical society whose citizens are strong in religious and spiritual values and imbued with the highest ethical standards, efforts will be directed at strengthening and enhancing local institutions and organisations such as Village Development and Security Committees (JKKK), *Rukun Tetangga* and Residents' Committees as well as utilising the mass media to contribute towards making integrity a way of life. Awareness campaigns and educational programmes will be expanded to remind individuals of the need to continuously inculcate noble values and norms so that they may be internalised and practised and eventually become a part of an individual's way of life and society's culture.

Good Corporate Governance

25.17 The efforts undertaken by the public sector in improving governance will be complemented by similar initiatives in the private sector to serve the interests of their stakeholders. Business establishments will continue to collaborate with the regulatory bodies and NGOs to enhance the level of corporate governance and business ethics. Particular emphasis will be given to improving transparency and accountability. The SSM will continue to ensure that companies comply with the requirements of rules and regulations. In addition, relevant laws and regulations will be reviewed to improve and strengthen corporate governance in Malaysia.

25.18 The SC and BMSB will closely monitor compliance and will strive to improve Malaysia's competitive edge in attracting foreign investors. In this regard, BMSB will continue to strengthen and refine the corporate governance framework for listed companies to improve the confidence of investors in the credibility of the market. The MSWG will intensify its efforts in protecting the interests of minority shareholders especially in companies controlled by founding families.

25.19 Focus will be directed on building strong internal auditing foundations and expanding into enterprise risk management, assurance services, ethics and governance, audit committee support and social responsibility. Private sector organisations will be encouraged to subscribe to and adopt the Malaysian Code on Corporate Governance and *Rukuniaga Malaysia* as well as develop their respective Codes of Ethics and Integrity. An Award for Good Ethics Practitioners and Organisations will also be introduced.

Intensifying Enforcement

25.20 Laws and regulations will be rigorously and credibly enforced to ensure that there is proper compliance. Enforcement will be predicated on preventive action, remedying any wrongs, punishing wrongdoers to deter others, effective action and co-operation among and between regulating agencies. In this regard, a review and update of relevant laws and regulations will be conducted. In addition, the capacity to enforce will be strengthened through the provision of adequate resources and manpower to critical enforcement agencies.

Addressing Corruption

25.21 The Government will intensify its efforts towards the elimination of opportunities for corruption, malpractices and abuse of power in the public and private sectors. In the public sector, the focus will be on enhancing the level of transparency and accountability in areas prone to corruption and corrupt practices. The ACA will continue to collaborate with all parties, and especially the high-risk agencies, in addressing corrupt practices.

25.22 The ACA will also diversify its community education initiatives and increase its campaigns in the media on the perils of corruption. It will adopt a long-term approach and target its educational programmes towards students in primary and secondary schools as well as institutions of higher learning. In addition, the ACA will equip itself with the latest methods and techniques to enhance its capacity and capability in prevention, surveillance and forensic science.

IV. INSTITUTIONAL SUPPORT

25.23 The IIM will be the prime mover in the implementation of PIN. In addition, the Public Service Department, the Ministry of Domestic Trade and Consumer Affairs, the Ministry of Women, Family and Community Development, the Ministry of Housing and Local Government, the Ministry of Higher Education and the Ministry of Education, will spearhead the initial phase of PIN. The Ministry of Culture, Arts and Heritage will promote the inculcation of noble values while the ACA will intensify its efforts in addressing corruption. For the private sector, the SC and SSM will continue efforts to ensure compliance with laws and regulations. In addition, NGOs such as BEIM, MICG and MSWG will undertake measures to promote transparency and accountability.

V. CONCLUSION

25.24 The Eighth Plan period witnessed a renewed commitment by the Government to promote good governance with the launching of the PIN. This commitment will be continued during the Ninth Plan period with the Government taking steps to enhance the integrity, transparency and accountability of the public and private sectors and further improve the level of good governance. These measures will help address corruption, reduce wastage and the cost of doing business as well as increase the efficiency of public service delivery and the corporate sector. These gains from good governance will make Malaysia more competitive and attractive to investors and facilitate the achievement of the nation's development goals.



EFFICIENT PUBLIC SERVICE DELIVERY SYSTEM

26

I. INTRODUCTION

26.01 During the Eighth Plan period, various programmes and measures were implemented to ensure an efficient and effective government administrative machinery for continued economic development. These improvements encompassed initiatives under areas such as quality management, information and communications technology (ICT), accountability and management integrity as well as human resource management. The measures to improve the delivery of public services included reducing bureaucratic red tape by simplifying and streamlining systems and procedures, strengthening district and land administration and measuring performance through Key Performance Indicators (KPIs).

26.02 During the Ninth Plan period, in line with the second¹ and sixth² principles of *Islam Hadhari*, efforts will be taken to improve the public service delivery system to further enhance the quality of life of Malaysians, reduce the cost of doing business, encourage private investment and positively influence investor perceptions about Malaysia as a preferred destination for trade and investment. These efforts will include improving district and local level administration, providing seamless and efficient multi-channel government-customer interface, reviewing and streamlining regulatory and licensing requirements, leveraging effectively on ICT and promoting competency-based human resource management to support effective service delivery.

II. PROGRESS, 2001-2005

26.03 During the Eighth Plan period, concerted efforts were undertaken to enhance the delivery of public services to customers and stakeholders. In addition to on-going efforts to strengthen service delivery through quality

¹ "A just and trustworthy government."

² "A good quality of life for the people."

management initiatives, the Government identified the enhancement of the public service delivery system as a key strategic thrust in the economic stimulus package that was implemented in May 2003 to mitigate the effects of the economic downturn faced by the country. The scope of efforts to enhance the public sector delivery system encompassed reduction of bureaucratic red tape as well as improvements in counter services, issuance of licenses and permits, land administration, services of local authorities, investment facilitation, quality management, recognition of excellence, performance measurement, management of public complaints and ICT development.

Reducing Bureaucratic Red Tape

26.04 Ministerial Task Forces were established in 2003 in various ministries and agencies to reduce bureaucratic red tape. The Task Forces improved existing systems and work procedures to ensure efficient service delivery and prevent abuse and corrupt practices; identified, reviewed and amended rules and regulations that hindered the smooth delivery of services; reviewed and recommended enhancements to service standards contained in client charters and acted on customer feedback; and determined the necessary resource requirements to enhance service delivery. The Task Forces reviewed a total of 335 systems and work procedures by the end of 2005. These led to improvements in service delivery especially in terms of faster processing time, among others, by the Construction Industry Development Board (CIDB) in processing applications from contractors in 30 days, down from 60 days; the Inland Revenue Board (IRB) reducing processing time for payment of refunds from two weeks to two days; and the Immigration Department reducing processing time for the issuance of new passports from one week to three days while passport renewals were processed within 24 hours. The Department also introduced the I-Visa initiative to facilitate bulk visa tourist applications from China and India, and in 2005, implemented measures to expedite the issuance of the Professional Visit Pass to assist experts and knowledge workers to carry out specialised services in critical areas.

Licenses and Permits

26.05 Various measures were undertaken to expedite the issuance of licenses and permits and to reduce the cost of doing business. This was undertaken by reviewing the need for such licenses and permits, introducing composite application forms and licenses and extending the validity period of licenses and permits. An important initiative during the Eighth Plan period was the effort to streamline licensing procedures for the hotel industry by integrating 14 different licenses into a composite hotel license. Under this initiative, local authorities were empowered to act as one-stop centres for processing applications of the composite licenses.

Other agencies also implemented initiatives to expedite the issuance of licenses, permits and approvals. The Ministry of International Trade and Industry (MITI) expedited the approval of import and export licenses as well as the Generalised System of Preferences (GSP) licences, while the Ministry of Tourism delegated powers of the Commissioner of Tourism to expedite issuance of various tourism-related licences. These measures were aimed at facilitating the private sector and reducing the cost of doing business.

Counter Services

26.06 Efforts continued to be undertaken to improve counter services so as to be more customer-oriented and business friendly. These included the provision of one-stop service counters to facilitate access to a variety of services as well as ensuring an adequate number of counters and manpower to provide efficient services. Multi-service counters, emergency counters, special counters for the disabled, elderly and expectant mothers, extended service hours, electronic queue management systems and indication of expected serving time were also implemented while customer satisfaction feedback forms were utilised to further improve services to customers. Several frontline agencies implemented proactive measures to enhance their counter services. The Road Transport Department (RTD) provided counter services to meet specific customer needs such as special counters for bulk applications as well as counters for senior citizens and the disabled. The Employees Provident Fund (EPF) deployed customer service personnel to assist customers to obtain services at the appropriate counters. In addition, floor managers were assigned to address the needs of customers with disabilities, expectant mothers and senior citizens.

26.07 Efforts to upgrade counter services at all agencies were strengthened with the establishment of the Customer Service Office (CSO) in 2005, which combined the duties and responsibilities of staff at the Enquiries Counter, Receptionist and the Public Relations Officer. Guidelines were issued to agencies on the establishment of the CSO while a new Customer Service Officer scheme of service was implemented to ensure that the CSO was staffed by qualified personnel. Training programmes on courteous customer service were also implemented to equip the customer service officers with the necessary awareness and skills related to customer services and relations.

Land Administration

26.08 A new package of land administration strategies containing 43 measures to improve land administration was launched during the Plan period. These included the re-engineering of existing work systems and processes as well as the enhancement of related support services. A total of 26 Flying Squads was

also established under the Ministry of Natural Resources and Environment to resolve the backlog of land application cases. In addition, measures such as delegation of powers, filling up of critical vacant posts, enhancing the competency of personnel in land administration and upgrading of facilities at land offices were also implemented.

26.09 Efforts were also taken to expedite the process for surveying land as part of measures to enhance land administration. The procedure for survey applications was reviewed to enable the Survey and Mapping Department (JUPEM) to expedite the preparation of the land title plan in issuing land titles. In addition, the Government also implemented the Land Application Monitoring System (LAMS) to monitor the number of land applications received, processed and approved as well as identify backlog in land applications. These efforts enabled the effective management of land application cases and reduced grievances on land matters.

Services of Local Authorities

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26.10 Various measures were undertaken to improve services provided by local authorities especially those that affect commercial and investment activities. One-stop centres (OSCs) were established in 96 local authorities and state administrations in Peninsular Malaysia to process and expedite the approval of building plans and certificates of fitness for occupation (CFO). The approval of CFOs was expedited by reducing the number of technical agencies involved in the approval process from seven to one, namely the Department of Sewerage Services. In 2005, the Government approved 332 posts to facilitate the operations of OSCs in all local authorities.

26.11 The Ministry of Housing and Local Government and the National Institute of Public Administration (INTAN) conducted a study in 2004 to identify a package of strategies and measures to further improve the management and services of local authorities. The study focused on the needs of customers, namely ratepayers, residents, investors, real estate developers, traders, and non-governmental organisations. The recommendations included short-, medium- and long-term measures in terms of structure, systems and work procedures; leadership and staffing; shared values; technology and work environment; and financial resources. Among others, the recommendations included measures to extend the use of composite licensing to cover a broad range of licences issued by local authorities, strengthening the enforcement function of local authorities, implementing systematic rubbish disposal, ensuring effective standards for maintenance and repair as well as implementing a grading system to assess the level of cleanliness of business premises. A majority of local authorities have implemented the short-term recommendations related to scheduled rubbish collection and disposal, upkeep and maintenance of drainage systems, standards

for the repair and maintenance of public facilities, stringent enforcement action on cleanliness as well as surveillance and monitoring procedures by local authority officials.

Facilitating Investors

26.12 In 2003, as part of efforts to strengthen national competitiveness and attract investors, the Government introduced the handholding facility for investors in the manufacturing sector. The Malaysian Industrial Development Authority (MIDA) appointed Special Project Officers to handhold and assist investors in obtaining the necessary approvals for manufacturing projects from the point of application until the commencement of operations. A total of 3,255 projects was monitored through the handholding facility during the Plan period. This facility complemented other initiatives by MIDA such as the Project Implementation Coordination Unit and State Investment Centres. MIDA also established a Services Section under its Business Information Centre (BIC) to assist investors in specific areas of the services sector. This involved the provision of information on policies, guidelines and procedures for services such as ICT and multimedia, research and development (R&D), logistics, education, offshore banking and health services. The Government also reviewed guidelines for foreign investment by simplifying procedures and shortening processing time from two months to 10 working days.

26.13 In the ICT sector, the Client Services Department of the Multimedia Development Corporation (MDC) provided assistance to potential investors in the ICT sector and in obtaining Multimedia Super Corridor (MSC) status. The MDC processed and assisted about 180 applicants annually, with 1,200 companies to-date having obtained MSC status. The MDC also embarked on developing a conducive infrastructure and human capital through its National Start-Up Development Programme (NSDP), National Lead Generation Programme (NLGP), National Unipreneur Development Programme (NUDP) and MSC TeC initiatives. In the agricultural sector, the Ministry of Agriculture established the Business Development Centre to assist both local and foreign investors to undertake agricultural and agri-business projects.

Quality Management

26.14 The Government continued to implement quality management initiatives under the total quality management programme. Apart from on-going quality management efforts such as quality control circles (QCC), innovations and benchmarking, a major focus during the Plan period was the implementation of the MS ISO 9000 standard and recognising organisational excellence in providing customer-oriented services.

26.15 *MS ISO 9000*. The implementation of the MS ISO 9000 quality management system gained momentum as more agencies adopted the MS ISO 9000:1994 standard. By the end of 2003, a total of 749 agencies obtained certification to the MS ISO 9000:1994 standard. Beginning 1 January 2004, all Government agencies migrated to the new MS ISO 9001:2000 standard, which emphasised meeting customer requirements and measuring customer satisfaction. By the end of 2005, 502 agencies obtained certification to this new standard, as shown in *Table 26-1*.

TABLE 26-1

**GOVERNMENT ENTITIES AWARDED
MS ISO 9001:2000 CERTIFICATION**

| <i>Category of Entity</i> | <i>Total</i> |
|---------------------------|--------------|
| Ministry | 8 |
| Federal Department | 41 |
| Federal Statutory Body | 43 |
| State Secretariat | 2 |
| State Department | 61 |
| State Statutory Body | 24 |
| Local Authority | 8 |
| Hospital | 25 |
| District Health Office | 32 |
| District Health Clinic | 171 |
| State Dental Office | 1 |
| District Dental Office | 11 |
| District Dental Clinic | 35 |
| Polytechnic | 16 |
| Teacher Training College | 24 |
| Total | 502 |

Source : Malaysian Administrative Modernisation and Management Planning Unit

26.16 *Recognition of Excellence*. The Government continued to promote and recognise excellence among organisations through the Prime Minister's Quality Award programme. During the Plan period, the criteria for the Prime Minister's Quality Award were reviewed to further reinforce quality and service delivery among agencies with emphasis on output, management of processes, resource utilisation and top management commitment. Agencies also competed for other awards such as the Premier ICT Award, Innovation Award and Quality Control Circle Award. In 2004, the Premier Local Authority Award and the Premier Land and District Administration Award were introduced to recognise excellent agencies at the local and district levels. Government agencies also received international recognition for excellence in various fields. The National Productivity Corporation (NPC) was awarded the United Nations Public Service Award 2004 under the

'Innovations in the Public Service' category for its database for benchmarking community projects. The National Registration Department (NRD) won the Commonwealth Association for Public Administration and Management International Innovations Bronze Award 2004 for the successful implementation of the innovative MyKad project.

Performance Measurement

26.17 Efforts to enhance services were further strengthened with the introduction of performance measurement and KPIs to support a higher level of service by agencies. The implementation of KPIs was undertaken on a pilot basis in six agencies, namely the Immigration Department in Johor; Kota Bharu Hospital in Kelantan; Melaka Historical City Municipal Council; Petaling District and Land Office in Selangor; National Registration Department in Pulau Pinang; and the Shah Alam Police District and Police Station in Selangor. Based on the results of the pilot projects, a development administration circular was issued in May 2005 to provide guidelines on the implementation of KPIs to measure the efficiency and effectiveness of processes, productivity of resources as well as the level of customer satisfaction. The first phase of the implementation of KPIs targeted all front line Government agencies.

Strategic ICT Development

26.18 The Government launched the Malaysian Public Sector ICT Strategic Plan in August 2003 to provide clear direction on the utilisation of ICT for service delivery. The ICT Strategic Plan identified several high impact community initiatives that involved the provision of multiple agency services from a single point. These included the business community portal, citizen-centric portal, Government-2-Employee Portal, e-Social Services, e-Learning, e-PBT for local authorities, e-Tanah for land administration, On-line Income Tax Services and an Integrated Financial Management System (SPKB).

26.19 The e-Government initiative that was introduced as one of the MSC flagships continued to be implemented to further improve the delivery of public services. A significant achievement was the implementation of the Public Service Portal known as myGovernment, which provided a one-stop window to information and services of public sector agencies over the Internet. By the end of 2005, the myGovernment portal provided links to 844 agency websites at the federal, state and local levels. It also provided access to 2,554 downloadable forms and 364 online services. In addition, the Project Monitoring System, SPP II, which provided a mechanism for the planning, control and monitoring of development projects at the federal, state and district levels, was rolled out to 938 development sites nationwide. The e-Services project for the on-line delivery of Government services included on-line theory test taking for driving licenses, the renewal of

driving licenses and the payment of bills online. By the end of 2005, a total of 2.16 million candidates sat for the driving theory test at approved sites. Under the e-Procurement project, 104,650 suppliers registered with the Ministry of Finance with 37,160 suppliers being e-Procurement enabled. Another e-Government project, the e-Syariah, was implemented in 102 Syariah courts to enhance the productivity and upgrade the quality of services at Syariah Courts. In addition, the e-SPKB payment system for electronic payments was strengthened while the Shared Services Outfit (SSO) was established to provide network services for public sector agencies in Putrajaya.

26.20 Numerous agency-specific applications were also developed and enhanced during the Plan period. The Royal Malaysia Police implemented the Police Reporting System (PRS) and the Computerised Accident Reporting System (CARS) to standardise the reporting of complaints and accidents and to facilitate the making of police reports. The Public Service Department implemented the Pensions Online Workflow EnviRonment (POWER) project to enable Government pensioners to receive their pensions on time. The IRB implemented the *Sistem Taksir Sendiri* (STS Syarikat) to enable companies to submit their returns online. Travel agents registered with Immigration Attachés abroad were able to submit applications for visas without referees in order to save cost and time. The RTD implemented the *e-Hakmilik*, *e-Daftar* and *e-Insurans* applications as part of efforts to enable the effective verification and authentication of information pertaining to the ownership and registration of motor vehicles.

26.21 The Smart Partnership Programme continued to further facilitate the application of common systems across agencies. A number of Government agencies and several state governments saved time and cost by modifying and using application systems implemented by other agencies, such as the adoption of the Penang State Government Financial and Accounting system (SPEN) by Perak, the Local Authority Integrated Accounting System of Perak being implemented in Kedah; and the *Sistem Kutipan Hasil Tanah* (LARIS) of Negeri Sembilan being adopted in Melaka.

26.22 During the Plan period, the Government also initiated the Open Source Software (OSS) programme as an additional software choice to increase interoperability among ICT systems and accelerate growth in the local ICT industry. A public sector OSS master plan and an interoperability framework for OSS were also developed as a guide for implementing OSS applications. In addition, an Open Source Competency Centre (OSCC) was established in Cyberjaya in 2004 as a reference centre for OSS.

26.23 ICT security measures were instituted as an integral component of good ICT governance. These included acculturation, standards, incident reporting

and monitoring mechanisms to protect Government ICT assets and information. In addition, the *Pemantauan Rangkaian ICT Sektor Awam Malaysia* (PRISMA), the government security command centre was established in 2002 to address ICT security threats. By the end of 2005, the electronic management and monitoring of potential security threats benefited 250 Government agencies.

Management of Public Complaints

26.24 Public sector agencies continued to emphasise measures to manage public complaints more effectively. In particular, the Public Complaints Bureau (BPA) stepped up efforts to promptly deal with complaints received from the public. On average, 50 per cent of complaints received by the BPA were on the failure or delays in attending or responding to the needs of customers. The number of complaints received and resolved by the BPA during the Plan period is shown in *Table 26-2*.

TABLE 26-2
COMPLAINTS RECEIVED AND RESOLVED, 2000-2005

| Year | Received | Resolved |
|------|----------|----------|
| 2000 | 3721 | 2695 |
| 2001 | 2769 | 2549 |
| 2002 | 3452 | 2753 |
| 2003 | 3199 | 2591 |
| 2004 | 2756 | 2252 |
| 2005 | 2707 | 2247 |

Source: Public Complaints Bureau

Public-Private Sector Collaboration

26.25 The Government leveraged on public-private sector collaboration to enhance the level of its services to the business community. Mechanisms such as consultative panels and dialogues facilitated co-operation in the spirit of Malaysia Incorporated. The Malaysia Incorporated Officials Committee continued to be an important channel to obtain feedback from the private sector in reducing service delivery obstacles. These included feedback on the operations of the OSC for the approval of building plans and CFO; service level agreement (SLA) for the supply of electricity for housing development; establishment of the Construction Labour Exchange Centre (CLAB); adoption of standard guidelines for business signage by all local authorities; impact of the amendments to the Money Lenders' Act 1951; and the review of medical treatment and hospital benefits under the Foreign Workers Compensation Scheme.

III. PROSPECTS, 2006-2010

26.26 During the Ninth Plan period, the Government will emphasise key areas of service delivery in meeting the requirements and expectations of all stakeholders. In this regard, weaknesses in the delivery of services will be addressed by ensuring that public sector agencies facilitate transactions with their customers and the private sector to reduce the cost of doing business. Steps will be taken to enhance the public sector delivery system by improving the administrative machinery at the district level, providing more service channels, reviewing and simplifying rules, regulations and work procedures as well as expediting the issuance of licenses, permits and approvals for trade, investment and commercial activities. At the same time, services rendered will be evaluated through performance measurement while ICT will be leveraged to support service delivery. The strategic thrusts to enhance the delivery of public services are:

- focusing on district and local level administration as a priority area for enhancing service delivery;*
- providing efficient and multi-channel Government-customer interface and simplifying systems and work procedures;*
- reviewing and streamlining regulatory requirements;*
- monitoring and measuring performance;*
- ensuring competency-based human resource management to support effective service delivery;*
- managing public complaints for better service delivery;*
- deploying ICT applications and infrastructure to support service delivery; and*
- conducting dialogues with the private sector to support economic growth and competitiveness.*

District and Local Level Administration

26.27 The Government will undertake measures to further strengthen the three main entities at the district administration level namely the district office, land office and local authority. The scope of functions and responsibilities of the district office will be enhanced through organisational restructuring, re-engineered processes, human resource development, deployment of ICT and streamlining the roles and responsibilities of the District Officer and agencies involved. In addition, districts would be classified as metropolitan, urban and rural to reflect the different level of services required under each of these classifications.

Efforts will be taken to ensure that more district and land offices as well as local authorities adopt the MS ISO 9000 quality standard for their core processes.

26.28 The Government will take the necessary measures to implement the e-Tanah project during the Ninth Plan period to further enhance land administration delivery systems in a comprehensive manner. Under this project, 24 main land administration processes will be enhanced and automated through the integrated utilisation of technology to support various land transactions. The e-Tanah project will be implemented in Pulau Pinang and upon the assessment of its capabilities by 2008, the project will be extended to the other states. In addition, the Government will implement the e-Consent application in all land offices. The implementation of e-Consent will facilitate and expedite the process of obtaining consent for the transfer of land titles and for mortgages.

26.29 The Government will ensure that the medium- and long-term measures that were identified by the joint study of the Ministry of Housing and Local Government and INTAN in 2004 are implemented by all local authorities during the Ninth Plan period. The OSCs at all local authorities will be expanded to provide the full range of services covering approvals for planning and development, issuance of licences and permits and the collection of fees and fines. In this regard, the Government will also review and take steps to strengthen the workings of local authorities to remove obstacles to the efficient and effective delivery of services to ratepayers, traders, investors and residents. At the same time, the Government will ensure that the core function of the local authority as the local planning agency is carried out in an effective and transparent manner.

Multi-channel Services

26.30 Efforts will continue to be undertaken to provide customers greater accessibility and choice in obtaining Government services. This will include expanding and strengthening existing OSCs and service counters, promoting the use of e-channels and mobile devices as well as improving monitoring and feedback mechanisms. In this regard, the Government will ensure the expansion of online services hosted by the myGovernment portal to include all core services provided by frontline agencies. In addition, existing online services provided via the e-Services initiative will be streamlined and consolidated under myGovernment. The Electronic Government Activities Act and Electronic Government Transactions Act will be enacted during the Plan period to further boost the uptake of online services.

26.31 The Government will also continue efforts to provide seamless and efficient services by reducing bureaucratic red tape. Work processes and procedures

will be reengineered and simplified while more decision centres will be established to enable effective and speedy decision-making. Inter-agency cooperation will be streamlined and enhanced to improve information sharing. The Ministerial Task Forces on Reducing Bureaucratic Red Tape will be further strengthened to enable them to act more effectively in reducing red tape and improving services provided by their respective ministries and agencies. The Government will also provide greater emphasis and allocate additional resources for areas facing high service delivery demands such as the management of court cases and public health care system in hospitals. In addition, the Government will undertake concerted efforts to revamp existing systems and procedures as well as expedite various approvals and permits to further facilitate the ease of doing business in the country.

Reviewing Regulatory Requirements

26.32 Statutes and regulations will be reviewed to further simplify and eliminate cumbersome regulations and procedures. More self-regulation approaches will be considered to ensure faster approvals for business permits and licences while promoting greater transparency. Efforts will also be undertaken to empower professional bodies to monitor and certify compliance with administrative and statutory provisions. As part of this effort, the Certificate of Completion and Compliance (CCC) will replace the existing CFO for completed buildings. Similarly, more disclosure-based regulations will be adopted to promote transparency as well as to expedite approvals, permits and licenses for various commercial transactions. While easing the regulatory and licensing application procedures through this approach, the Government will ensure stringent enforcement of penalties for wrongful disclosure and non-compliance.

Performance Measurement

26.33 The performance of the public sector delivery system will continue to be monitored and assessed. A major focus will be the implementation of performance measurement through the implementation of KPIs in the public sector. By the end of the Ninth Plan period, KPIs will be implemented in all front line agencies and their branches nationwide. Other public sector agencies will also implement KPIs as part of efforts to enhance organisational performance. Efforts will continue to be undertaken to assess the performance of agencies through systematic inspections, management audits and compliance with the MS ISO 9001:2000 standard.

26.34 The Government will continue to promote and recognise excellence and high performance among public sector agencies at all levels through evaluation against excellence criteria under the Prime Minister's Quality Award programme.

To further consolidate service delivery and motivate agencies to continuously improve services to customers, the Government will also implement a rating system for all ministries and their agencies. Under the rating system, the performance of agencies will be assessed according to stipulated criteria as well as feedback from customers.

Competent Human Resource

26.35 The efficiency and effectiveness of the public service delivery system is dependent on the quality of the public sector workforce. Towards this end, the Government will further strengthen competency-based human resource management to nurture a workforce with the right attitude, skills and knowledge. The required generic, specific and technical competencies will also be developed, based on the needs of the work environment and job requirements. In addition, appropriate assessment systems will be adopted and the inculcation of positive values and work ethics will be promoted. The Government will also ensure that front line agencies are staffed by appropriate personnel who are selected according to set criteria to provide efficient and courteous services to their customers.

26.36 At the same time, the Government will continue to implement the necessary strategies and initiatives to strengthen individual and organizational performance in the public sector. This includes setting clear strategic directions whereby the public sector's vision and direction is aligned with the national agenda; strengthening organizational capacity by ensuring that agencies are equipped with the appropriate structures, systems and processes that enable them to function effectively; instituting a comprehensive public service training and competency development plan to produce a knowledgeable and competent workforce; enhancing workforce performance through a human resource management system that is capable of planning, attracting and retaining talented employees through a conducive work environment, work-life balance and compensation package; and building a high performance work culture based on positive values and work ethics.

26.37 The Government will intensify measures to upgrade the competency and skills of its workforce through effective training programmes. In this regard, the capacity and capability of public training institutions will be strengthened to cater to the training needs of the public sector work force. With the establishment of the Advanced Leadership and Executive Development Centre, INTAN will take on the role of providing executive education for top-level officials. INTAN will also work with highly qualified resource persons and established institutions to conduct specialised programmes. More emphasis will be given to the development of language and communication skills, particularly proficiency in the English language among entrants to the public sector. The Government will also ensure that other training and development institutes such as the Malaysian Customs

Academy (AKMAL), the *Institut Aminuddin Baki* (IAB), the Judicial and Legal Training Institute (ILKAP), the *Institut Tanah dan Ukur Negara* (INSTUN) continue to upgrade their training and development programmes to meet requirements in their respective fields.

Managing Complaints

26.38 The Government will ensure that public complaints are managed effectively to enhance service delivery. Customer complaints will continue to be utilised as a means of rectifying weaknesses and preventing recurrent service delivery shortfalls. In line with this, the management of customer complaints in the public sector will be further enhanced through more responsive and proactive mechanisms including implementing computerised public complaints management systems to receive, address and monitor all public complaints. The CSO and the 'Meet Your Clients' day initiatives will continue to be leveraged to address the needs of customers. To further consolidate the monitoring and feedback mechanism, the BPA will conduct scheduled public polls to gather feedback on the implementation of projects under the Ninth Plan as well as monitor various aspects of service delivery by public sector agencies. In addition, to address complaints on inadequate enforcement, the Government will take the necessary steps to enhance the capacity of agencies to undertake enforcement functions more effectively.

Deploying ICT Infrastructure and Applications

26.39 Effective measures will be instituted to ensure the availability of a well planned, secure and reliable infrastructure to support a wide spectrum of ICT systems and applications across Government agencies. The SSO will expand its services to cover a further 30 agencies and 12,000 additional users. At the same time, steps will be taken to enhance EG*Net, the dedicated and secure telecommunications network that was developed to support all agencies implementing e-Government projects.

26.40 Efforts will be intensified towards the formulation of ICT strategic plans (ISPs) for all Government agencies based on the provisions of the Malaysian Public Sector ISP framework. This will involve greater coordination and streamlining of intra- and inter-agency ICT initiatives as well as promoting the use of appropriate technology to enhance access to and delivery of Government services. The Government will also embark on the implementation of high impact community-based, enterprise-wide and agency-specific ICT applications. In this regard, the e-PBT project will be implemented during the Plan period to enhance the ability of local authorities in delivering core functions including planning and development, revenue collection, financial management and public complaints. The e-PBT project will be extended to all local authorities by the end of the Plan period. Similarly, the e-Social Services project involving the Ministry of Women, Family

and Community Development and 13 related agencies will be implemented to provide online social services and information related to welfare aid and social development programmes. The Public Sector e-Learning Blueprint developed in 2005 will be implemented to enable Government personnel to benefit from life-long learning and allow streamlined planning for generic training courses.

26.41 The Government will continue to ensure the wide-scale deployment of e-Government applications such as e-Procurement, Project Monitoring System, ELX, Human Resource Management Information System (HRMIS) and Generic Office Environment (GOE). Efforts will also be taken to improve the capability and performance of the core functionalities of these applications to ensure that they will deliver the intended benefits. In the case of the e-Procurement project a further 2,342 responsibility centres will be enabled by 2009.

26.42 The Government will take steps to showcase and market e-Government applications that have been developed in partnership with local and international ICT companies and have proven to be leading-edge multimedia applications. As the holder of intellectual property rights for these applications and given the interest shown by countries such as the United Arab Emirates, Saudi Arabia, Sudan and Syria for e-Government products and consultancy services, the Government will support efforts to commercialise e-Government products in the global market through the MDC.

26.43 During the Ninth Plan period, efforts to enhance the protection of public sector assets and information will be intensified in ensuring information confidentiality, integrity and availability within the public sector. In this regard, the facilities provided by PRISMA will be extended to cover the ICT infrastructure of all Government agencies while its ability to track and analyse cyber threats will be enhanced through the provision of an early warning system, proactive and reactive incident response capabilities and active 24x7 monitoring of Government ICT networks. In addition, the Government will ensure that all agencies adopt the Public Sector Risk Assessment Methodology (MyRAM) as part of efforts to mitigate security risks and focus on compliance with established standards. At the same time, regular ICT security audits, inspectorate and risk assessment will be conducted to ensure that agencies comply with ICT security standards and that ICT security requirements are included as part of specifications in the procurement of ICT systems and applications. Overall, ICT security initiatives will aim to ensure that all ICT assets in public sector agencies are managed in compliance with stipulated ICT security requirements and standards.

Public Safety and Security

26.44 Efforts will be taken to enhance the maintenance of public safety and security to further improve the quality of life. In this regard, the ten strategic

thrusts identified by the Royal Commission to Enhance the Operations and Management of the Royal Malaysia Police will be implemented.

Public-Private Sector Collaboration

26.45 The Government will also seek to further enhance the level of consultation with the private sector on new policy initiatives and legislation that impact their activities. In this regard, the Government will, wherever possible, publish and make available to the private sector proposed policy initiatives and draft legislation for comments and inputs. The Government will also continue to leverage on the expertise, knowledge and experience of the private sector in further upgrading its service delivery mechanism. Private sector feedback on impediments to service delivery will continue to be utilised to assess existing levels of service delivery and provide more efficient and effective services.

IV. INSTITUTIONAL SUPPORT

26.46 Steps to improve the public service delivery system will involve the combined efforts of various agencies. The Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) will be the catalyst and co-ordinator for the overall process of improvements. An excellent public service delivery system will require the right kind of personnel and the Public Service Department and INTAN will have key roles in the selection and training of such personnel. The emphasis on delivery at the local level will directly involve the Ministry of Housing and Local Government, state administrations and local authorities as well as the Director General of Lands and Mines and district and land offices. In addition, all front line agencies will institute measures to improve delivery of their services. The BPA, through the complaints received, as well as through feedback polls, will provide feedback to Government agencies to ensure continuous improvement.

V. CONCLUSION

26.47 The Eighth Plan period saw the introduction of a wide range of initiatives to upgrade the delivery of public services in supporting national competitiveness and meeting the requirements of customers and stakeholders. The scope of efforts to enhance the public sector delivery system encompassed land administration, services of local authorities, investment facilitation, quality management, performance measurement, consolidated licenses and permits, improvements in counter services, management of public complaints, reduction of bureaucratic red tape and ICT development. The commitment to enhance the

efficiency and effectiveness of the public service delivery system will continue during the Ninth Plan period with the Government taking steps to continuously review and improve services in strategic areas. These efforts will include improving district and local level administration, providing seamless and efficient multi-channel government-customer interface, reviewing and streamlining regulatory and licensing requirements, leveraging effectively on ICT and promoting competency-based human resource management. These measures are expected to further reduce the cost of doing business, encourage private investment and positively influence investor perceptions about Malaysia as a preferred destination for trade and investment.



DEVELOPMENT THROUGH INTERNATIONAL COOPERATION

27

I. INTRODUCTION

27.01 During the Eighth Plan period, cooperation fostered with the international community resulted in strengthening international cooperation at the bilateral, regional and multilateral levels. International cooperation is important in view of the openness of Malaysia's economy as indicated by its ranking as the 18th largest trading country in the world. Malaysia also supported multilateral cooperation, in advancing international peace and development as well as actively promoting South-South cooperation through the Malaysian Technical Cooperation Programme (MTCP).

27.02 Malaysia will continue to intensify efforts to strengthen international cooperation towards the formulation of appropriate policy options and strategies to enable developing countries to harness the benefits of globalisation on a more equitable basis. During the Ninth Plan period, initiatives will be undertaken to enhance regional cooperation and cooperation with development partners towards expanding Malaysia's global outreach. To further strengthen the MTCP, new strategies will be undertaken to enhance cooperation with the private sector and non-governmental organisations (NGOs). While the MTCP will continue to focus on building human capital in cooperation with other developing countries, it will also support initiatives that will further enhance bilateral relations.

II. PROGRESS, 2001-2005

27.03 During the Eighth Plan period, Malaysia cooperated with bilateral, multilateral and regional development partners to address a number of regional and global issues which impacted on its development as well as advocated South-South cooperation through the sharing of development experiences. Special emphasis was given to the development of human capital and the enhancement of institutional capacity towards the achievement of the Millennium Development Goals (MDGs). Efforts were undertaken to strengthen political and economic relations in line with Malaysia's foreign policy, especially in regional groupings

such as the Association of Southeast Asian Nations (ASEAN) and the Asia-Pacific Economic Cooperation (APEC) as well as groupings such as the Organisation of Islamic Conference (OIC) and the Non-Aligned Movement (NAM).

Bilateral Cooperation

27.04 Bilateral cooperation was enhanced with cooperating countries through the establishment of 22 new diplomatic missions, signing of 14 economic, scientific and technical cooperation agreements, and 23 Joint Commission Meetings. Trade and services cooperation was also enhanced with the signing of 45 trade and services agreements. Negotiations on bilateral free trade agreements were also initiated with several major trading partners. The Japan-Malaysia Economic Partnership Agreement (JMEPA) was signed in 2005 to promote cooperation, liberalisation and facilitation in trade and investment. Negotiations for similar arrangements were undertaken with Pakistan, India, Australia and New Zealand while preparations were also made for negotiations with the United States of America (USA) and Chile. In addition, the Malaysia-Thailand Committee on Joint Development Strategy (JDS) for border areas was established to promote economic development in four states of Malaysia and five provinces of Thailand.

27.05 Malaysia continued to receive bilateral official development assistance (ODA), albeit at a lower level. Japan was the largest bilateral assistance partner, providing soft loans amounting to US\$1.5 billion for projects in human resource development, small and medium enterprises (SMEs) and infrastructure.

27.06 The total amount of bilateral technical assistance received by Malaysia was US\$328.4 million, of which US\$260.1 million or 79 per cent of the total was received from Japan, as shown in *Table 27-1*. ODA received from Denmark was US\$46.4 million in the area of environment and US\$12.5 million from Germany for skills training. Australia and Canada graduated Malaysia from their ODA programmes in 2003 and 2004, respectively.

Regional Cooperation

27.07 In line with the commitment to open regionalism, Malaysia continued its active participation in ASEAN, APEC and the Asia-Europe Meeting (ASEM). ASEAN has been the main thrust of Malaysia's external and regional policies involving cooperation in broad areas of mutual interest. Participation in APEC was aimed at fostering cooperation in a broad range of regional and global trade and economic issues, particularly in the area of trade and business facilitation and capacity building. APEC also provided a useful forum to seek feedback from the international business community in evolving APEC initiatives that facilitate and enhance business activities in the Asia Pacific region. Cooperation with ASEM was based on political dialogue, economic cooperation and cultural interaction.

TABLE 27-1
TECHNICAL ASSISTANCE RECEIVED BY SOURCE, 2001-2005
 (US\$ '000)

| Source | 2001 | 2002 | 2003 | 2004 | 2005 | 8MP |
|---|---------------|---------------|---------------|---------------|---------------|----------------|
| Bilateral | 75,990 | 66,831 | 71,500 | 61,200 | 52,900 | 328,421 |
| Australia | 1,790 | 831 | 3,100 | 0 | 0 | 5,721 |
| Canada | 1,100 | 1,300 | 800 | 500 | 0 | 3,700 |
| Denmark | 9,200 | 7,200 | 14,500 | 9,600 | 5,900 | 46,400 |
| Germany | 2,700 | 2,500 | 3,100 | 2,200 | 2,000 | 12,500 |
| Japan | 61,200 | 55,000 | 50,000 | 48,900 | 45,000 | 260,100 |
| Multilateral | 7,555 | 6,997 | 7,419 | 6,692 | 9,009 | 37,672 |
| UN Organisations/Funds | 7,335 | 6,731 | 7,214 | 6,219 | 8,042 | 35,541 |
| Food and Agricultural Organisation | 200 | 453 | 800 | 300 | 400 | 2,153 |
| Global Environmental Facility Fund | 1,600 | 2,580 | 2,200 | 2,000 | 3,300 | 11,680 |
| International Atomic Energy Agency | 350 | 421 | 493 | 522 | 603 | 2,389 |
| Montreal Protocol | 1,764 | 338 | 359 | 295 | 160 | 2,916 |
| United Nations International Drug Control Programme | 0 | 3 | 20 | 13 | 15 | 51 |
| United Nations Development Programme | 746 | 1,055 | 1,290 | 1,218 | 1,200 | 5,509 |
| United Nations Educational, Scientific and Cultural Organisations | 600 | 23 | 10 | 30 | 30 | 693 |
| United Nations Population Fund | 150 | 150 | 300 | 200 | 200 | 1,000 |
| United Nations Children's Fund | 693 | 405 | 462 | 611 | 1,214 | 3,385 |
| World Health Organisation | 490 | 480 | 480 | 430 | 420 | 2,300 |
| Other UN Specialised Agencies/ International Organisations | 742 | 823 | 800 | 600 | 500 | 3,465 |
| Development Banks/Financial Institutions | 220 | 266 | 205 | 473 | 967 | 2,131 |
| Asian Development Bank | 0 | 0 | 0 | 0 | 0 | 0 |
| Islamic Development Bank | 0 | 52 | 50 | 108 | 504 | 714 |
| World Bank ¹ | 220 | 214 | 155 | 365 | 463 | 1,417 |
| Total | 83,545 | 73,828 | 78,919 | 67,892 | 61,909 | 366,093 |

Source: Economic Planning Unit

Notes: ¹ Excluding funds sourced from trust funds.

27.08 During the Plan period, ASEAN members intensified cooperation to address economic, political and security issues affecting the region. ASEAN members at the Ninth ASEAN Summit in Bali, Indonesia in 2003 reaffirmed their commitment through the Declaration of ASEAN Concord II to establish an ASEAN Community as envisioned by ASEAN Vision 2020.

27.09 The 11th ASEAN Summit and Related Summits hosted by Malaysia from 12 to 14 December 2005 achieved considerable progress towards deepening commitments to enhance economic integration within the region. These achievements included the advancement of the liberalisation of the ASEAN services sector by five years to 2015 and to further fast track the integration of tourism and air travel services sectors under the implementation of Phase II of the Priority Integration Sectors.

27.10 Measures were taken to strengthen ASEAN's economic linkages with its major dialogue partners including the Plus Three Countries¹, India, the Russian Federation and Australia-New Zealand. The Framework Agreement on Comprehensive Economic Cooperation between ASEAN and China signed in 2002 provided, among others, for the establishment of the ASEAN-China Free Trade Area (FTA) by 2010. The Agreement on Trade in Goods was implemented since 1 July 2005. Similar Framework Agreements were also signed between ASEAN-Korea, ASEAN-India, and ASEAN-Japan to further enhance their economic cooperation, including the establishment of the FTA by 2010, 2011 and 2012, respectively. In conjunction with the 11th Summit, Malaysia also hosted the First East Asia Summit (EAS) which provided a forum for the ASEAN and Plus Three Countries to engage their partners, namely India, Australia-New Zealand and the Russian Federation on issues of broad strategic interest to the East Asia region.

27.11 The sub-regional initiatives within ASEAN also received greater attention with the convening of the First Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) Summit and the Second Brunei-Indonesia-Malaysia-the Philippines-East ASEAN Growth Area (BIMP-EAGA) Summit on 11 December 2005 in Kuala Lumpur. To narrow the development gap among ASEAN countries, Malaysia implemented 33 capacity-building projects under the Initiative for ASEAN Integration (IAI) for Cambodia, Lao PDR, Myanmar and Vietnam with a total cost of RM5.8 million.

Multilateral Cooperation

27.12 Malaysia continued to cooperate with the Colombo Plan, Commonwealth, OIC, NAM and World Trade Organisation (WTO) to enhance development cooperation. Cooperation with the Asian Development Bank (ADB), Islamic Development Bank (IDB) and World Bank was to enhance national capacity in various fields such as productivity, investment and education. Malaysia continued to source capital assistance from IDB amounting to US\$148.4 million for the procurement of equipment. Malaysia hosted the 30th IDB Governors' Meeting in June 2005, during which two Memoranda of Understanding and three agreements were signed including on a joint scholarship programme for tertiary education and capacity building in the palm oil industry in Sierra Leone. Malaysia was also

¹ People's Republic of China, Japan and Republic of Korea.

appointed the Chair of the IDB 1440H Vision Commission, which was entrusted to identify the challenges faced by the *ummah* and shape the future role of the IDB to better respond to these challenges. Malaysia participated in the OIC Trade Preferential System and signed bilateral payment arrangements (BPAs) with several OIC member countries. As part of its commitment to United Nations (UN) peacekeeping efforts, Malaysia participated in 13 missions in Africa, Middle East, Central Europe, Caribbean and Asia.

27.13 Malaysia received technical assistance amounting to US\$35.5 million from the UN specialised agencies. Although technical assistance received was on a decline, Malaysia continued its engagement with UN specialised agencies such as the United Nations Development Programme (UNDP), United Nations Population Fund (UNFPA) and United Nations Children's Fund (UNICEF). However, Malaysia increasingly assumed the role of a development partner where projects were implemented on a cost-sharing basis. The achievement of the MDGs was documented and launched in January 2005. It highlighted Malaysia's achievements in all the MDG targets, namely, poverty, health, education, environment and global partnership, earlier than the target date of 2015, with the exception of Goal 6, namely, halting and reversing the spread of HIV/AIDS. Malaysia's contribution to multilateral organisations and institutions amounted to RM341.3 million, as shown in *Table 27-2*.

Malaysian Technical Cooperation Programme

27.14 During the Plan period, Malaysia further widened the scope of South-South cooperation through the sharing of its development experience with other developing countries. In this regard, the MTCP was expanded in terms of scope and coverage with continued focus on human capital development, project-type cooperation and advisory services. The MTCP participating countries increased from 121 to 135 countries while 16 new training institutions joined the programme to provide short-term courses, hence, almost doubling the total number of training providers to 34. By the end of the Plan period, the number of MTCP participants increased to reach a total of 7,030, a significant increase of 158 per cent compared with the previous plan, as shown in *Chart 27-1*. A total of RM164.3 million was utilised to implement the MTCP activities.

27.15 Several special projects were undertaken including special advisory services for Algeria, Pakistan, Sudan, Timor Leste, Uganda, South Africa and Namibia as well as development projects in Bosnia Herzegovina, Malawi, Lao PDR and feasibility studies in Iran, Syria and Myanmar. To strengthen its impact, MTCP undertook several initiatives, including promoting networking among MTCP alumni, production of a corporate video, publication of a book on MTCP and an annual training directory as well as a MTCP Alumni Newsletter which is issued three times a year. An Alumni Homecoming and Study Visit Programme was held in May 2005 to renew bilateral ties and promote networking between alumni and Malaysian counterparts including the private sector. Collaborations

TABLE 27-2

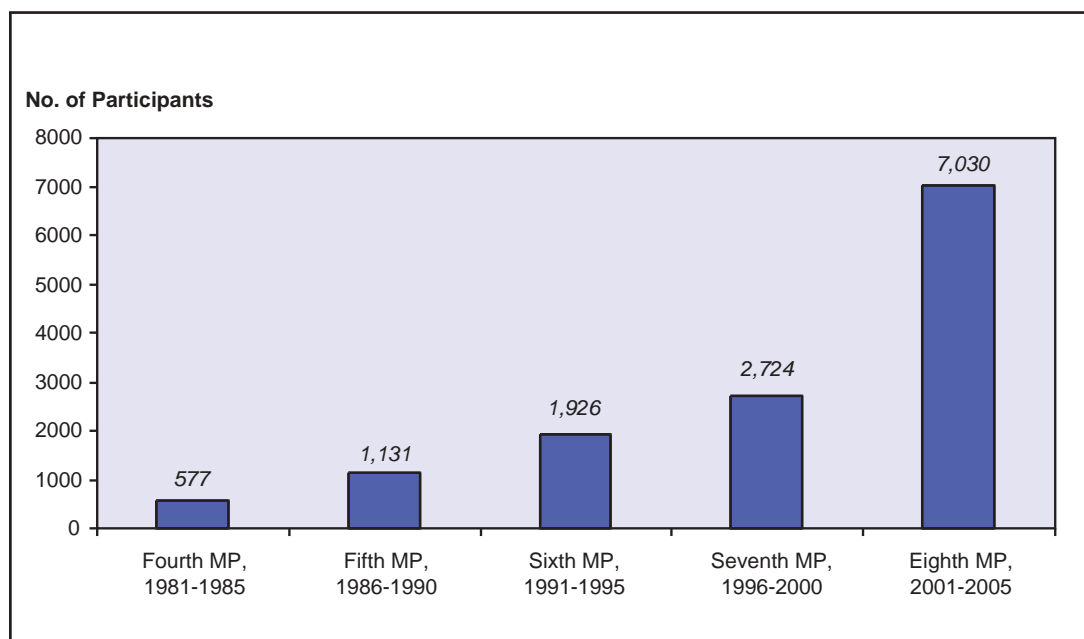
**MALAYSIA'S CONTRIBUTION TO MULTILATERAL
ORGANISATIONS, 2001-2005**
(RM '000)

| <i>Organisation</i> | <i>2001</i> | <i>2002</i> | <i>2003</i> | <i>2004</i> | <i>2005</i> | <i>8MP</i> |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| Development Banks/Financial Institutions | | | | | | |
| Asian Development Bank | 3,046.0 | 3,023.3 | 1,970.0 | 1,100.0 | - | 9,139.3 |
| Asian Development Fund | 3,518.0 | 4,130.0 | 4,282.0 | 3,926.0 | 3,386.0 | 19,242.0 |
| Islamic Development Bank | 5,842.6 | 5,571.0 | - | - | - | 11,413.6 |
| Development-related Organisations | | | | | | |
| ASEAN | 2,917.6 | 2,917.6 | 2,917.6 | 2,917.6 | 2,917.6 | 14,588.0 |
| Food and Agriculture Organisation | 2,921.6 | 2,917.0 | 2,896.3 | 1,520.1 | 1,520.1 | 11,775.1 |
| International Civil Aviation Organisation | 865.3 | 1,033.0 | 1,035.5 | 1,039.0 | 1,130.0 | 5,102.8 |
| Organisation of Islamic Conference | 1,927.5 | 1,927.5 | 1,927.5 | 1,927.5 | 1,927.5 | 9,637.5 |
| International Labour Organisation | 1,341.4 | 2,053.4 | 2,312.9 | 2,312.9 | 2,288.4 | 10,309.0 |
| International Maritime Organisation | 878.8 | 968.3 | 1,039.3 | 1,191.0 | 1,385.1 | 5,462.5 |
| International Telecommunication Union | - | 725.8 | 867.2 | 963.3 | 1,021.9 | 3,578.2 |
| International Tropical Timber Organisation | 927.5 | 912.3 | 1,075.5 | 1,087.8 | 1,210.0 | 5,213.1 |
| Islamic Education, Scientific and Cultural Organisation | 765.0 | 1,530.0 | 1,721.9 | 1,834.1 | 1,834.1 | 7,685.1 |
| Regional Centre of Education in Science and Mathematics | 3,300.0 | 3,300.0 | 3,300.0 | 5,300.0 | 3,300.0 | 18,500.0 |
| South East Asian Ministers of Education Secretariat | 727.0 | 727.0 | 727.0 | 727.0 | 918.7 | 3,826.7 |
| United Nations | 13,727.1 | 13,727.1 | 13,727.1 | 13,727.1 | 13,727.1 | 68,635.5 |
| United Nations Development Programme | 2,846.0 | 2,067.0 | 2,831.6 | 2,811.9 | 2,390.0 | 12,946.5 |
| United Nations Educational, Scientific and Cultural Organisation | 2,871.7 | 1,767.0 | 2,531.6 | 2,511.9 | 2,071.3 | 11,753.5 |
| United Nations Population Fund | 57.0 | 57.0 | 817.0 | 817.0 | 817.0 | 2,565.0 |
| United Nations Peacekeeping | 6,785.6 | 6,785.6 | 6,785.6 | 6,785.6 | 6,785.6 | 33,928.0 |
| UN World Tourism Organisation | 179.8 | 493.4 | 504.3 | 529.9 | 529.9 | 2,237.3 |
| World Health Organisation | 2,781.7 | 2,996.6 | 2,996.6 | 3,365.4 | 3,406.1 | 15,546.4 |
| World Trade Organisation | 4,521.3 | 4,196.5 | 5,464.9 | 6,452.3 | 6,751.3 | 27,386.3 |
| Others (annual contributions less than RM500,000) | 5,769.9 | 6,126.6 | 6,080.0 | 6,295.1 | 6,514.2 | 30,785.8 |
| Total | 68,518.4 | 69,953.0 | 67,811.4 | 69,142.5 | 65,831.9 | 341,257.2 |

Source: Economic Planning Unit

CHART 27-1

NUMBER OF MTCP PARTICIPANTS, 1981-2005



Source: Economic Planning Unit
 Notes: MP refers to Malaysia Plan.

were made with Colombo Plan and Japan International Cooperation Agency (JICA) to conduct 47 Third Country Training Programme (TCTP) on a cost-sharing basis, based on 11 themes such as diplomacy, medical training, skills training and SME development.

III. PROSPECTS, 2006-2010

27.16 During the Ninth Plan period, Malaysia will continue to actively participate at the bilateral, regional and multilateral levels to promote international cooperation in order to create a more just and equitable international system as well as to achieve the national goals. While the MTCP will continue to focus on capacity building and the sharing of experiences with other South countries, it will also embark on new strategic directions which will include more private sector and NGO involvement in the implementation of its programme as well as streamline its activities to ensure its cost-effectiveness and impact.

Bilateral Cooperation

27.17 During the Plan period, Malaysia will continue its policy of development cooperation through the establishment and strengthening of bilateral relations

with both developed and developing countries. The thrust of Malaysia's bilateral relations will be the strengthening of ties for mutual benefits. New diplomatic missions in cooperating countries will be established while the Joint Commission mechanism will be strengthened to improve bilateral relations, particularly in cooperation in science and technology, educational and cultural exchanges as well as trade and investment. In this respect, investment guarantee agreements (IGAs), BPAs, and Palm Oil Credit Payment Arrangements (POCPAs) as well as trade and investment agreements will be negotiated between Malaysia and cooperating countries.

27.18 *Bilateral Official Development Assistance.* Malaysia will continue to seek further cooperation from traditional sources of capital assistance to implement projects in identified focus areas, particularly for human capital development. Malaysia and Japan Bank for International Cooperation (JBIC) will undertake joint evaluation on ODA projects two years after their completion to ensure that these projects are mutually beneficial. Through this approach, the project will be evaluated from the perspectives of both countries, which will also contribute towards future project formulation.

27.19 *Bilateral Technical Assistance.* During the Plan period, technical assistance from Japan will be guided by the JMEPA. In this regard, initiatives, programmes and projects will be implemented under the Economic Partnership Programme (EPP) of the JMEPA where both countries will be committed to the objectives of enhancing socio-economic development, strengthening competitiveness, developing human capital, promoting sustainable development and narrowing the gaps between Malaysia and Japan.

27.20 Technical assistance will continue to comprise development studies, project-type cooperation, cultural grants as well as the fielding of Japan Overseas Cooperation Volunteers (JOCVs), Japan Senior Volunteers (JSVs) and experts. The JOCVs and JSVs will be assigned to complement and support project-type activities and services of experts. JOCVs will continue to provide services, particularly in rural development, special education, social welfare services and the environment. The experience and expertise of the JSVs will continue to contribute towards capacity building and the transfer of technical and industrial skills for the development of the manufacturing sector.

27.21 During the Plan period, cooperation with the Danish International Development Agency (DANIDA) will continue to focus on environmental hazardous substances, solid waste management and biodiversity management components of the Environment Cooperation Programme (ECP). A Programme Support Unit will be established in the Economic Planning Unit (EPU) in 2006 as the secretariat for the review and implementation of ECP projects. This Unit will also assume the functions of the DANIDA team in Kuala Lumpur from 2007 onwards while DANIDA will continue to provide support to the ECP in terms of procedural and technical matters. A programme monitoring system for the ECP will also be put in place to ensure its effectiveness.

27.22 Technical cooperation with Germany will continue through the *Deutsche Gesellschaft Für Technische Zusammenarbeit* (GTZ) on the Malaysian-German Forestry Education Project, a six-year project, which is expected to be completed in 2009. The project will include curriculum development in forestry for undergraduate and post-graduate courses as well as improving research and consultancy capabilities. Through this project, *Universiti Malaysia Sabah* is expected to further develop its School of International Tropical Forestry, which will promote sustainable forestry development, particularly due to its proximity to one of the largest forest ecosystems in the world.

Regional Cooperation

27.23 During the Plan period, Malaysia will continue to cooperate at the regional level to increase the dynamism of the region and enhance inter-regional cooperation. Malaysia will also cooperate with other countries in the region to address common issues and enhance competitiveness for economic growth and development through closer economic integration, particularly among ASEAN members.

27.24 *Association of Southeast Asian Nations.* Malaysia in cooperation with other ASEAN members, will continue to undertake measures to deepen the economic integration of ASEAN towards achieving the objectives of the ASEAN Economic Community (AEC) by 2020. In this regard, Malaysia will cooperate actively with ASEAN members to implement various initiatives under the Vientiane Action Programme (VAP) and the Framework Agreement on Priority Integration Sectors. The acceleration of liberalisation of the services sector is expected to promote intra-ASEAN trade in services and also provide the necessary impetus to sustain and boost economic growth.

27.25 During the Plan period, in addition to ASEAN-China FTA in Goods, ASEAN will also implement the ASEAN-Korea FTA in Goods in 2006. Efforts will be intensified to conclude the on-going FTA negotiations with the other Dialogue Partners. All these FTAs are expected to have significant impact on the ASEAN economies and to provide the catalyst to continue to attract foreign direct investment into the region.

27.26 Malaysia will continue to encourage and support cooperation under the ASEAN Plus Three framework towards the establishment of an East Asia community, including the possibility of an East Asia FTA. Collaboration with Japan, People's Republic of China and Republic of Korea will be continued in sub-regional development initiatives, particularly the Growth Triangles, as well as in efforts towards the integration of ASEAN through the narrowing of development gaps between its members. Malaysia will also spearhead efforts to streamline and strengthen ASEAN through an institutional review and the adoption of the ASEAN Charter.

27.27 *Asia Pacific Economic Cooperation.* Malaysia will continue to emphasise the strengthening of regional economic development and enhancing shared prosperity in the Asia Pacific region. Towards this end, trade and business facilitation will be implemented, whereby the cost of doing business will be reduced and capacity building initiatives will continue to be given emphasis. Malaysia will encourage greater efforts among members to further intensify economic and technical cooperation as well as build human and institutional capacity.

Multilateral Cooperation

27.28 During the Plan period, Malaysia will continue to participate in and support programmes of multilateral organisations. Malaysia will work towards reforms in the UN in efforts to democratise the global decision-making process, strengthen multilateralism and address the pressing issue of poverty in South countries. Malaysia will also continue to cooperate with the UN in its efforts at peacekeeping and conflict resolution. Although technical assistance from multilateral sources is expected to decline during the Plan period, cooperation will continue, particularly to achieve targets beyond the MDGs.

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27.29 Malaysia will promote new cooperation modalities in consultation with development partners including cost-sharing in programme implementation. In addition, Malaysia, in cooperation with the international community, will continue to pursue innovative modalities to finance infrastructure development in developing countries.

27.30 *Organisation of Islamic Conference.* To further promote economic relations among OIC countries, Malaysia will cooperate with member countries to implement business initiatives, which can enhance intra-OIC trade and investment. This will include increasing opportunities to source quality goods and services from among member countries. Malaysia will also cooperate with members to enhance wealth creation through activities such as the production and supply of halal products and services, Islamic banking and finance, education as well as tourism.

27.31 To promote the spirit of self-help, Malaysia will continue to encourage the more developed OIC member countries to assist in the economic development of the less developed member countries through capacity building with the aim of eradicating poverty. This approach will reduce the significant gap between the ten OIC members which are also OPEC members, and the 22 member countries categorised as least developed countries by the UN. In the implementation of the OIC Capacity Building Programme, Malaysia will cooperate with the IDB and other OIC member countries to assist low income and less developed member countries which have been identified. This programme will include capacity building in fishery development in Bangladesh, small enterprises and micro-financing development in Aceh, Indonesia, oil and mineral resources development in Mauritania as well as capacity building in the palm oil industry

in Sierra Leone. In addition, Phase II of the programme will involve Comoros, Guinea, Maldives, Burkina Faso, Palestine and Somalia.

27.32 *Non-Aligned Movement.* Malaysia's Chairmanship of NAM which will end in 2006, will be assumed by Cuba. As one of the countries in the NAM troika, Malaysia will continue to actively contribute towards strengthening NAM to face new global challenges, promote and strengthen multilateralism, promote the primacy of international law and a just and democratic world order as well as global peace and stability. The Centre for Gender Development in Malaysia, established under NAM, will spearhead programmes which will contribute towards greater gender development among member countries.

27.33 *Asian Development Bank.* To further strengthen its national capacity, Malaysia will continue to participate in programmes offered by the ADB. In addition, collaboration with the ADB will include the sharing of development experience with South countries through study visits funded by the Bank in various technical fields. New areas of collaboration will be explored to enhance competitiveness and to promote sustainable rates of growth in the region as well as greater economic integration.

27.34 *Islamic Development Bank.* Malaysia will continue to collaborate with the IDB to further promote and strengthen cooperation among member countries including supporting the activities of the IDB 1440H Vision Commission. As Chair of the Commission, Malaysia will take the lead in formulating an action plan by the IDB to enhance business collaboration and economic linkages through a series of consultations with member countries.

27.35 Malaysia will contribute to capacity building and institutional development of a global Islamic finance system by leveraging on its expertise, experience and knowledge. In this regard, Malaysia will offer capacity building programmes in relation to the Islamic capital market through the Securities Industry Development Centre, the education and training arm of the Securities Commission. Efforts will also be undertaken to collaborate with research and training institutes of the IDB as well as other member countries towards creating a pool of Muslim capital market professionals.

27.36 Malaysia will continue to source financing from the IDB and participate in its capacity building programme for member countries including attachment programmes, dispatch of experts in specific technical areas and the hosting of study visits from member countries. Cooperation with the IDB will be enhanced through the provision of 200 scholarships for the Plan period to students from IDB member countries to pursue tertiary education at the undergraduate and post-graduate levels in local public universities, on a cost-sharing basis.

27.37 *World Bank.* Cooperation with the World Bank will be mainly through technical assistance in specific areas such as investment, competitiveness, education and agriculture. International experts who will undertake specific advisory activities will continue to be sourced when necessary, from the Bank.

27.38 *UN Specialised Agencies.* During the Plan period, technical assistance from the UN specialised agencies is expected to decline. In this regard, new funding modalities for project implementation with development partners will be explored. To continue cooperation with UNICEF, the National Advisory Committee, comprising representatives from the Government agencies and NGOs, will review and recommend an alternative modality that will be implemented in a systematic and transparent manner, optimising available resources, after the completion of the Country Programme Action Plan in 2007. Collaborative partnership with UNFPA will also be reviewed during the Plan period, to maximise benefits from its expertise. It is expected that cooperation projects will increasingly be implemented on a cost-sharing basis with development partners.

27.39 Technical assistance from multilateral development partners such as UNDP, UNFPA, UNICEF and World Health Organisation (WHO) will focus on achieving targets beyond the MDGs through projects on poverty reduction, environmental management, governance, health, education and gender issues. Cooperation with development partners will increasingly be on an equal footing as Malaysia continues to make advancements in these areas. Funding for projects such as biological diversity, energy efficiency, renewable energy, climate change and reducing the release of chlorofluorocarbons (CFCs) and other ozone-depleting substances (ODS) into the atmosphere will continue to be sourced from multilateral funds including the Global Environment Facility (GEF). Malaysia will also utilise the global network of UN specialised agencies to access cutting edge ideas.

27.40 South-South cooperation with multilateral development partners will be enhanced. In this regard, Malaysia will continue to share its development experience with other South countries, particularly in Africa and Central Asia, with focus on poverty alleviation, development planning and development of SMEs. These activities, which will involve specialised short-term training and study visits, will be conducted under the MTCP as well as in collaboration with other international development agencies.

27.41 *Other Multilateral Organisations.* Negotiations in the WTO will focus on improving market access without the inclusion of extraneous issues. To further enhance its capacity to meet new challenges in international trade, Malaysia will fully utilise its participation as an observer in eight committees of the Organisation for Economic Cooperation and Development (OECD) as well as in three of its working and expert groups. In addition, Malaysia will be able to voice its concerns on relevant trade issues and be involved in policy formulation.

Malaysian Technical Cooperation Programme

27.42 As a strong advocate of South-South cooperation and in line with the “prosper-thy-neighbour policy”, Malaysia through the MTCP, will continue to extend technical cooperation to other South countries during the Plan period. The MTCP will assume a more strategic role in strengthening smart partnerships, enhancing bilateral relations and promoting greater self-reliance among developing countries through the sharing of knowledge and experience and the development of human capital. The MTCP will seek to cooperate closely with the private sector and NGOs as well as implement cost-sharing arrangements with member countries and development partners such as JICA and Colombo Plan in order to widen its scope and coverage.

27.43 The strategic thrusts of the MTCP will be to promote cooperation partnerships, greater private sector and NGOs’ involvement as well as tourism, industry, health and education. The implementation, monitoring and evaluation mechanism of the MTCP will also be strengthened to increase its impact and effectiveness.

27.44 In line with efforts to enhance greater South-South cooperation, the MTCP will enhance its programmes to promote partnerships among MTCP member countries. This approach will further strengthen bilateral trade and economic relations between MTCP and member countries.

27.45 The MTCP will continue to cooperate with the NGOs to assist countries affected by the *tsunami* in disaster risk management. Cooperation with NGOs will include collaboration in organising capacity building courses such as disaster management in cooperation with MERCY Malaysia as well as for humanitarian causes.

27.46 During the Plan period, efforts will be made to promote tourism, industry, health and education through the MTCP by incorporating visit programmes in the course curriculum to tourist destinations, industries as well as health facilities. Scholarships at the post-graduate level provided by the MTCP, will be complemented by a special scholarship programme, the *Perdana* International Scholarship Programme, administered by the Ministry of Higher Education.

27.47 Measures will be taken to increase the impact of MTCP through the strengthening of its implementation, monitoring and evaluation mechanisms. The current modalities of technical cooperation among developing countries (TCDC) will be further refined and the scope expanded, particularly to address the digital divide, poverty eradication and governance on global trade and investment as well as promote the process of peace-building. These modalities will be continually reviewed and improved to reflect the current needs of recipient

countries. The MTCP will implement TCTP courses in cooperation with development partners such as JICA and Colombo Plan in designated areas and with greater participation from private sector institutions.

27.48 To implement the MTCP effectively, efforts will be undertaken to work closely with Malaysian missions abroad. These missions will assist in the establishment of an Alumni Association and networking in member countries. The MTCP will continue to utilise its Alumni Network as a forum to obtain inputs for the planning of the future direction of the programme. The Alumni Network will be a resource pool to source expertise for seminars, workshops and conferences. The Network will also be enhanced with the establishment of a data exchange, which will enable the sharing of information among all training institutions.

27.49 The MTCP will continue to actively support South-South cooperation including collaborating with multilateral organisations, donor countries and other developing countries to provide TCTP and other forms of technical cooperation to MTCP member countries. In this regard, more member countries will be encouraged to participate as partners with the MTCP including through a cost-sharing modality. This will apply to more developed member countries, particularly those with higher per capita income than Malaysia.

IV. INSTITUTIONAL SUPPORT AND ALLOCATION

27.50 To implement effective bilateral and multilateral cooperation programmes, the leading agencies are the Ministry of Foreign Affairs, Ministry of International Trade and Industry and the EPU. These agencies will focus on priority areas of cooperation that will contribute towards national economic development and regional integration as well as international networking. Malaysian missions abroad will also play a significant role to implement the MTCP training programme and promote other activities including the MTCP alumni networking. The EPU will coordinate, monitor and evaluate MTCP activities as well as provide for its funding to all the training institutions and agencies which implement the MTCP courses.

27.51 During the Ninth Plan period, a sum of RM200 million will be allocated for the MTCP of which about 75 per cent will be utilised on human capital development. This allocation constitutes an increase of 25 per cent compared with the Eighth Plan.

V. CONCLUSION

27.52 By cooperating actively with the regional and global community, Malaysia was able to enhance relations at the bilateral, regional and multilateral levels during the Eighth Plan period. South-South cooperation continued to be emphasised

as a vehicle for Malaysia to promote greater economic relations with other developing countries for mutual benefits. Significant progress was made in expanding the scope and coverage of the MTCP and its partnerships with other international development agencies as well as spearheading regional cooperation, particularly through ASEAN.

27.53 During the Ninth Plan period, efforts will be undertaken to intensify international cooperation at the bilateral and multilateral levels to enable Malaysia to explore new opportunities for economic development. Regional cooperation with other ASEAN members will be emphasised and inter-regional cooperation will be further promoted through participation in APEC activities. Malaysia will further promote economic relations among OIC countries, particularly in trade and investment as well as capacity-building with the aim of eradicating poverty. The MTCP will play a significant role in enhancing political and economic bilateral relations between Malaysia and member countries. Cooperation with other developing countries will continue to be emphasised to enable the interests of South countries to be integrated in the global agenda and the development gap to be narrowed between developed and developing countries.

FEDERAL GOVERNMENT DEVELOPMENT ALLOCATION

TABLE A-1
FEDERAL GOVERNMENT DEVELOPMENT ALLOCATION AND
EXPENDITURE BY SECTOR, 2001-2010
(RM million)

| Sector | 8 MP | | 9MP | | | | |
|--------------------------------------|----------------|--------------|------------------------|--------------|-----------------------------|----------------|--------------|
| | Expenditure | % | Development Allocation | % | Private Finance Initiatives | TOTAL | % |
| Economic | 65,446 | 38.5 | 89,886 | 44.9 | 1,294 | 91,180 | 41.4 |
| Agricultural Development | 7,749 | 4.6 | 11,435 | 5.7 | 350 | 11,785 | 5.4 |
| Mineral Resource Development | 47 | 0.0 | 141 | 0.1 | 0 | 141 | 0.1 |
| Commerce & Industry | 10,174 | 6.0 | 19,891 | 9.9 | 310 | 20,201 | 9.2 |
| Transport | 31,813 | 18.7 | 31,876 | 15.9 | 634 | 32,510 | 14.8 |
| Communications | 560 | 0.3 | 533 | 0.3 | 0 | 533 | 0.2 |
| Energy & Public Utilities | 12,722 | 7.5 | 21,805 | 10.9 | 0 | 21,805 | 9.9 |
| Feasibility Study | 421 | 0.2 | 338 | 0.2 | 0 | 338 | 0.2 |
| Research & Development | 1,960 | 1.2 | 3,868 | 1.9 | 0 | 3,868 | 1.8 |
| Social | 69,377 | 40.8 | 74,954 | 37.5 | 11,915 | 86,869 | 39.5 |
| Education & Training | 43,729 | 25.7 | 41,114 | 20.6 | 9,472 | 50,586 | 23.0 |
| Health | 9,506 | 5.6 | 10,710 | 5.4 | 878 | 11,588 | 5.3 |
| Information & Broadcasting | 450 | 0.3 | 450 | 0.2 | 0 | 450 | 0.2 |
| Housing | 6,972 | 4.1 | 9,947 | 5.0 | 1,565 | 11,512 | 5.2 |
| Culture, Youth & Sports | 1,113 | 0.7 | 1,394 | 0.7 | 0 | 1,394 | 0.6 |
| Local Authorities & Welfare Services | 5,942 | 3.5 | 9,121 | 4.6 | 0 | 9,121 | 4.1 |
| Village & Community Development | 1,665 | 1.0 | 2,218 | 1.1 | 0 | 2,218 | 1.0 |
| Security | 22,042 | 13.0 | 21,203 | 10.6 | 4,276 | 25,479 | 11.6 |
| Defence | 17,298 | 10.2 | 15,237 | 7.6 | 1,582 | 16,819 | 7.6 |
| Internal Security | 4,744 | 2.8 | 5,966 | 3.0 | 2,694 | 8,660 | 3.9 |
| General Administration | 13,135 | 7.7 | 13,957 | 6.9 | 2,515 | 16,472 | 7.5 |
| General Services | 12,839 | 7.6 | 12,878 | 6.4 | 2,515 | 15,393 | 7.0 |
| Upgrading & Renovation | 296 | 0.2 | 1,079 | 0.5 | 0 | 1,079 | 0.5 |
| Total | 170,000 | 100.0 | 200,000 | 100.0 | 20,000 | 220,000 | 100.0 |

TABLE A-2

**FEDERAL GOVERNMENT DEVELOPMENT ALLOCATION AND
EXPENDITURE BY MINISTRY, 2001-2010**
(RM million)

| Ministry | 8 MP | | 9MP | | | | |
|--|----------------|--------------|------------------------|--------------|-----------------------------|----------------|--------------|
| | Expenditure | % | Development Allocation | % | Private Finance Initiatives | TOTAL | % |
| Prime Minister's Department | 7,287 | 4.3 | 26,495 | 13.2 | 3,193 | 29,688 | 13.5 |
| Public Service Department | 260 | 0.2 | 263 | 0.1 | 41 | 304 | 0.1 |
| Ministry of Finance | 13,541 | 8.0 | 9,004 | 4.5 | 865 | 9,868 | 4.5 |
| Ministry of Foreign Affairs | 577 | 0.3 | 753 | 0.4 | 0 | 753 | 0.3 |
| Ministry of Plantation Industries and Commodities | 442 | 0.3 | 791 | 0.4 | 30 | 821 | 0.4 |
| Ministry of Agriculture and Agro-Based Industry | 3,346 | 2.0 | 6,959 | 3.5 | 357 | 7,316 | 3.3 |
| Ministry of Rural and Regional Development | 7,515 | 4.4 | 10,914 | 5.5 | 55 | 10,969 | 5.0 |
| Ministry of Natural Resources and Environment | 3,579 | 2.1 | 6,851 | 3.4 | 121 | 6,972 | 3.2 |
| Ministry of International Trade and Industry | 328 | 0.2 | 2,326 | 1.2 | 0 | 2,326 | 1.1 |
| Ministry of Domestic Trade and Consumer Affairs | 51 | 0.0 | 65 | 0.0 | 0 | 65 | 0.0 |
| Ministry of Entrepreneur and Cooperative Development | 3,768 | 2.2 | 5,772 | 2.9 | 142 | 5,914 | 2.7 |
| Ministry of Works | 19,333 | 11.4 | 18,623 | 9.3 | 350 | 18,973 | 8.6 |
| Ministry of Transport | 9,664 | 5.7 | 8,222 | 4.1 | 1,310 | 9,532 | 4.3 |
| Ministry of Energy, Water and Communications | 6,085 | 3.6 | 12,123 | 6.1 | 0 | 12,123 | 5.5 |
| Ministry of Science, Technology and Innovations | 4,911 | 2.9 | 7,173 | 3.6 | 350 | 7,523 | 3.4 |
| Ministry of Tourism | 482 | 0.3 | 1,367 | 0.7 | 110 | 1,477 | 0.7 |
| Ministry of Federal Territories | 5,980 | 3.5 | 3,447 | 1.7 | 0 | 3,447 | 1.6 |
| Ministry of Education | 24,172 | 14.2 | 16,963 | 8.5 | 6,235 | 23,198 | 10.5 |
| Ministry of Health | 9,334 | 5.5 | 10,276 | 5.1 | 728 | 11,004 | 5.0 |
| Ministry of Housing and Local Government | 7,513 | 4.4 | 8,974 | 4.5 | 0 | 8,974 | 4.1 |
| Ministry of Culture, Arts and Heritage | 404 | 0.2 | 598 | 0.3 | 53 | 651 | 0.3 |
| Ministry of Youths and Sports | 2,203 | 1.3 | 2,242 | 1.1 | 0 | 2,242 | 1.0 |
| Ministry of Human Resource | 2,146 | 1.3 | 2,126 | 1.1 | 484 | 2,610 | 1.2 |
| Ministry of Information | 350 | 0.2 | 450 | 0.2 | 253 | 703 | 0.3 |
| Ministry of Women, Family and Community Development | 258 | 0.2 | 552 | 0.3 | 0 | 552 | 0.3 |
| Ministry of Higher Education | 13,554 | 8.0 | 16,069 | 8.0 | 1,548 | 17,617 | 8.0 |
| Ministry of Defence | 18,643 | 11.0 | 14,546 | 7.3 | 1,206 | 15,751 | 7.2 |
| Ministry of Home Affairs | 1,313 | 0.8 | 1,033 | 0.5 | 520 | 1,553 | 0.7 |
| Ministry of Internal Security | 2,964 | 1.7 | 5,023 | 2.5 | 2,051 | 7,074 | 3.2 |
| Total | 170,000 | 100.0 | 200,000 | 100.0 | 20,000 | 220,000 | 100.0 |

TABLE A-3

**FEDERAL GOVERNMENT DEVELOPMENT ALLOCATION
AND EXPENDITURE BY STATE, 2001-2010**
(RM million)

| State | 8MP | 9MP | | TOTAL |
|--------------------------|----------------|------------------------|-----------------------------|----------------|
| | Expenditure | Development Allocation | Private Finance Initiatives | |
| Johor | 9,161 | 10,200 | 1,799 | 11,999 |
| Perak | 6,558 | 7,614 | 1,963 | 9,577 |
| Pulau Pinang | 4,862 | 6,152 | 494 | 6,646 |
| Melaka | 3,542 | 3,686 | 291 | 3,977 |
| Negeri Sembilan | 5,658 | 5,884 | 749 | 6,633 |
| Selangor | 13,863 | 15,539 | 2,338 | 17,877 |
| Wilayah Persekutuan | 20,650 | 31,090 | 2,043 | 33,133 |
| Kedah | 7,610 | 7,817 | 1,093 | 8,910 |
| Kelantan | 3,681 | 6,651 | 976 | 7,627 |
| Pahang | 7,469 | 9,853 | 1,228 | 11,081 |
| Perlis | 1,799 | 2,201 | 377 | 2,578 |
| Sabah | 13,180 | 15,658 | 1,250 | 16,908 |
| Sarawak | 12,817 | 13,437 | 1,671 | 15,108 |
| Terengganu | 3,193 | 5,806 | 1,396 | 7,202 |
| Multi-state ¹ | 55,957 | 58,412 | 2,332 | 60,744 |
| Total | 170,000 | 200,000 | 20,000 | 220,000 |

Note:

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



NINTH MALAYSIA PLAN 2006-2010

GLOSSARY OF ACRONYMS

GLOSSARY OF ACRONYMS

| | | |
|-----------|---|--|
| 3G | = | third generation |
| ABS | = | access and benefit sharing |
| ACA | = | Anti-Corruption Agency |
| ACDA | = | Agricultural Concentrated Development Area |
| ACR | = | Allowable Cut Rate |
| ADB | = | Asian Development Bank |
| AEC | = | ASEAN Economic Community |
| AFTA | = | ASEAN Free Trade Area |
| AIM | = | <i>Amanah Ikhtiar Malaysia</i> |
| AKMAL | = | <i>Akademi Kastam Malaysia</i> (Malaysian Customs Academy) |
| AMREC | = | Advanced Materials Research Centre |
| APAEC | = | ASEAN Plan of Action on Energy Cooperation |
| APEC | = | Asia-Pacific Economic Cooperation |
| API | = | Air Pollution Index |
| APMM | = | <i>Agensi Penguatkuasa Maritim Malaysia</i> (Malaysian Maritime Enforcement Agency) |
| ASEAN | = | Association of Southeast Asian Nations |
| ASEM | = | Asia – Europe Meeting |
| ASK | = | <i>Akademi Seni Kebangsaan</i> |
| ASP | = | applications service providers |
| BCIC | = | Bumiputera Commercial and Industrial Community (<i>Masyarakat Perdagangan dan Perindustrian Bumiputera</i>) |
| BDD | = | Bridging the Digital Divide |
| BEIM | = | Business Ethics Institute of Malaysia |
| BIMP-EAGA | = | Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area |
| BIOSTAQ | = | Biotechnology Standardisation and Quality Control Centre |
| BMSB | = | <i>Bursa Malaysia Securities Berhad</i> |
| BOT | = | Build-Operate-Transfer |
| BPA | = | <i>Biro Pengaduan Awam</i> (Public Complaints Bureau) |
| bpd | = | barrels per day |
| BPM | = | <i>Bank Pertanian Malaysia</i> (Agricultural Bank of Malaysia) |

| | | |
|--------------|---|---|
| BSTC | = | Bumiputera Science and Technology Community (<i>Masyarakat Sains dan Teknologi Bumiputera</i>) |
| CADC | = | Creative Applications and Development Centre |
| CARS | = | Computerised Accident Reporting System |
| CCC | = | Certificate of Completion and Compliance |
| CDRC | = | Corporate Debt Restructuring Committee |
| CFO | = | Certificate of Fitness for Occupation |
| cGMP | = | Current Good Manufacturing Practice |
| CIDB | = | Construction Industry Development Board |
| CIQ | = | Customs Immigration and Quarantine |
| CLAB | = | Construction Labour Exchange Centre |
| CMP | = | Capital Market Master Plan |
| COMDEX | = | Commodity and Monetary Exchange of Malaysia |
| CPI | = | Consumer Price Index |
| CRC | = | Convention of the Rights of the Child |
| CRDF | = | Commercialisation of Research and Development Fund |
| CSO | = | Customer Service Office |
| DANIDA | = | Danish International Development Agency |
| DCI | = | Development Composite Index |
| DFIs | = | Development Financial Institutions |
| DSM | = | Department of Standards Malaysia |
| e-Commerce | = | Electronic Commerce |
| e-Consent | = | Electronic Consent |
| ECP | = | Environment Cooperation Programme |
| e-Daftar | = | <i>Sistem Aplikasi ICT untuk Pendaftaran Kenderaan</i> (Electronic Motor Vehicle Registration) |
| EG*Net | = | Electronic Government Network |
| e-Government | = | Electronic Government |
| e-Hakmilik | = | <i>Sistem Aplikasi ICT untuk Hakmilik Kenderaan</i> (Electronic Motor Vehicle Ownership) |
| e-Insurans | = | <i>Sistem Aplikasi ICT untuk Insurans Kenderaan</i> (Electronic Insurance for Motor Vehicle) |
| e-Learning | = | Electronic Learning |
| ELX | = | Electronic Labour Exchange |
| e-PBT | = | <i>Pihak Berkuasa Tempatan Elektronik</i> (ICT Application for Local Authority) |

| | | |
|-------------------|---|--|
| EPF | = | Employees Provident Fund |
| EPP | = | Economic Partnership Programme |
| e-Procurement | = | Electronic Procurement |
| e-Services | = | Electronic Services |
| e-Social Services | = | Electronic Social Services |
| e-SPKB | = | <i>Sistem Aplikasi Perancangan dan Kawalan Belanjawan Elektronik</i> (Electronic Budgetary Planning and Control System) |
| e-Syariah | = | <i>Syariah Elektronik</i> (ICT Application for Syariah Court) |
| e-Tanah | = | <i>Tanah Elektronik</i> (ICT Application for Land Administration) |
| FAMA | = | Federal Agricultural Marketing Authority |
| FDI | = | Foreign Direct Investment |
| FELDA | = | Federal Land Development Authority |
| FINAS | = | <i>Perbadanan Kemajuan Filem Nasional Malaysia</i> |
| FSMP | = | Financial Sector Master Plan |
| FTA | = | Free Trade Area |
| FTE | = | Full Time Equivalent |
| GAP | = | Good Agriculture Practices |
| GDP | = | Gross Domestic Product |
| GERD | = | Gross Expenditure of R&D |
| GJ | = | gigajoule |
| GLCs | = | Government-linked Companies |
| GLP | = | Good Laboratory Practice |
| GMPC | = | Government Multipurpose Card |
| GNP | = | Gross National Product |
| GOE | = | Generic Office Environment |
| GSP | = | Generalised System of Preferences |
| HES | = | Household Expenditure Survey (<i>Penyiasatan Perbelanjaan Isi Rumah</i>) |
| HIS | = | Household Income Survey (<i>Penyiasatan Pendapatan Isi Rumah</i>) |
| HIV/AIDS | = | Human Immunodeficiency Acquired Virus/Acquired Immunodeficiency Syndrome |
| HNDP | = | Highway Network Development Plan |
| HPAI | = | Highly Pathogenic Avian Influenza |

| | | |
|--------|---|--|
| HRDF | = | Human Resource Development Fund |
| HRMIS | = | Human Resource Management Information System |
| IADP | = | Integrated Agricultural Development Project |
| IBS | = | Industrialised Building System |
| ICOR | = | Incremental Capital Output Ratio |
| ICT | = | Information and Communications Technology (<i>Teknologi Maklumat dan Komunikasi</i>) |
| IDB | = | Islamic Development Bank |
| IGS | = | Industry Research and Development Grant Scheme |
| IIM | = | Malaysian Institute of Integrity (<i>Institut Integriti Malaysia</i>) |
| IKBN | = | <i>Institut Kemahiran Belia Negara</i> |
| I-KIT | = | <i>Inkubator Kemahiran Ibu Tunggal</i> |
| ILKAP | = | <i>Institut Latihan Kehakiman dan Perundangan</i> (Judicial and Legal Training Institute) |
| IMP3 | = | Third Industrial Master Plan |
| IMT-GT | = | Indonesia-Malaysia-Thailand Growth Triangle |
| INSKEN | = | <i>Institut Keusahawanan Negara</i> |
| INSPAK | = | <i>Integrasi dan Penyusunan Semula Pengangkutan Awam di Lembah Klang</i> |
| INSTUN | = | <i>Institut Tanah dan Ukur Negara</i> |
| IOFC | = | International Offshore Financial Centre |
| IP | = | Intellectual Property |
| IPO | = | Initial Public Offering (<i>Tawaran Awam Permulaan</i>) |
| IPP | = | Independent Power Producer |
| IPR | = | Intellectual Property Rights |
| IPv4 | = | Internet Protocol version 4 |
| IPv6 | = | Internet Protocol version 6 |
| IRB | = | Inland Revenue Board |
| IRPA | = | Intensification of Research in Priority Areas |
| ISP | = | ICT Strategic Plan |
| ISRWT | = | Inter-State Raw Water Transfer |
| ITIS | = | Integrated Transport Information System |
| IWRM | = | Intergrated Water Resource Management |
| JAKIM | = | <i>Jabatan Kemajuan Islam Malaysia</i> |

| | | |
|--------|---|---|
| JBIC | = | Japan Bank for International Cooperation |
| JUPEM | = | Jabatan Ukur dan Pemetaan Malaysia (Survey and Mapping Department) |
| KDI | = | Knowledge-based Economy Development Index |
| KKLW | = | Ministry of Rural and Regional Development (<i>Kementerian Kemajuan Luar Bandar dan Wilayah</i>) |
| KLIA | = | KL International Airport |
| KLOFFE | = | Kuala Lumpur Options and Financial Futures Exchange Berhad |
| KLPAC | = | Kuala Lumpur Performing Arts Centre |
| KPIs | = | Key Performance Indicators |
| KPNB | = | <i>Konsortium Perikanan Nasional Berhad</i> |
| KTMB | = | <i>Keretapi Tanah Melayu Berhad</i> |
| kW | = | kilowatt |
| LAMS | = | Land Application Monitoring System |
| LARIS | = | <i>Sistem Kutipan Hasil Tanah</i> (Land Revenue Information System) |
| LCA | = | Life Cycle Approach |
| LFPR | = | Labour Force Participation Rate |
| LFX | = | Labuan International Financial Exchange |
| LITS | = | Low Intensity Tapping System |
| LKIM | = | Fisheries Development Authority of Malaysia (<i>Lembaga Kemajuan Ikan Malaysia</i>) |
| LMOs | = | Living Modified Organisms |
| LNG | = | Liquefied Natural Gas |
| LPP | = | <i>Lembaga Pertubuhan Peladang</i> |
| MAMPU | = | <i>Malaysian Administrative Modernisation and Management Planning Unit</i> |
| MAQIS | = | Malaysian Quarantine and Inspection Services |
| MARA | = | <i>Majlis Amanah Rakyat</i> |
| MARDI | = | Malaysian Agricultural Research and Development Institute |
| MAVCAP | = | Malaysia Venture Capital Management Berhad |
| MC&I | = | Malaysian Criteria and Indicators for Forest Management Certification |
| MCC | = | Malaysia Co-operative Commission |
| MCMC | = | Malaysian Communications and Multimedia Commission |
| MDC | = | Multimedia Development Corporation |

| | | |
|---------|---|--|
| MDG | = | Millennium Development Goals |
| MDV | = | Malaysia Debt Ventures Berhad |
| MECD | = | Ministry of Entrepreneur and Cooperative Development (<i>Kementerian Pembangunan Usahawan dan Koperasi</i>) |
| MESDAQ | = | Malaysian Exchange of Securities Dealing and Automated Quotation Berhad |
| MGS | = | MSC Research and Development Grant Scheme |
| MHLG | = | Ministry of Housing and Local Government |
| MICCI | = | Malaysian International Chamber of Commerce and Industry |
| MICG | = | Malaysian Institute of Corporate Governance |
| MIDA | = | Malaysian Industrial Development Authority |
| MIEEIP | = | Malaysian Industrial Energy Efficiency Improvement Project |
| MITI | = | Ministry of International Trade and Industry |
| Mld | = | million litres per day |
| MLNG 3 | = | Third Malaysia Liquefied Natural Gas |
| mmBTU | = | million British Thermal Unit |
| mmscfd | = | million standard cubic feet per day |
| MNCs | = | Multinational Companies |
| MOA | = | Ministry of Agriculture and Agro-Based Industry |
| MOE | = | Ministry of Education |
| MOHE | = | Ministry of Higher Education |
| MOHR | = | Ministry of Human Resources |
| MOYS | = | Ministry of Youth and Sports |
| MPIC | = | Ministry of Plantation Industries and Commodities |
| MPOB | = | Malaysian Palm Oil Board |
| mppa | = | million passengers per annum |
| MRB | = | Malaysian Rubber Board |
| MSC | = | Multimedia Super Corridor |
| MSC TeC | = | MSC Technopreneurship Centre |
| MSMA | = | <i>Manual Saliran Mesra Alam</i> |
| MSWG | = | Minority Shareholder Watchdog Group |
| MTCP | = | Malaysian Technical Cooperation Programme |
| MTJA | = | Malaysia-Thailand Joint Authority |
| MW | = | megawatt |
| MyCERT | = | Malaysian Computer Emergency Response Team |

| | | |
|--------|---|--|
| MyGfL | = | Malaysian Grid for Learning |
| MyICMS | = | Malaysian Information, Communications and Multimedia Services |
| MyIPO | = | Intellectual Property Corporation of Malaysia |
| MyRAM | = | Malaysian Public Sector ICT Security Risk Assessment Methodology |
| MyREN | = | Malaysia Research and Education Network |
| NAFC | = | National Agriculture and Food Corporation |
| NAM | = | Non-Aligned Movement |
| NBP | = | National Biotechnology Policy |
| NCP | = | National Co-operative Policy |
| NDTS | = | National Dual Training System |
| NeLCC | = | National e-Learning Consultative Committee |
| NFPEs | = | Non-financial Public Enterprises |
| NGDS | = | Natural Gas Distribution System |
| NGOs | = | Non-Governmental Organisations |
| NGV | = | Natural Gas for Vehicles |
| NIPN | = | National Institute of Pharmaceuticals and Neutraceuticals |
| NIS | = | National Innovation System |
| NISER | = | National ICT Security and Emergency Response Centre |
| NITC | = | National Information Technology Council |
| NLGP | = | National Lead Generation Programme |
| NOSS | = | National Occupational Skills Standards |
| NPC | = | National Productivity Corporation |
| NPCB | = | National Pharmaceutical Control Bureau |
| NPP | = | National Physical Plan |
| NRD | = | National Registration Department |
| NSC | = | National Sports Council |
| NSDP | = | National Start-Up Development Programme |
| NSF | = | National Science Foundation Programme |
| NSP | = | National Social Policy |
| NSPSWM | = | National Strategic Plan for Solid Waste Management |
| NUDP | = | National Unipreneur Development Programme |
| NYCC | = | National Youth Consultative Council |
| ODA | = | Official Development Assistance |
| OECD | = | Organisation for Economic Cooperation and Development |

| | | |
|----------|---|---|
| OER | = | Oil Extraction Rate |
| OIC | = | Organisation of Islamic Conference |
| OSC | = | One-stop Centre |
| OSCC | = | Open Source Competency Centre |
| OSS | = | Open Source Software |
| PEMADAM | = | <i>Persatuan Pencegahan Dadah Malaysia</i> |
| PENGASIH | = | <i>Persatuan Bekas-bekas Penagih Malaysia</i> |
| PETRONAS | = | <i>Petroleum Nasional Berhad</i> |
| PFI | = | Private Finance Initiatives |
| PFPP | = | Permanent Food Production Parks |
| PICS | = | Pharmaceutical Inspection Cooperation Scheme |
| PIN | = | National Integrity Plan (<i>Pelan Integriti Nasional</i>) |
| PJ | = | petajoule |
| PLHP | = | Public Low-cost Housing Programme |
| PLI | = | Poverty Line Income |
| PLKN | = | <i>Program Latihan Khidmat Negara</i> |
| PNB | = | <i>Permodalan Nasional Berhad</i> |
| PNS | = | <i>Perbadanan Nasional Berhad</i> |
| POWER | = | Pensions Online Workflow Environment |
| PPA | = | Power Purchase Agreement |
| PPFs | = | Provident and Pension Funds |
| PPI | = | Producer Price Index |
| PPMKB | = | <i>Pasukan Petugas Khas Bagi Mengurangkan Kerenah Birokrasi</i> (Ministerial Task Force on Reducing Bureaucratic Red Tape) |
| PPR | = | <i>Program Perumahan Rakyat</i> |
| PPRB | = | <i>Program Perumahan Rakyat Bersepadu</i> |
| PRISMA | = | <i>Pemantauan Rangkaian ICT Sektor Awam Malaysia</i> (Government ICT Security Command Centre) |
| PROSPER | = | <i>Projek Usahawan Bumiputera Dalam Bidang Peruncitan</i> |
| PRS | = | Police Reporting System |
| PSMB | = | <i>Pembangunan Sumber Manusia Berhad</i> |
| PTP | = | Port of Tanjung Pelepas |
| PTPTN | = | <i>Perbadanan Tabung Pendidikan Tinggi Negara</i> |
| PUNB | = | <i>Perbadanan Usahawan Nasional Berhad</i> |

| | | |
|--------|---|--|
| PUTRA | = | <i>Projek Usahasama Transit Ringan Automatik Sdn. Bhd</i> |
| QCC | = | Quality Control Circle |
| R&D | = | Research and Development |
| RDAs | = | Regional Development Authorities |
| RDI | = | Road Development Index |
| RE | = | Renewable Energy |
| RISDA | = | Rubber Industry Smallholders Development Authority |
| RSEs | = | Research Scientists and Engineers |
| RTD | = | Road Transport Department |
| SC | = | Securities Commission |
| S&T | = | Science and Technology |
| SAGA | = | Scientific Advancement Grant Allocation |
| SARS | = | Severe Acute Respiratory Syndrome |
| SCADA | = | Supervisory Control and Data Acquisition |
| SCAN | = | Suspected Child Abuse and Neglect |
| SDC | = | State Skills Development Centre |
| SDVI | = | Supply and Demand Virtual Information |
| SEA | = | Southeast Asian |
| SEDCs | = | State Economic Development Corporations (<i>Perbadanan Kemajuan Ekonomi Negeri</i>) |
| SESB | = | Sabah Electricity Sdn. Bhd. |
| SESCo | = | <i>Syarikat SESCo Bhd.</i> |
| SJER | = | South Johor Economic Region |
| SLA | = | Service Level Agreement |
| SLGGA | = | Smart Local Government Governance Agenda |
| SMART | = | Stormwater Management and Road Tunnel |
| SMEs | = | Small and Medium Enterprises |
| SPAN | = | <i>Suruhanjaya Perkhidmatan Air Negara</i> |
| SPED | = | <i>Skim Pembiayaan Ekonomi Desa</i> |
| SPKR | = | <i>Skim Pembangunan Kesejahteraan Rakyat</i> |
| SPNB | = | <i>Syarikat Perumahan Negara Malaysia Berhad</i> |
| SPP II | = | <i>Sistem Pemantauan Projek II</i> (Project Monitoring System II) |
| SPS | = | Sanitary and Phytosanitary |
| SREP | = | Small Renewable Energy Programme |

| | | |
|--------------|---|--|
| SSO | = | Shared Services Outfit |
| STAR | = | <i>Sistem Transit Aliran Ringan Sdn. Bhd.</i> |
| STP2 | = | Second Science And Technology Policy |
| STS Syarikat | = | <i>Sistem Taksir Sendiri</i> (Self Assessment System for Companies) |
| TAF | = | Technology Acquisition Fund |
| TAPG | = | Trans-ASEAN Power Grid Project |
| TCDC | = | Technical Cooperation Among Developing Countries |
| TCTP | = | Third Country Training Programme |
| TEMAN | = | National Food Terminals (<i>Terminal Makanan Negara</i>) |
| TEUs | = | twenty-foot equivalent units |
| TFP | = | Total Factor Productivity |
| TIEN2 | = | Trans-Eurasia Information Network 2 |
| TM | = | <i>Telekom Malaysia Berhad</i> |
| TNB | = | <i>Tenaga Nasional Berhad</i> |
| TPM | = | Technology Park Malaysia |
| tsf | = | trillion standard cubic feet |
| UiTM | = | MARA University of Technology (<i>Universiti Teknologi MARA</i>) |
| UN | = | United Nations |
| UNDP | = | United Nations Development Programme |
| UNFPA | = | United Nations Population Fund |
| UNICEF | = | United Nations Children's Fund |
| UPEN | = | State Economic Planning Unit (<i>Unit Perancang Ekonomi Negeri</i>) |
| USP | = | Universal Service Provision |
| VoIP | = | Voice over Internet Protocol |
| WAVE | = | Women against Violence |
| WHO | = | World Health Organisation |
| WITSA | = | World Information Technology and Services Alliance |
| WTO | = | World Trade Organisation |
| YTN | = | <i>Yayasan Tekun Nasional</i> |



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